Environmental Procedures Manual

M 31-11

Washington State Department of Transportation
Environmental and Engineering Service Center
Environmental Services Office

Persons with disabilities may request this information be prepared and supplied in alternate forms by calling the WSDOT ADA Accommodation Hotline collect 206-389-2839.

Persons with vision or hearing impairments may access the WA State Telecommunications Relay Service at TT 1-800-833-6388, Tele-Braille 1-800-833-6385, or Voice 1-800-833-6384, and ask to be connected to 360-705-7097.

The Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which WSDOT receives federal financial assistance.

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Additional copies of this manual may be purchased from:

Washington State Department of Transportation
Engineering Publications, Room SD3
PO Box 47300
Olympia, WA 98504-7300

Phone: 360-705-7430
Fax: 360-705-6861
Email: leerc@wsdot.wa.gov

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Foreword

The Washington State Department of Transportation (WSDOT) proudly presents its newly revised and updated Environmental Procedures Manual EPM. This edition of the EPM is a direct result of the ongoing WSDOT program to incorporate continuous improvements through the Quality Approach, adding value to projects through process improvement and reinvention, increased customer satisfaction, and timely project delivery.

The EPM is a compilation of environmental procedures and processes that is anticipated to be used as a guidance resource for the WSDOT.

The information contained in the EPM supplements the wide range of technical expertise among WSDOT Engineering, Environmental, Highway and Local Programs, and Planning staff, as well as local agencies and consultants. It provides consistent, current, and accurate guidelines for complying with federal and state environmental laws and regulations for all phases of project delivery. The guidance provided by the EPM adds value to WSDOT project proposals by encouraging early consideration and documentation of environmental issues during project scoping, alternative development, and preliminary design.

Updating this manual is a continuing process, due to the ever-changing status of environmental policies. Users are encouraged to submit the Process Improvement Suggestion Form provided with the manual to help guide future updates. For convenience, the manual is also available on the WSDOT Environmental Services Office Website, and a CD version will be available in January 2002.

Don Nelson
Assistant Secretary
Environmental and Engineering Service Center

This manual includes information from many sources other than the Washington Department of Transportation, including a variety of state and federal agencies. Every effort has been made to make this information as current as possible. However, it is the reader's responsibility to ensure that any action taken to comply with the excerpted or referenced material is based on the most current information available from these outside sources.

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6) Environmental Permits and Approvals

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Key to Icon

Web site.*

100.01 Introduction

The Environmental Procedures Manual (EPM) provides guidance for complying with federal, state, and local environmental laws and regulations during the planning, designing, constructing, and maintaining of transportation facilities in Washington State. The manual applies to facilities that are owned and operated by the Washington State Department of Transportation (WSDOT): the state highway system, ferry system, state owned airports, state-sponsored rail system, and maintenance facilities. Cities, counties, other local agencies and private transportation entities may also use the EPM for guidance on their transportation facilities, either voluntarily or as required under WSDOT's Local Agency Guidelines (M 36-63).

The intended users of the manual are WSDOT staff, consultants working on WSDOT projects, and other state and local staff working on transportation-related facilities. The manual is primarily a technical resource focused on the "how to" of environmental review under various laws and regulations. In addition to technical guidance, the manual provides background information on environmental laws and WSDOT policy statements to aid in interpreting the numerous mandates. Understanding a law's history and intent may aid the user in properly interpreting its application. The manual also lists resources for further information and assistance in complying with the technical requirements.

This manual revises and replaces the three-volume EPM (M 31-11). The new manual relies extensively on resources available through the Internet. In most cases these are agency web sites with information on the regulatory process and requirements. The revised manual is also available on WSDOT's *Engineering Publications* CD ROM.

Updating and revising the manual is a continuous process because of the ever-changing status of environmental issues and laws. While WSDOT endeavors to keep the EPM current, it is the user's responsibility to ensure that any action taken to comply with environmental laws and regulations is based on the most current information available. The manual lists web sites and agency contacts that can assist a user with this task. When changes are necessary, WSDOT mails the revised pages to all holders of the printed manual and mails a new CD to holders of the electronic version.

Comments and suggestions for improving the manual are welcome. Please use the feedback form provided in the appendix. Please direct comments to the WSDOT **Environmental Services Office** (**ESO**) for consideration in the next revision. For questions about the manual, users may contact the **ESO** at 360-705-7481. For additional copies of the EPM, please contact Engineering Publications at the Transportation Building in Olympia, Washington (360-705-7430). Both offices are online via the WSDOT web site:

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the **ESO** home page: http://www.wsdot.wa.gov/environment/eao

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office. Or click on Engineering Publications.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/

and

http://www.wsdot.wa.gov/fasc/EngineeringPublications/

100.02 Organization of Manual

(1) Overview

The manual is organized to reflect the flow of a transportation project through the major phases of development. Table 100-1 illustrates the relationship of the manual to the phases, their related activity, and the associated environmental actions. The manual's four major parts each contain sections that describe the phase and relevant environmental considerations or requirements during that phase. These are:

- 200 – Transportation Planning
- 300 – Programming and Project Definition
- 400 – Project Development
- 500 – Post-Design (Construction, Maintenance, Surplus Real Property Disposal)

The level of environmental review required for the early phases generally parallels the level of detail known about the project. In general, the level of information about a project increases from the planning phase, through the programming and project definition phase, to the project development phase. The bulk of the environmental review occurs in the project development phase, because this is when the details of the project are being determined and therefore when the impacts to the environment can best be evaluated. Environmental requirements and best management practices also must be followed during construction, maintenance, and surplus real property disposal.

Many of the environmental information needs during project development are driven by requirements to obtain a particular permit. In addition to these permit requirements, the project must also comply with the procedural and substantive requirements of the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). **Table 100-2** lists the numerous environmental permits and approvals that may be required for a transportation project.

(2) Environmental Study and Permit Requirements

The environmental study requirements in the project development phase (Part 400), are categorized according to the NEPA and SEPA regulations. These are often referred to as the elements of the environment or discipline areas. These elements include earth, air, water, plants and animals, land use and other environmental topics. WSDOT has developed a series of checklists for Discipline Reports to address the information needs of the various permits and the NEPA/SEPA process. These checklists are the starting point for preparing the environmental documentation on a project. They are included as exhibits in **Section 420** through **Section 459**. For elements of the environment without a Discipline Report checklist or specific permit requirements, the manual has drawn upon other sources including federal and state guidelines for preparing special studies.

The intent of the manual is to identify the environmental requirements and point the user in the right direction often to the resources available through resource agencies and the Internet. The manual does not attempt to duplicate these resources. The manual includes the most recent version of key documents not on the Internet as of January 2001. These documents are attached as exhibits at the end of each section.

Between this manual and the Internet sources, users should have access to all environmental requirements. However, given the complexity of environmental regulations, which are constantly in flux, and the variability of WSDOT projects, no manual can offer complete step-by-step guidance applicable in all situations. Users will need to develop their own experience in exploring and applying the guidance found in this manual and other resources to ensure that all applicable environmental requirements have been met.

(3) Emphasis on Highways

While the manual covers all transportation facilities owned or operated by WSDOT, the level of detail for highway projects is greater for several reasons. First, highway projects are the most common type of facility constructed by WSDOT. As a consequence, the regulatory agencies have had more experience with highway projects and have developed more detailed environmental procedures. Second, highway projects typically have a larger "footprint" on the land and thereby generate more environmental impacts. Finally, the funding for highway projects is the largest of WSDOT's transportation facilities and provides the most support to environmental initiatives. These initiatives often develop new procedures for resolving highway related environmental impacts.

(4) References

For easy reference, the appendix includes compilations of information referred to in individual sections. For complete references and details, see the individual section. References include:

- Abbreviations and acronyms
- Glossary
- Web site reference guide
- Key state and federal legislation and regulations (index)
- Memoranda of Understanding and other interagency agreements (index)
- State and federal environmental permits (index)
- Agency contacts and map of WSDOT regions

100.03 Exhibits

None

Table 100-1: WSDOT Environmental Procedures Manual General Organization

Part 1	**Introduction**		
Part 2	**Transportation Planning**	• WTP – 20 yrs – needs and objectives; fiscally constrained; includes system plans for state-owned highways, ferries, airports & other facilities with state interest • Route Development Plan or Corridor Plan (long term/vision) • Highway Access Plan	• None at present • Environmental initiative is piloting consideration at this phase • Highway System Plan includes environmental retrofit program
Part 3	**Programming & Project Definition**	• 6-yr investment plan • 3-yr Statewide Improvement Plan • Project Summaries (project definition, design decision summary) • Cost estimates • Biennial review meeting (regions) • WSDOT budget to legislature	• Project Summary includes environmental review summary - project classification, recommended threshold determination
Part 4	**Project Development**	• Design • PS&E • Rights-of-way • Permitting	• Scoping – public involvement & interagency coordination • Environmental studies for NEPA/SEPA and permits
Part 5	**Project Construction, Maintenance, Surplus Real Property Disposal**	• Contracting, construction management • Ongoing operation & maintenance • Evaluation of surplus property for transportation uses	• Inspection, monitoring for environmental compliance • Use of BMPs • Assessment of property for potential environmental uses, hazardous materials risk

Table 100-2: Permits and Approvals

Note: Abbreviations are listed at the end of this table; for water quality permits, see details in **Exhibit 431-9;**

NEPA	FHWA and WSDOT	Activities that require federal permits, approvals, or funding trigger NEPA procedural and documentation requirements.	320, 410-480	42 USC 4321 23CFR 771 40 CFR 1500-1508
SEPA	Ecology	Any activity not categorically exempt triggers SEPA procedural and documentation requirements.	410-480	RCW 43.21C WAC 197-11, WAC 468-12
Section 4(f)	FHWA and Affected Agency (WSDOT)	Use of park and recreation lands, wildlife and waterfowl refuges, and historic sites of national, state, or local significance triggers Section 4(f) procedural and documentation requirements.	411, 455	49 USC 1651 Sec. 4 (f) 23 CFR 138
Section 6(f)	FHWA and Affected Agency (WSDOT)	Use of lands purchased with LWCA funds triggers Section 6(f) procedural and documentation requirements.	411, 455	LWCA
Section 106	OAHP/SHPO	Potential impacts to historic or archaeological properties trigger Section 106 procedural and documentation requirements.	411, 456	16 USC 470 Sec.106 36 CFR 800 RCW 43.51.750
Critical/Sensitive Areas Ordinances	Counties and Cities	Local approval or permits may be required for projects impacting areas defined as "critical" by counties and cities under the GMA, including wetlands, aquifer recharge areas, wellhead protection areas, frequently flooded areas, geographically hazardous areas, fish and wildlife habitat, and conservation areas.	420, 431, 436, 437, 451, 520	RCW 90.58 RCW 36.70A
Clearing, Grading and Building Permits.	Counties / Cities	Clearing and grading of land for development with impacts outside WSDOT right of way; (includes connecting streets, frontage roads, etc.). Construction of any building for human habitation.	420, 451, 454, 460, 520	RCW 36.21.080
Operating Permit for Surface Mining	WDNR, USFS, BLM	Surface mining (pit and quarry sites); more than 3 acres disturbed at one time or pit walls more than 30 feet high and steeper than 1:1; pit site reclamation (WDNR). Borrow pits on federal land may require a permit or easement from the land-management agency.	420, 510	RCW 78.44
Temporary Air Pollution	Ecology, local Clean Air Agencies, fire protection agencies	Pollutants above allowed levels for temporary periods; includes building demolition and brush burning. Regulations may limit the type, size or timing of brush burning.	425	RCW 70.94
New Source Construction	Ecology, Local Clean Air Agencies	Air pollution from a point source (e.g., asphalt plants, rock crushers).	425	RCW 70.94.152

Joint Aquatic Resource Permits Application (JARPA) [Note: JARPA is an application form, not a permit.]	COE, Coast Guard, EPA, WDFW, Ecology, DNR, and local governments.	Joint application for COE Section 10 and Section 404 permits, Coast Guard bridge permits, WDFW Hydraulic Project Approvals, Shoreline Management Permits, approvals for water quality exceedance, Section 401 water quality certifications, and DNR Aquatic Resource Use Authorization.	431, 432, 436, 437, 452, 453	See permits, certificates and approvals included in JARPA.
Section 9 (Bridge)	US Coast Guard	Bridges and causeways in navigable waters, including all tidally influenced streams used by boats over 21 feet in length.	431, 432, 452, 453	33 USC Sec. 9 33 USC 11 33 CFR 114 & 115 FHWA Sec 123(b)
Section 10	COE	Obstruction, alteration, or improvement of any navigable water (e.g., rechannel-ing, piers, wharves, dolphins, bulkheads, buoys).	431, 432, 452	Rivers & Harbors Act, Section 10 33 CFR 403
Hydraulic Project Approval	WDFW	Projects that will use, divert, obstruct, or change the natural flow or bed of any state waters (e.g., culvert work, realignment, bridge replacement).	431, 432, 436, 447, 452, 453, 510, 520	RCW 77.55.100 WAC 220-110
Section 401 Water Quality Certification	Ecology USEPA (federal and tribal lands)	Activity requiring a federal permit/license for discharge into navigable waters.	431, 432, 437, 452, 453	CWA Sec 401 RCW 90.48.260 WAC 173-225
Section 402 NPDES Permit	Ecology	Discharge of pollutants into state waters, including wetlands and groundwater. Municipal Stormwater Discharge, Industrial Stormwater, Construction Storm-water, or Sand/Gravel permits may be required, depending on the activity.	431, 433	CWA Sec 402 WAC 173-226
Section 404 Individual and Nationwide Permits	COE, USEPA, US Coast Guard	Discharging, dredging, or placing fill material within waters of the US or adjacent wetlands.	431, 432, 437, 452, 510	CWA Sec 404 33 USC 1344 33 CFR 330.5 & 330.6
State Waste Discharge (SWD) Permit	Ecology	Discharge or disposal of municipal and industrial wastewater into groundwater, or discharge industrial wastewater to an NPDES-permitted wastewater treatment plant.	433	RCW 90.48, WAC 173-226
Easement over Navigable Water	WDNR Harbor line commission	Rights of way or fills on, over, or across beds of navigable waters. If waters are part of harbor area, easements may also needed from harbor line commission.	431, 432, 451	RCW 47.12.026
Sewage Facilities	DOH Ecology	Construction/modification of domestic/industrial wastewater facilities (e.g., sewer relocation, rest area construction). Systems with design flow capacity of 3500-14500 gallons per day are regulated by DOH. Industrial systems (i.e., rest areas) with design flow capacity >14500 gallons per day are regulated by Ecology.	431, 432, 433	RCW 90.48.110 WAC 246-272 WAC 173-240
Temporary Water Quality Disturbance	Ecology	Activity resulting in temporary minor increase in turbidity.	431, 432, 447, 452, 453	WAC 173-201A-110(3)

Water quality modification – herbicide use.	Ecology	Application of herbicides to control noxious or non-noxious weeds.	431, 432, 437, 510	RCW 90.48, WAC 173-201A-110
Coastal Zone Management Certificate	Ecology	Applicants for federal permits/licenses are required to certify that the activity will comply with the state's Coastal Zone Management program (Shoreline Management Act).	431, 432, 437, 452, 520	CZMA Sec 6217 16 USC 1451 et seq. 15 CFR 923-930 RCW 90.58
Shoreline Permits	Ecology Cities and Counties	Development or construction valued at $2,500 or more interfering with shorelines or water use; lakes & reservoirs over 20 acres, streams over 20 cfs, lands 200 ft inland from OHWM, marshes, swamps, bogs & deltas.	431, 432, 437, 447, 452, 453, 520	RCW 90.58 WAC 173-14 through 173-28
Floodplain Development Permit	Ecology Counties and Cities	Any structure or activity that may adversely affect the flood regime of streams within the flood zone.	432	RCW 86.16 WAC 173-158
Water Rights Permit	Ecology (Water Resources Program) City or county	Appropriation of a specific amount of public ground water or surface water for a specific beneficial purpose.	433	RCW 18.104, 43.27A, 90.03, 90.14, 90.16, 90.44 and 90.54 WAC 173-100, 173-136, 173-150, 173-154, 173-166, 173-500 and 173-590,– and 508-12
Water System Project Approval	DOH City or county health departments	Any project with two or more water service connections for human consumption and domestic use.	433	RCW 43.20A WAC 246-290, 246-291 and 246-293.
Underground Injection Control	Ecology	Injection well that may contaminate drinking water.	433	40 CFR 144 RCW 43-21A.44 WAC 173-218
Threatened and Endangered Species	USFWS/**NOAA FISHERIES**	Projects affecting critical habitat of species listed under the ESA may be subject to water quality and wetland permits listed in **Section 431.06** and **Section 437.06.**	436, 447, 510, 520	16 USC 1531-1543
Fish Habitat Enhancement Project Application	WDFW	Streamlined process for projects designed to enhance fish habitat. Application is in addition to JARPA.	436	
Aquatic Resource Use Authorization	WDNR	Included in JARPA.	436, 437, 520	RCW 79.90 WAC 332-30

Wetlands Report	COE	Impact to lowlands covered with shallow and sometimes temporary/intermittent waters (e.g., swamps, marshes, bogs, sloughs, potholes).	437	49 USC 1651 EO 11990 (Protection of Wetlands)
Noise Permit	Counties / Cities	Construction and maintenance activities during nighttime hours may require a variance from local noise ordinances. Daytime noise from construction is usually exempt.	446	WAC 173-60
Hazardous Waste Tracking Form	Ecology	A WAD tracking number from Ecology is required for transport, storage, transport, or disposal of dangerous waste.	447	WAC 173-303
Monument Removal	WDNR	Removal or destruction of a monument.	451	
Wild and Scenic Rivers	FHWA and Affected Agency	No specific permits are required for projects in wild and/or scenic river corridors, but water quality permits listed in **Section 431.06** may apply.	453	16 USC 1271
Farmland conversion	NRCS Counties/cities	NRCS Form AD1006 approval may be required if project entails conversion of farmlands. Local grading permits may also be required.	454	7 USC 4201 7 CFR 650
Forest Practices Application	WDNR	Road construction, pits, pesticide use, and other specified activities on public or private forest land (i.e., land capable of supporting merchantable timber).	455	RCW 76.09 WAC 222
Archeological Resources Protection Permit	Tribes Federal landowners, e.g. BLM, COE, NPS	Excavation or removal of archeological resources from tribal or federal land.	456	43 CFR 7.6 – 7.11
Airport/Highway Clearance	FAA (Federal)	Airspace intrusion by a highway facility (i.e. proposed construction in the vicinity of public use or military airports) may require FAA notification.	460	FHPM 6-1-1-2 FAA Regs. p.77

Abbeviations:

BLM	Bureau of Land Management (Federal)
CFR	Code of Federal Regulations
COE	US Army Corps of Engineers
CWA	Clean Water Act
CZMA	Coastal Zone Management Act (Federal)
DOH	Washington Department of Health
DSHS	Washington Dept. of Social and Health Services
Ecology	Washington Department of Ecology
EO	Executive Order
ESA	Endangered Species Act (Federal)
FAA	Federal Aviation Authority
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FWCA	Fish and Wildlife Coordination Act (Federal)
WPCA	Water Pollution Control Act (Federal)
GMA	Growth Management Act (State)
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resource Permits Application
LWCA	Land and Water Conservation Act (Federal)
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service (US Dept. of Agriculture)
OAHP	Office of Archaeology and Historic Preservation (State)
RCW	Revised Code of Washington
ROW	Right of Way
SDWA	Safe Drinking Water Act (Federal)
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Officer
SMA	Shoreline Management Act (State)
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFW	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service (Dept. of Interior)
WAC	Washington Administration Code
WAD	Dangerous Waste Identification Number
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources

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Web site.*

200.01 Introduction

This section describes WSDOT's transportation planning process and the relevant environmental review process. The information on the transportation planning process is found in several resources including Washington's Transportation Plan and its associated website at:

http://www.wsdot.wa.gov/ppsc/planning/

Transportation planning helps to identify the important transportation problems facing Washington and possible solutions to both current and future issues. The process supports investment decisions by the legislature and WSDOT. Transportation planning in Washington reflects the decentralized and diverse ownership of the transportation system. A key mission of these various transportation planning efforts is coordination between jurisdictions so facilities and services under separate ownership operate as a total system.

Statewide planning is essential to analyze total transportation requirements and to evaluate how these needs can best be met by the various transportation modes. Detailed data regarding present and future economic conditions, land use patterns, use of each transportation mode, costs and revenues, changes in technology, service problems and opportunities, environmental issues, and numerous other factors are necessary to satisfactorily evaluate transportation needs. The unique role of each transportation mode and the integration of services to maximize use of available facilities requires detailed study and the development of important policies and plans.

Part 200 reviews WSDOT's overall planning and programming process, the legal and policy framework within which it occurs, statewide and corridor/route planning activities, and the relationship of state, regional, and local transportation planning.

200.02 Process Overview

The overall transportation planning process has two distinct phases: planning and programming. Part 200 of the manual covers planning and Part 300 discusses programming. In brief, these phases are described below and illustrated in **Figure 200-1**. For more details, see **Section 230**.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

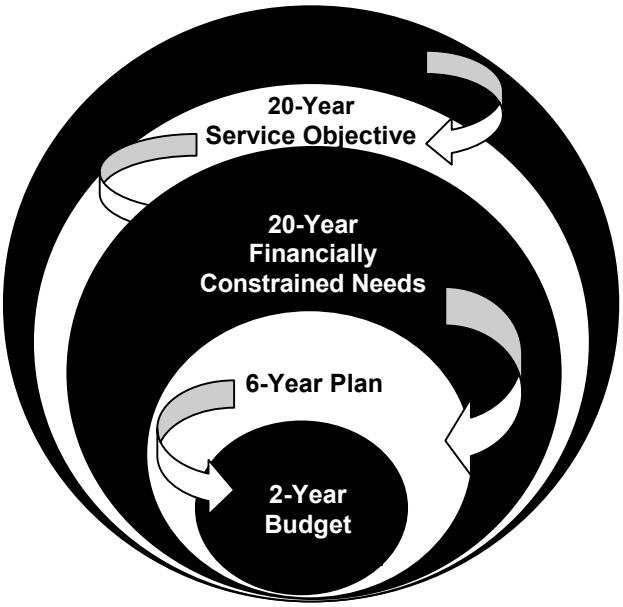

Figure 200-1:
Relationship between Planning and Programming

Planning – Identifies needs, service objectives, and priorities – based on costs and revenue projections. Transportation planning produces several related planning documents:

- Washington's Transportation Plan (WTP). A statewide multi-modal plan required by RCW 47.06. Includes component plans for state-owned facilities (highways, ferries, and airports) and for other transportation modes in which the state has an interest (rail, marine ports, public transportation, bicycle and pedestrian facilities). Together, these plans comprise the WTP.
- Corridor Management Plans. State a community's visions and goals for a scenic byway corridor.
- Route Development Plans (RDP). A long-range plan for a specific route, separate planning process.
- Roadside Master Plans. Guide roadside-related long-term design and management activities on state highway roadsides.

Programming – Prioritizes and develops a list of specific projects derived from WTP, based on statewide priorities and regional recommendations. (This process is described in Part 300.)

- Six-Year Investment Program (six years). Required by RCW 47.05 (see **Section 310**).
- Statewide Transportation Improvement Program (three years). Required by TEA-21 (see **Section 310**).
- Biennial Budget (two years). Required by RCW 47.01, based on projects defined by WSDOT regional offices (see **Section 320**).

Planning sets the direction for transportation in the state. In its planning activities, WSDOT identifies and prioritizes needs, then develops proactive solutions constrained by projected revenue. Planning establishes a vision for the transportation system covering all transportation modes.

Programming is a link between long-range plans and short-term budgets. In its programming activities, WSDOT ranks projects and develops six-year and two-year implementation programs, with specific projects ranked and adjusted to meet construction needs. Programming identifies projects from deficiency lists, determines which projects can be implemented with projected funding levels, and monitors expenditures until projects are complete.

200.03 Corridor/Route Development Plans

Route Development or Corridor Plans present a long-range vision of safe and efficient mobility in a given transportation corridor, as defined by the affected jurisdictions and users of the route. They serve as WSDOT's comprehensive plan for each state highway, a tool to assist WSDOT, local agencies, and RTPOs with their plans and programs. The RDPs are designed to support implementation of the Highway System Plan and project development within the corridor, identify environmental issues and potential mitigations early in the process, strengthen priority planning, and build consensus with local agencies and the public. RDPs include:

- Highway description, location, and function
- Existing geometrics and features,
- Present and future operating conditions
- Proposed route strategies
- Environmental evaluations
- Potential mitigations
- Public involvement information
- Benefit/cost ratios

For information on current corridor planning activity, see the WSDOT web site:

http://www.wsdot.wa.gov/

Click on Site Index, then T, then Washington's Transportation Plan.

Or by direct link:

http://www.wsdot.wa.gov/ppsc/wtp/

200.04 Environmental Issues in Transportation Planning

Transportation plans are categorically exempt as "information collection and research" under SEPA Rules (WAC 197-800(18). Under WSDOT SEPA Rules (WAC 468-12-800 (3)), categorical exemptions specifically include "six-year programs, and other studies, plans, and programs which lead to proposals which have not yet been approved, adopted, or funded, and which do not commit WSDOT proceed with the proposals contained in the plans or studies."

However, the statewide multi-modal transportation plan statute (RCW 47.06.040) directs WSDOT to identify and document potential affected environmental issues, coordinate with regulatory agencies and local governments, and give regulatory agencies an opportunity to review the plans (see **Section 230.04**).

Procedures for environmental analysis and review during transportation planning vary among Regions.

200.05 Abbreviations and Acronyms

Following are the key acronyms and abbreviations used in **Section 200** through **Section 230.** Others are found in the general list in the Appendix.

CAA	Clean Air Act
CAPP	County Arterial Preservation Program
CRAB	County Road Administration Board
FHWA	Federal Highway Administration
FAA	Federal Aviation Administration
GMA	Growth Management Act
HSP	Highway System Plan
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
RAP	Rural Arterial Program
RTPO	Regional Transportation Planning Organization
SEPA	State Environmental Policy Act
SIP	State Implementation Plan
STB	Surface Transportation Board
STIP	Statewide Transportation Improvement Program
TEA-21	Transportation Equity Act for the 21st Century (PL 105-178), as amended by the TEA-21 Restoration Act of July 22, 1998
TIP	Transportation Improvement Program
WTP	Washington's Transportation Plan

200.06 Exhibits

None.

210 Legal and Policy Framework for Transportation Planning

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Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

210.01 Introduction

Transportation planning is driven by federal and state requirements. WSDOT must comply with federal law because transportation is regulated by Congress as interstate commerce under the commerce clause of the Constitution. Furthermore, a substantial portion of WSDOT's budget comes from federal funds and WSDOT must comply with various federal laws to receive and spend these funds. These funds and associated federal laws are administered by a variety of federal agencies including Federal Highway Administration (FHWA), Federal Aviation Administration (FAA); and the Surface Transportation Board (STB).

State laws also govern transportation planning. WSDOT is a state agency and is funded through the state legislature. Numerous state laws govern WSDOT's planning activities.

This section reviews the primary federal and state legislation affecting transportation planning, and the overall policy guidelines of the Washington Transportation Commission. For more specific references, see **Sections 410-480**.

210.02 Federal Legislation

Following are some of the key statutes affecting transportation planning.
For a detailed reference matrix, see FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs; then Environment; then Legislation, Regulations, and Guidance; then Summary of Environmental Legislation (under Legislation.

Or by direct link:

http://www.fhwa.dot.gov/environment/env_sum.htm

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) *TEA-21 – Transportation Equity Act for the 21st Century*

TEA-21 was enacted on June 9, 1998 and amended July 22, 1998. It replaces the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 as the authorizing legislation for federal surface transportation funding for highways, highway safety, and transit. It covers the six-year period 1998-2003. The full text of TEA-21 may be found on the FHWA web site at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then Transportation Equity Act for the 21st Century.

Or by direct link:

http://www.fhwa.dot.gov/tea21/index.htm

Effective October 1, 2004. Safe, Accountable, Flexible, and efficient Transportation Equity Act of 2003 (SAFETEA will replace ISTEA. More information can be found at:

http://www.fhwa.dot.gov/reauthorization/index.htm

(a) *Statewide Planning Provisions (Section 1204)*

As a condition for receiving federal surface transportation funding, states are required to:

- Develop a long-range intermodal transportation plan for at least 20 years.
- Develop statewide plans and programs for the development and integrated management and operation of intermodal surface transportation systems and facilities (including pedestrian walkways and bicycle facilities).
- Develop a Statewide Transportation Improvement Program (STIP).
- Coordinate designated Metropolitan Planning Organizations (MPOs) to develop Transportation Improvement Programs (TIPs).

(b) *Goals of Transportation Planning*

TEA-21 directs states to consider projects that will:

- Support the economic vitality of the United States, the states, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety and security of the transportation system for motorized and non-motorized users.
- Protect and enhance the environment, promote energy conservation, and improve quality of life.
- Enhance the integration and connectivity of the transportation system, across and between modes throughout the state, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.

(c) Environmental Streamlining Provisions (Section 1309)

This section aims to coordinate federal agency involvement in major highway projects under NEPA to address concerns relating to delays in implementing projects, unnecessary duplication of effort, and added costs associated with the conventional process for reviewing and approving surface transportation projects. Key elements of Section 1309 are:

- Establishes a coordinated environmental review process by which USDOT would work with other Federal agencies to ensure that major highway and transit projects are advanced according to cooperatively determined time frames.
- Emphasizes using concurrent rather than sequential reviews to save time.
- Establishes a dispute resolution process between USDOT and other federal agencies.
- Allows states the option of including their environmental reviews in the coordinated environmental review process.
- Authorizes the Secretary of Transportation to approve state DOT requests to reimburse federal agencies for expenses associated with meeting expedited time frames.

Other environmental provisions of TEA-21 may be reviewed at the FHWA web site.

(2) Clean Air Act

Under the federal Clean Air Act (42 USC 7401 et seq.), each state must develop a state implementation plan (SIP) for controlling air pollutants including those released by vehicles. EPA recently set new standards for ozone and particulate matter, two pollutants partially caused by motor vehicles. There are transportation funding implications for "non-attainment" areas not meeting the new standards. If a region in non-attainment does not show progress in moving back towards attainment, federal transportation funds for projects that increase pollution can be withheld. In addition, transportation projects requiring federal funding that must go through a federal "conformity" process can have the funds withheld if it is that the projects will further worsen air quality. For details, see **Section 425.02**.

(3) Clean Water Act

The Water Pollution Control Act, better known as the Clean Water Act (CWA), 33 USC Section 1251 *et seq*., provides for comprehensive federal regulation of all sources of water pollution. It prohibits the discharge of pollutants from other than permitted sources. The CWA authorizes the EPA to administer or delegate water quality regulations covered under the act. In Washington, authority is delegated primarily to COE and Ecology. Implementation requirements for CWA Sections 303(d), 305(b), 401, 402, and 404 are described in **Section 431.06**.

210.03 State Legislation

Requirements for transportation planning are established by state law. In Washington State, the transportation planning, programming and project development, and accompanying environmental review process are closely intertwined with and given added significance by passage of the Growth Management Act (GMA) in 1990 and the Salmon Restoration Act in 1999.

(1) *Statewide Multi-Modal Transportation Plan*

Under this law (RCW 47.06), WSDOT is responsible for developing a statewide multi-modal transportation plan, in conformance with federal requirements, "to ensure the continued mobility of people and goods within regions and across the state in a safe, cost-effective manner." WSDOT adopted Washington's Transportation Plan in 2002 to comply in part with this mandate. The WTP will be updated on a regular basis. It can be viewed on line at:

http://www.wsdot.wa.gov/ppsc/wtp/

(2) *Growth Management Act*

The GMA (RCW 36.70A), adopted in 1990, requires cities and counties with significant population growth to prepare comprehensive plans composed of six elements including a transportation element. The transportation element must document the 20-year transportation infrastructure needs that are consistent with the other plan elements. The jurisdiction must show how it will pay for the level of services it is providing and any new facilities or service must be concurrent with the development driving the need. For details, see **Section 451**.

An implementation guidance manual, *Coordinating Transportation with Growth Management Planning* under 1998 legislation, HB 1487, the "level of service bill," is available on line from WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then T, then Transportation Planning, then Coordinating Transportation and Growth Management Planning.

Or by direct link:

http://www.wsdot.wa.gov/ppsc/planning/Manual.pdf

Both the GMA and the transportation planning statutes require WSDOT to comply with local comprehensive plans and development regulations. The GMA requires local governments to develop a process for siting "essential public services." The transportation planning statute (RCW 47.06.140) defines these facilities to include the interstate highway system, interregional state principal arterials including ferry connections that serve state-wide travel, intercity passenger rail services, intercity high-speed ground transportation, major passenger intermodal terminals excluding all airport facilities and services, the freight railroad system, the Columbia/Snake navigable river system, marine port facilities and services that are related solely to high-capacity transportation systems serving regions as defined in RCW 81.104.015.

(3) *Washington Clean Air Act (RCW 70.94)*

Washington adopted a Clean Air Act to implement requirements of the federal CAA and protect air quality in Washington. The Washington Clean Air Act provides authority to Washington Department of Ecology over air pollution sources and to devise SIPs as mandated by the federal CAA. For details, see **Section 425.02.**

(4) *Salmon Recovery Strategy-Salmon Restoration Act*

This act, adopted in 1999, is a action plan from the Joint Natural Resources Cabinet. Its focus is new actions or modifications to existing activities that provide additional protection for salmon.

It is a combination of priority actions for short-term implementation and a scorecard to track implementation of strategies.

The act will lead to defined criteria and analysis that will be required on land use and road projects in the coming years. These will be folded in with any regional or state agreements on the 4(d) rule. For details, see **Section 436**.

210.04 Washington Transportation Commission Policy

WSDOT policies are guiding principles to accomplish broad objectives and/or specific direction in support of the department's vision, mission, and goals. Policies apply agency-wide or when more than one organizational group is impacted. WSDOT policy, in the form of an Executive Order or Policy Statement, must be authorized by the Office of the Secretary.

(1) Transportation Policy Plan

Overall WSDOT policy is stated in the *Transportation Policy Plan for Washington State*, which aims to foster implementation of consistent transportation initiatives, programs, and projects in three issue areas, one of which is environmental protection and energy conservation.

The following eight policy objectives of the Policy Plan apply to all modes and all transportation providers in Washington:

- Protect our investments by keeping transportation infrastructure in sound operating condition.
- Operate transportation systems to work reliably and responsibly for the customer.
- Improve safety through continuous reduction in the societal cost of accidents.
- Provide viable mobility choices for the customer and expand the system to accommodate growth.
- Support the economy through reduced barriers to the movement of people, products, and information.
- Meet environmental responsibilities.
- Cooperate and coordinate with public and private transportation partners so that systems work together cost effectively.
- Continuously improve the efficient and effective delivery of agency programs.

The plan can be found on WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then State Transportation Policy.

Or by direct link:

http://www.wsdot.wa.gov/PPSC/WTP/

(2) Transportation Commission Policy Catalog

The Transportation Commission Policy Catalog provides policy guidelines to shape and direct state, regional, and local decisions about the future of Washington's transportation systems. The policy in this catalog was developed through a consensus-based steering committee process staffed by WSDOT and guided by public input. The steering committee was composed of government, business, and interest group representatives from all over the state.

The Policy Catalog can be found on WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

The Policy Catalog addresses several areas, one of which is environmental protection. The environmental section of the policy catalog states the following three principles:

- Minimize, and avoid when practical, air, water, and noise pollution; energy usage; use of hazardous materials; flood impacts; and impacts on wetlands and heritage resources from transportation activities.
- When practical, and consistent with other priorities, protect, restore and enhance fish and wildlife habitats and wetlands impacted by transportation facilities.
- Coordinate and take the lead in partnering with other agencies in environmental issues affecting transportation to reduce costs and increase effectiveness.

Chapter 6 of the Policy Catalog contains service objectives and detailed policies on air quality, water quality, fish and wildlife habitat protection, wetlands conservation, use of non-renewable energy resources, visual quality, noise abatement, use of hazardous substances, and heritage resources. These policies are listed in Part 400 of the manual under the applicable environmental element in the policy guidance section.

In addition, the *1995 Policy Plan: Report to the Legislature* stated that, "Measures to protect, restore, and enhance the environment must be integrated into the planning, construction, operation, and maintenance of the transportation system."

210.5 Exhibits

None.

220 Relationship of State, Regional, Local Transportation Planning

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220.02 Metropolitan Planning Organizations (MPOs)
220.03 Regional Transportation Planning Organizations (RTPOs)
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Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

220.01 Introduction

This section describes transportation planning activities at different levels of government, and WSDOT's role in working with metropolitan and regional planning organizations and local governments responsible for transportation planning.

220.02 Metropolitan Planning Organizations (MPOs)

In Washington, metropolitan planning organizations (MPOs) are established as required by federal statutes (23 U.S.C. 134 and 49 U.S.C. 1607). Each urbanized area (population 50,000 or more) must have such an organization to receive federal transportation capital or operating assistance. The purpose of such an organization is to provide a forum for cooperative transportation decisionmaking by the local governmental units in the area and the state. The products of this continuing, cooperative, and comprehensive transportation process are plans and programs consistent with the comprehensively planned development of the urban area.

Each MPO has a transportation policy committee consisting of elected officials of the general purpose local governments (counties and cities) within the area and may have a technical committee composed of personnel from public works and planning agencies within the area. WSDOT is represented on the policy and technical committees concerning transportation in each MPO.

The MPO is required to prepare a work program each year that describes the transportation and transportation-related activities the organization plans to undertake. Funds to prepare these plans and studies are derived primarily from federal funds (more than 80 percent) with the remainder from local funds.

The products of this urban planning process are:

- Transportation plan for the area describing policies, strategies, and facilities or changes in facilities.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

- A transportation improvement program (TIP) that is usually a six-year program of projects including an annual or biennial element.
- The annual or biennial element consists of a list of transportation improvement projects proposed for implementation during the first one or two years of the TIP.

220.03 Regional Transportation Planning Organizations (RTPOs)

Regional transportation plans (also known as metropolitan transportation plans in eight urbanized areas for federal purposes), are developed by Regional Transportation Planning Organizations (RTPOs). An RTPO is created through the voluntary association of local governments within a region. Member jurisdictions within an RTPO determine their own structures to ensure equitable representation among local governments and to allow flexibility across the state.

The *RTPO Transportation Planning Guidebook* and other information is available on line from WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then T, then Transportation Planning Office, then RTPO Planning Guidebook.

Or by direct link:

http://www.wsdot.wa.gov/ppsc/planning/RTPO.htm

RTPO Membership and Designation – Membership in each RTPO must include a minimum of one county, and a population of at least 100,000. Regions may be formed in areas with less than 100,000 population if a minimum of three geographically contiguous counties are linked. Member jurisdictions of an RTPO must include all counties in the region, and at least 60 percent of the cities and towns representing at least 75 percent of the population of the cities and towns, as well as tribal governments and school districts.

In areas where there are Metropolitan Planning Organizations (MPOs) as required by the federal government, the RTPO and MPO must be the same organization. The Department of Transportation verifies the designation of each RTPO to ensure that all state requirements are met.

Each RTPO must establish a Transportation Policy Board whose membership includes, but is not limited to: representatives from the member counties, cities and towns; major employers; the WSDOT; transit providers; and port districts within the region. State legislators are ex officio members of their home RTPO. Technical Advisory Committees are encouraged in RTPOs.

Lead Planning Agency – The RTPO is required to designate a lead planning agency which may be a regional council, county, city, town agency, or a WSDOT regional office. Of the 14 RTPOs that have formed or are in the process of forming, eight of the lead planning agencies are regional councils, two are economic development councils/districts, three are Department of Transportation regional offices, and one is a county public works department. The key role of the lead planning agency is to provide staff support to the RTPO and to coordinate the development of the Regional Transportation Plan.

Developing the Regional Transportation Plan – The RTPO is a formal mechanism used by local governments and the State to coordinate the planning of regional transportation facilities and services. A key function of the RTPO is to develop a Regional Transportation Strategy which addresses alternative transportation modes, and transportation demand management in regional corridors, and recommended preferred transportation policies to implement growth strategies. The Regional Transportation Strategy serves as a guide – along with countywide

planning polices, guidelines and principles – for the development of the Regional Transportation Plan, also a responsibility of the RTPO. RTPOs are also required to develop, regional transportation improvement programs based on the plan, in cooperation with WSDOT, public transit operators, local jurisdictions, and tribal governments. Improvement programs are to propose regionally significant transportation projects and programs and transportation demand management measures.

220.04 Local Government

Local Comprehensive Plans, under the State's Growth Management Act, serve as basic building blocks for transportation planning by defining land uses and the transportation system needed to support those land uses. Local comprehensive plans must include six elements as stated earlier. The transportation element of the plan should integrate land use assumptions through identifying and developing the following:

- An inventory of land, water and air transportation facilities
- Analysis of impacts on other jurisdictions, and a feedback loop to reassess land uses that cannot be served with available funding; Service level standards
- Current and future transportation needs
- Realistic funding analysis

Other key components are plans developed by special transportation districts, such as transit agencies and port districts. These plans define the needs and services to carry out these special purpose governments' missions.

The County Road Administration Board (CRAB) helps county governments meet their transportation planning responsibilities through direct technical support, research on current issues with framework plans, workshops, and discussion papers.

(1) Highways and Local Programs

- Highways and Local Programs (H&LP) is the division within WSDOT which serves local agencies. H&LP administers the distribution of federal funds to local agencies for FHWA. H&LP oversees 14 federal funding programs. Its responsibilities include recommending program levels, developing project priorities, preparing program, authorizing and monitoring projects, and performing federally delegated oversight on environmental, design, and construction activities on all federally funded local agency projects across the state.

(2) Planning Requirements

At the state and federal levels, policies and procedures have been established to provide for areawide coordination of transportation programs.

TEA-21 requires a continuous transportation planning process that involves:

- Transportation Management Areas (TMA) long-range transportation plans
- MPO long-range transportation plans
- Statewide long-range transportation plans
- Statewide Transportation Improvement Program (STIP) (see **Section 310.04**).

(3) Urban Program

The Transportation Improvement Board (TIB) and Transportation Improvement Account (TIA) were established by the 1988 legislature. (They were formerly called the Urban Arterial Board and Urban Arterial Program.) They are designed to provide additional revenues for use in urban areas and to ensure that these revenues are allocated and expended throughout the state in a logical and systematic manner.

The TIB is directed by the legislation to allocate revenues from the Urban Arterial Trust Account and the Transportation Improvement Account to counties and cities for use on specific urban arterial projects. To ensure that these allocations are systematic, orderly and productive, the TIB requires that systems of arterials shall be established for each city and county in urban areas in accordance with the federal functional classification system.

Functional classification is the process of designating and grouping streets into classes, or systems, each of which has a definably distinct function in serving different categories of traffic. The objective of functional classification is to define relative purposes of streets in providing service and influencing urban development, and to establish the most economic yet beneficial systems to meet street needs. The establishment and updating of such systems provides the TIB and the legislature with knowledge that revenues are spent on those streets that serve the major traffic demands in urban areas. Refer to the TIB's *Guidelines to Cities and Counties.*

(4) Rural Arterial Program

The Rural Arterial Program (RAP) was established by the legislature to help finance the reconstruction of rural arterial roads, which faced severe deterioriation in the wake of railroad abandonments. Arterials eligible for funding under the RAP are the county roads in rural areas classified as major collectors and minor collectors in the federal functional classification system.

The program is administered by the County Road Administration Board (CRAB), through a six-year construction program developed by county governments. The construction program is approved by CRAB and funded by the legislature through a biennial funding request. The program's initial funding of 0.33 cents of the Motor Vehicle Fuel Tax (MVFT) was increased to 0.58 cents by the 1990 legislature. That level of funding generates approximately $37 million per biennium to the rural arterial trust account.

Since 1983, RAP has funded over 900 projects, most involving rehabilitation and reconstruction of existing roads and bridges to current and safer design standards.

(5) County Arterial Preservation Program (CAPP)

In 1990 the legislature created a second grant program, the County Arterial Preservation Program (CAPP), also administered by CRAB. Similar to WSDOT's Highway Preservation program, CAPP is designed to help counties preserve their existing paved arterial road networks. The program is funded with 0.45 cent of the fuel tax, which generates approximately $26 million per biennium. For more information on the RAP and CAPP, see CRAB's web site:

http://www.crab.wa.gov/

Click on Resources, then CRAB Links, then Grant Programs.

http://www.crab.wa.gov/grants/

220.05 Exhibits

None.

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Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

230.01 Introduction

Adoption of a comprehensive, balanced, statewide transportation plan is one of the primary responsibilities of the Washington Transportation Commission under RCW 47.01.071. Washington's Transportation Plan (WTP) is a 20-year, fiscally constrained document that outlines the service objectives and strategies for maintaining, operating, preserving, and improving the state transportation system. It also outlines a financial funding strategy that identifies the responsibilities for implementation and establishes needs for the system.

The WTP addresses transportation facilities owned and operated by the state: state highways, the Washington State Ferries, and state-owned airports. It also addresses facilities and services that the state does not own, but has an interest in, as they are vital to the entire transportation system. These are: public transportation, freight rail, intercity passenger rail, marine ports and navigation, nonmotorized transportation, and aviation. System plans for each of these transportation modes are incorporated into the WTP.

The WTP is developed in cooperation with WSDOT regions and divisions; city, county, and transit officials; and representatives of private carriers, with extensive public involvement.

The WTP will be updated periodically in response to changing federal and state legislation, updated growth and revenue projections, and emerging issues. The current WTP was adopted in February 2002, covering the period from 2003 to 2022. The Plan and its component system plans will be updated at regular intervals.

For information on the WTP, the current update process, and related corridor planning, see the WSDOT web site:

http://www.fhwa.dot.gov/environment/env_sum.htm

http://www.wsdot.wa.gov/

Click on Site Index, then T, then Transportation Planning, then Washington's Transportation Plan.

Or by direct link:

http://www.wsdot.wa.gov/ppsc/wtp/

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

230.02 Plan Components

(1) State Highway System Plan

The WTP contains the State Highway System Plan (HSP) which provides service objectives and strategies for maintaining, operating, preserving, and improving our state highways. The HSP is updated every two years and defines service level objectives, action strategies, and costs. It includes an extensive public involvement process.

The HSP describes the major highway programs including highway maintenance (Program M), traffic operations (Program Q), highway preservation (Program P), highway improvement (Program I), highway safety (Subprogram I2), economic initiatives (Subprogram I3), and environmental retrofit (Subprogram I4).

For information on the state highway system, see WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs.

Or by direct link:

http://www.wsdot.wa.gov/TA/HOMEPAGE/HLPHP.html

(2) State Ferry System Plan

The State Ferry System Plan is comprised of three service objectives: ferry system maintenance, ferry preservation, and ferry system improvements. WSDOT is also preparing a Long-Range Ferry Plan to develop ferry capacity needs beyond 2001.

Information on WSF is online at:

http://www.wsdot.wa.gov/Ferries/

(3) State Airport System Plan

The State Airport System Plan is comprised of three service objectives: airport maintenance, airport preservation, and airport improvement. WSDOT manages 16 airports across the state that serve as staging areas for search and rescue operations and provide emergency landing sites for aircraft in distress.

(4) Public Transportation and Intercity Rail Passenger Plan

The Public Transportation and Intercity Rail Passenger Plan for Washington State integrates the intercity passenger rail and public transportation elements of the WTP into a single document. This plan addresses the state-interest components of the transportation system. The full text of this plan is available on the WSDOT Public Transportation and Rail Division web site at:

http://www.wsdot.wa.gov/pubtran/

(5) Freight Rail System Plan

The Freight Rail System Plan has three service objectives:

- Ensure adequate mainline freight capacity and safety and enhance access to and capacity of intermodal terminals.
- Preserve and enhance service on branch lines, promote continued service on light density lines, and preserve essential lines threatened with abandonment.
- Identify and preserve essential rail corridors for future rail service.

(6) *Marine Ports and Navigation System Plan*

The Marine Ports and Navigation System Plan has five service objectives:

- Increase Washington ports' share of the West Coast trade and support the development and growth of port related tourist activities.
- Ensure adequate landside access to and capacity of intermodal terminals.
- Ensure adequate waterside access to and capacity of transportation routes.
- Facilitate and support port actions and investments in port districts that increase speed and efficiency of intermodal transfers.
- Enable marine ports to continue to operate and expand within their shoreline locations while adequately protecting the natural environment.

(7) *Bicycle and Pedestrian Transportation Plan*

The Bicycle and Pedestrian Transportation Plan has two service objectives:

Improve bicycle and pedestrian safety.

Increase the use of bicycling and walking for transportation purposes, principally utilitarian and commuting trips and connections to intermodal facilities.

(8) *Aviation System Plan*

The Aviation System Plan has five service objectives:

- Ensure adequacy and improve general aviation facilities to meet current and future growth and demand in support of the state's trade and economic vitality.
- Promote the development of adequate air carrier airport facilities, both airside and landside to meet preservation, growth, and safety needs.
- Ensure the highest level of aviation safety.
- Provide emergency response capability and public safety through search and rescue and by maintaining, preserving, and improving a system of general aviation and commercial aviation services and facilities.
- Facilitate compliance by pilots, aircraft owners, and airport operators with state aviation regulations to ensure safe aviation and provide funding for general aviation services and facilities.

Information on the Aviation Division is online at:

http://www.wsdot.wa.gov/Aviation/

230.03 WTP Implementation

From the WTP, a six-year implementation program is developed. The Six-Year Plan is constrained to the investment level for a three-biennium period and is used in the budget development process. Only the first two years of the Six-Year Plan contain specific projects. The last four years contain funding levels for the different programs.

230.04 Environmental Issues in the WTP

(1) *Statutory Considerations*

Section 1204 of TEA-21 exempts the WTP from consideration as a federal action subject to review under the National Environmental Policy Act (NEPA). The reasons given include the reasonable opportunity for public comment on the plan and that the individual projects included in the plan are subject to review under NEPA.

The SEPA Rules (WAC 468-12-800(18)) provides a similar categorical exemption for the WTP and the various implementing plans.

The statewide multi-modal transportation plan statute (RCW 47.06.040) directs WSDOT to identify and document potential affected environmental resources and issues, including, but not limited to, wetlands, storm water runoff, flooding, air quality, fish passage, and wildlife habitat during the development of the WTP. WSDOT must coordinate with all relevant environmental regulatory authorities and local governments. Finally, WSDOT must give the regulatory agencies an opportunity to review the environmental plans and the agencies must respond in a timely manner.

The statute also states that "environmental identification and documentation as provided in RCW 47.01.300 and in this section is not intended to create a private right of action or require an environmental impact statement as provided in chapter 43.21C RCW."

The WTP is analogous to a city or county comprehensive plan under GMA. Most of these comprehensive plans were accompanied by environmental impact statements (EIS). The same considerations that cities and counties applied to these comprehensive plans would apply to WSDOT's decision on whether to prepare an EIS for the WTP and its implementing plans.

(2) Environmental Retrofit Program

The Environmental Retrofit Program is one of the subprograms of the HSP. The objective is to retrofit state highway facilities as appropriate to reduce existing environmental impacts. The environmental retrofit program is in addition to WSDOT's commitment of performing appropriate environmental mitigation as a part of all other highway system projects.

The Environmental Retrofit Program focuses on:

- ***Noise Barriers*** – Adding noise mitigation along state highways where neighborhoods are exposed to unacceptable noise levels as defined by federal statute.
- ***Fish Passage*** – Targeting the removal of fish barriers along state highways.
- ***Stormwater Discharge*** – Constructing new stormwater treatment facilities to treat runoff from existing untreated pavements.
- ***Air Quality*** – Implementing all transportation control measures identified in the SIP. Currently, there are no transportation control measures specifically identified in either SIP or the HSP.

(3) Public Transportation and Intercity Rail Passenger Plan

This plan includes as an objective, "to facilitate integration of public transportation in land use development including permitting and environmental impact processes."

(4) Marine Ports and Navigation Plan

This plan includes a service objective to address the environment. There are four proposed actions to support the objective:

- Expedite the regulatory process to enable Washington marine ports to compete in the world market while adequately protecting the natural environment.
- Pursue regulatory process reform to ensure that regulatory agencies accommodate the needs of those port facilities and their supporting inland transportation and navigation channels as being of statewide significance.

- Advocate for adequate disposal sites for the disposal of contaminated dredged materials.
- Facilitate the ability to use federal EPA super fund monies to clean up designated sites.

230.05 Exhibits

None.

300 Programming and Project Definition Phase

300.01 Introduction
300.02 Environmental Issues in Programming and Project Definition
300.03 Exhibits

Key to Icon

Web site.*

300.01 Introduction

Part 300 covers the evolution of transportation plans from the conceptual stage of needs and service objectives as identified in Washington's Transportation Plan (WTP), through statewide prioritizing, to project definition by WSDOT divisions and regional offices, and development of the biennial budget proposal to the legislature.

The Olympia Service Center (OSC) is responsible for developing six-year investment programs for preservation and improvement programs identified in the WTP. The six-year programs identify specific projects for the next biennium and an investment plan for the remaining four years. The programs are developed through a process of needs analysis, evaluation of alternatives, tradeoffs, and cost/benefit analysis to rank projects to be included in the biennial budget. Six-year programs are done concurrently with development of the three-year Statewide Transportation Improvement Plan (STIP) for surface transportation projects required under federal legislation (TEA-21).

During this phase, regional offices are responsible for defining specific projects that address deficiencies identified in the six-year program. For each proposed project, a draft project summary is prepared which identifies the purpose and need; general design parameters (e.g. route, length of road segment, lane width, paving depth); and potential environmental impacts and permitting requirements. A preliminary budget is developed which includes the cost of design, and construction as well as environmental permitting and mitigation.

Draft project summaries are reviewed at Biennial Review Meetings in each region for preliminary scoping of the project by federal and state resource agencies and local municipalities. Based on this feedback, a final project summary is prepared which includes a recommended level of environmental analysis (i.e., categorical exemption/exclusion, environmental assessment, or environmental impact statement).

From the list of benefit/cost prioritized projects, the Transportation Commission selects a mix of projects providing the greatest net benefit to transportation users. This prioritized program is submitted biennially to the Legislature for funding authorization and is included in the STIP.

WSDOT's Program Management Office is responsible for overseeing this phase. For details, see WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then P, then Planning and Capital Program Management, Transportation Planning.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

Or by direct link:

http://www.wsdot.wa.gov/ppsc/planning/

300.02 Environmental Issues in Programming and Project Definition

During this phase, potential projects are reviewed to determine potential environmental impacts, and to classify them for NEPA/SEPA purposes. This analysis is done during programming and project definition in order to anticipate environmental issues as early in the process as possible, and to factor the costs of environmental review into the project budget.

These procedures are described in **Section 320.** See **Exhibit 320-1** through **320-3** for copies of the Project Definition, Design Decision Summary and Environmental Review Summary.

300.03 Exhibits

None.

310 Project Programming

310.01 Introduction
310.02 Six-Year Investment Program
310.03 Highway Access Plans
310.04 Statewide Transportation Improvement Program
310.05 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

310.01 Introduction

Programming of WSDOT projects is required by law and limited, through legislation, to addressing state highway deficiencies (RCW 47.05.010).

The WSDOT project programming process results in the Transportation Commission approving a prioritized list of fiscally constrained projects that meet the service objectives of the 20-year *Highway Systems Plan.* These projects are included in the six-year investment program, the three-year STIP as required by federal law, and the biennial budget request.

(1) Requirements

RCW 47.05 requires that the six-year investment program include a needs analysis that identifies problems and deficiencies, an evaluation of alternative solutions and tradeoffs, and an estimate of the costs and benefits of the proposed projects. Program objectives and performance measures must also be a part of the investment program. Each project in the investment program must meet the service objectives identified in the *State Highway System Plan.*

RCW 47.05 sets the following priorities for project selection based on a cost benefit analysis:

- The preservation of the existing highway system
- Mobility for people and goods
- Support of Washington's economy
- Environmental protection and energy conservation

RCW 47.05 requires that WSDOT and the Transportation Commission consider a broad range of multimodal solutions that address identified state highway deficiencies. These solutions could include:

- Highway expansion projects
- Measures to improve highway efficiency
- Transportation facilities serving non-motorized modes

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

- High occupancy vehicle (HOV) facilities
- Rail facilities
- Transportation demand management (TDM) programs

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

FTA	Federal Transit Administration
HOV	High Occupancy Vehicles
MPO	Metropolitan Planning Organization
RTPO	Regional Transportation Planning Organization
STIP	Statewide Transportation Improvement Program
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Plan
TMA	Transportation Management Agency

310.02 Six-Year Investment Program

RCW 47.05 divides the highway capital construction program into two major components: preservation and improvement.

Preservation includes:

P1 ***Roadway*** **–** Embodies preservation work on roadway surfaces and shoulder and safety features.

P2 ***Structures*** **–** Comprises preservation and catastrophic failure reduction on bridges, major culverts and other structures.

P3 ***Other Facilities*** **–** Includes preservation work in rest areas, weigh stations, unstable slopes, and major drainage and electrical rehabilitation.

The improvement program encompasses:

I–1 ***Mobility*** **–** Projects to allow efficient movement of people and goods. Includes projects to relieve urban congestion and improve capacity in rural areas. Examples of I-1 projects include additional general purpose lanes, truck climbing lanes, intersection improvements, and route realignments.

Methods to prioritize Transportation Demand Management (TDM) and Transportation Systems Management (TSM) are being developed. Examples of TDM include flex time work hours, and user fees; some TDM projects include Surveillance Control and Driver Information. Other subprograms of I-1 address bicycle problems, and the Puget Sound core HOV network.

I–2 ***Safety*** – Designed to make highways safer, including collision reduction in hazardous accident locations, and collision prevention projects that bring highways up to standards in selected high risk locations.

I–3 ***Economic Initiatives*** – Includes projects to upgrade highways to all-weather roads that can carry legal loads all year; provide 4-lane limited access highways for all roads carrying 10 million tons of freight per year; provide rest areas; replace or upgrade bridges that cannot currently carry legal overloads or have vertical clearance of 15 feet

six inches or less; provide interpretive sites on scenic and recreational highways; provide for rural bicycle touring loops.

I–4 ***Environmental Retrofit*** – Provides for stormwater runoff improvements; fish passage barrier removal; noise abatement projects; and air quality improvement.

In addition to these ongoing WSDOT programs, there are two subprograms, which are funded for specific purposes:

I–6 ***Sound Transit*** – The objective of this subprogram, added in the 97-99 biennium, is to partner with Sound Transit (formerly known as the Central Puget Sound Regional Transit Authority) to provide improved transit access to state highways

I–7 ***Tacoma Narrows*** – The objective of this subprogram, added in the 99-01 biennium, is to improve mobility along the SR 16 Tacoma Narrows Bridge corridor by partnering with private firms to design and build improvements.

310.03 Highway Access Plans

Access plans are developed for each limited access highway in the state. The plans define the level of access to intersection, ingress/egress ramps, and driveways. The level of access is directly related to the overall capacity of each highway, as defined by the highway's functional classification.

310.04 Statewide Transportation Improvement Program

TEA-21 requires Transportation Improvement Programs (TIPs) to be prepared by WSDOT and the Metropolitan Planning Organizations (MPO). The Statewide Transportation Improvement Program (STIP) encompasses all projects in Washington funded with TEA-21 funds. It includes:

- All TMA transportation improvement programs;
- All MPO transportation improvement programs; and
- All improvement programs for the remainder of the state.

Agencies involved in preparing the STIP include local governments, RTPOs, TMAs, MPOs, WSDOT, transit agencies, and the Governor's Office.

WSDOT's Highways and Local Programs Office is involved in developing guidelines and procedures for preparing the STIP and manages STIP amendments and financial feasibility throughout the year.

For details, see WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then STIP under Program Management.

Or by direct link:

http://www.wsdot.wa.gov/TA/ProgMgt/STIP/STIPHP.htm

(1) ***STIP Requirements***

TIPs prepared by transportation management areas or MPOs include all federally funded projects in the region (including projects on native lands). Projects for TIPs are selected based on the long-range plan, need, priority rating defined by a clear set of criteria, and the availability of funds. TIPs usually are prepared annually and provide a three-year "window" for projects at both the regional and statewide levels. They must be prepared at least every two years.

In air quality nonattainment areas, projects funded with state or local funds must be included in the TIP as well. This is to ensure that Washington's TIPs reflect important changes to the transportation system with potential air quality impacts.

The current STIP contains federally funded projects plus state and local regionally significant projects programmed for Calendar Year 1999, 2000 and 2001. These projects have been identified through the planning process as the highest priority for the funding available to the state's transportation program.

The STIP also includes state and local roadway, bridge, bicycle, pedestrian, safety and public transportation (transit) projects. Project-related activities, such as preliminary engineering, right-of-way acquisition, and construction are eligible for roadways, and capital and operating expenses for public transit. The projects are organized in alphabetical order by MPO, county and lead agency, and are shown in a standardized format, which includes similar information for each project.

In Washington, most of the TIPS and the STIP have been developed on a yearly basis. A two-year budget is developed in even years and approved in approximately May of odd years. A supplemental budget is developed on the off-year. Likewise, Puget Sound Regional Council, the largest MPO in the state, develops its TIP on even years, and develops a major amendment on odd years. The timing of the STIP process results in it being approved in advance of the two-year budget. Most projects in the two-year budget are also in the approved STIP, although some must be added by amendment. The development of the TlPs includes an extensive public involvement process.

(2) STIP Contents

Following are the basic required elements of the STIP, which must be approved by FHWA and the Federal Transit Administration (FTA):

- Identifies all proposed highway and transit projects in the state funded under title 23 USC and the Federal Transit Act, including Federal Lands projects.
- Incorporates the metropolitan transportation improvement programs approved by the TMAs and MPOs.
- In carbon monoxide, ozone, or PM_{10} non-attainment areas, includes projects that conform with the State Implementation Plan (SIP).
- Maintains consistency with expected available funding.
- Identifies selection priorities developed with appropriate consultation and/or coordination with local jurisdictions, metropolitan planning organizations, and Federal Lands agencies.
- Contains all regionally significant transportation projects requiring FHWA or FTA approval, regardless of funding.
- Meets the requirements of 23 USC 135(f), Statewide Planning, coordination with local jurisdictions, and review by FHWA.

For more details see:

http://www.wsdot.wa.gov/TA/ProgMgt/STIP/STIPHP.htm

310.05 Exhibits

None.

320 Project Definition and Budgeting

320.01 Introduction
320.02 Project Summary
320.03 Preparing the Environmental Review Summary
320.04 Environmental Database Resources
320.05 Project Classifications
320.06 Biennial Budget
320.07 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

320.01 Introduction

Projects are identified based on a funding and fiscal analysis that updates revenue projections for the 20-year system plan and develops a preliminary allocation of available resources. The project identification process encompasses identification of a highway problem or need, statement of project purpose, project scoping, and development of a project summary.

Project summaries are prepared for all projects that will begin design or construction in the next biennium. Each summary includes an environmental review to identify potential environmental issues and impacts. Summaries are used to establish for the Commission and Legislature the level of development required for each project.

Under NEPA and SEPA, projects are classified as either Class I (Environmental Impact Statement required), Class II (Categorically Excluded or Exempt), or Class III (Environmental Assessment or Checklist required) to determine whether environmental impacts will be significant. Under SEPA, the Class III action is known as making a threshold determination.

WSDOT has developed an extensive online GIS database that is useful for preliminary environmental analysis and project classification during the project definition phase. See **Section 320.04**.

(1) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

CE	Categorical Exclusion (NEPA) or Categorical Exemption (SEPA)
DCE	Documented Categorical Exclusion (NEPA)
EA	Environmental Assessment

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
GIS	Geographic Information System
NEPA	National Environmental Policy Act
PS&E	Plans, Specifications and Estimates
SEPA	State Environmental Policy Act

(2) Glossary

Federal Nexus – A project has a federal nexus when there is a connection with the federal government; i.e. when any of the following occur: federal land is within the project area, federal money is used in the project, or federal permits or approvals are required as part of the undertaking.

320.02 Project Summary

Project summaries are prepared in each regional office for all projects proposed to begin design or construction in the next biennium, for which funds will be requested in the next biennial budget. The Project Summary has three components:

- Project Definition
- Design Decisions Summary
- Environmental Review Summary

Preparation of the Project Summary ensures that regional staff have considered all potential costs of the project, including both engineering and environmental factors, so a realistic budget can be prepared.

For details on this process, see WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then P, then Planning and Capital Program Management, then Transportation Planning, then Project Summary Toolbox.

Or by direct link:

http://www.wsdot.wa.gov/ppsc/planning/

For details on the Local Agency Guidelines (LAG) Program Summary process and forms, see WSDOT's web site:

http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM

(1) Project Definition

The Project Definition form (**Exhibit 320-1**) includes:

- Deficiency or need addressed by the project and whether the deficiencies are included in the 20-year Highway System Plan (or equivalent for other modes) or Six-Year Program.
- Statement of purpose and need.
- Proposed strategy (description of work by road segment).
- Right-of-way or relocation requirements.
- Duration of pre-construction and construction activities.

- Summary of design decisions.
- Summary of environmental review.
- Estimated costs.

(2) Design Decisions Summary

The Design Decisions Summary (**Exhibit 320-2**) is prepared with the guidance of the Design Matrix. Design matrices are used to identify the design level(s) for a project and the associated processes and approval authority for allowing design variances. The matrices address the majority of preservation and improvement projects and focus on those design elements that are of greatest concern for project development.

The Design Decisions Summary includes:

- Geometrics and traffic
- Access control designation
- Roadway geometric data (existing and proposed) compared to standard
- Pavement requirements
- Roadway preservation
- Roadside restoration
- Improvements (safety and hydraulics)
- Deviations from the design matrix
- Design variance inventory

(3) Environmental Review Summary

The Environmental Review Summary (**Exhibit 320-3**) allows the regional environmental staff to consider at this early stage potential impacts and mitigations, required permits and approvals, and what form the environmental documentation for the project will take. If the project scope is revised before approval, the design office consults with the regional environmental staff to verify that the environmental classification and other information is still correct.

320.03 Preparing the Environmental Review Summary

The Environmental Review Summary (ERS) form is found in the Project Summary database in each Regional Office. It is completed by the regional environmental staff at the request of regional design staff. On a project that is categorically excluded or exempt (CE) under NEPA and/or SEPA, the signed ERS, with any required documentation, is retained within the Region and serves as the environmental document for the project. For a NEPA Documented CE, which requires FHWA approval, the ERS serves as a draft document, and is replaced by an identical form, called the Environmental Classification Summary (ECS), which requires FHWA signature. This signed ECS serves as the environmental document for the project, as explained in **Section 320.05(3).**

See **Exhibit 320-4** for instructions on completing the summary. The WSDOT Environmental GIS Workbench, which provides data needed for the "Environmental Considerations" section of the form, is described below **Section 320.04**. Guidance on project classifications for NEPA/ SEPA purposes is found in **Section 320.05.**

For details on required procedures and permits, see **Section 410** through **Section 470**.

320.04 Environmental Database Resources

(1) WSDOT's GIS Environmental Workbench

WSDOT's Environmental GIS Workbench is an internal data system developed for use by WSDOT staff in preparing the Project Summary, particularly the "Environmental Considerations" portion of the ERS. The workbench is a user-friendly interface covering a wide range of environmental resources gathered from a variety of public agency and WSDOT sources.

The database has over 60 layers of environmental and natural resource management data, in the following major data categories:

- ***General reference*** – Transportation routes, political and administrative boundaries, major public lands, geographic reference.
- ***Environmental data*** – Air quality, fish and wildlife, priority species and habitats, geology and soils, groundwater and wells, hazardous materials, hydrography, plants, and water quality.

WSDOT users can access these data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

A six-hour training session has been developed to provide WSDOT staff with a starter knowledge of ArcView, the Environmental GIS Workbench tool and the environmental data available through the tool.

The data provided to WSDOT staff through the Environmental GIS Workbench is sufficient for Project Summary purposes.

(a) Accessing the GIS Workbench

WSDOT staff wishing to access this GIS application should contact their Information Technology Manager (or equivalent), and ask for ArcView and the Environmental GIS Workbench Extension. Geographic Services provides WSDOT employees with basic training on ArcView, and the ESO provides technical support and information regarding the data available through this interface.

At this time, there are no plans to provide this interface to the general public or to WSDOT consultants.

(b) Expansion of GIS Workbench

GIS resources for environmental data are expanding rapidly. WSDOT staff works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. New data resources are incorporated into the WSDOT Environmental GIS Workbench over time. To facilitate getting the best data into the system, please contact the ESO's Environmental Information Program with information about newly identified data resources.

(2) What is a GIS Data Set?

A Geographic Information System (GIS) data set is data that describes and locates geographic features and stores an Earth-based delineation of those features. GIS data sets are used to track information about things on the ground, typically organized by geographic features (e.g. stream, watershed, city, county). Using common tabular database technology, GIS links data tables and records with graphical representations (maps) of real-world features. These features are stored using coordinate values correlated with the Earth's surface. This allows tabular information to be stored as a characteristic of a place or geographic feature and then be cross-referenced to other information based on common geographic location.

(3) Using Online GIS Databases

The data needed for transportation project environmental impact analysis often can be retrieved from a GIS database. Many public agencies and non-governmental organizations now focus their mapping functions on building GIS databases rather than physically publishing maps or reports. For example, U.S. Fish and Wildlife Service's National Wetlands Inventory data are available through several web sites and via the WSDOT Environmental GIS Workbench.

Generally, if the online data is sufficient for the purpose, there is no need to acquire paper versions from the same agency. However, agencies often still produce and distribute standardized paper maps and reports produced using their GIS systems. They also often provide copies of the GIS data as a product.

When required data is available through a GIS, it may be reviewed either on-line or on paper printouts. Direct use of the GIS database enables ad hoc inquiries that generate information not found in pre-designed, standard products.

GIS may or may not be the best available source for some environmental data. Whether the environmental data is obtained from paper products or digital ones, the information has the same value and is equally appropriate for use in reviewing projects.

(4) Citing a GIS Database

The GIS data system itself should be cited as a reference whether the data is provided on paper or digitally. Proper form for citations referring to digital database is evolving, but typically includes the name of the data system, the name of the agency that maintains/updates the database, and date of the data retrieval. If the data comes from an Internet web site, the title of the site should be included with the full Uniform Resource Locator (URL).

320.05 Project Classification

Based on the environmental considerations identified during preparation of the Environmental Review Summary, WSDOT projects are classified for NEPA/SEPA purposes to determine the type of environmental documentation that will be required. Projects with a federal nexus (using federal funds, involving federal lands, or requiring federal approvals or permits) are subject to NEPA and SEPA. Projects that are state funded only, with no federal nexus, can just follow SEPA guidelines. Since many WSDOT projects are prepared in the hope of obtaining federal funding, NEPA guidelines are usually followed. The sections below define the three classes of projects and list types of work typically found in each class, FHWA/federal agency concurrence required, and procedures for classifying and, if necessary, reclassifying projects.

(1) Classification System

(a) NEPA Classifications

All projects subject to NEPA are classified as either Class I, II, or III. Class I projects require preparation of an EIS because the action is likely to have significant adverse environmental impacts. Class II projects are categorical exclusions (CE) or Documented categorical exclusions (DCE) that meet the definitions contained in 40 CFR 1508.4. These are actions that are not likely to cause significant adverse environmental impacts. On DCE projects where the use of federal funds is proposed or other federal nexus is present, FHWA must review and concur with the NEPA classification as part of design approval. For guidance on these procedures see the MOU between WSDOT and FHWA, **Exhibit 320-5**.

Class III projects require an Environmental Assessment (EA) because the significance of the impact on the environment is not clearly established.

✐ Memorandum of Understanding between Washington State Transportation Department and Federal Highway Administration, Programmatic Categorical Exclusion Approvals (**Exhibit 320-5**).

(b) SEPA Classifications

Class II projects are categorical exclusions under NEPA but may not be categorically exempt under SEPA (WAC 197-11-305). In the alternative, a NEPA Documented CE (DCE), with some additional information, may be adopted for SEPA and support a DNS, as per the NEPA Categorical Exclusions Implementing Agreement with the Department of Ecology (June 1996); see **Exhibit 320-6**.

If the project is not exempt under SEPA, WSDOT must prepare a SEPA checklist and issue a threshold determination, which may be a Determination of Nonsignificance (DNS) or a Determination of Significance (DS). A SEPA checklist may be required if additional right-of-way is acquired, or environmental impacts result from the project (see **Sections 420** through **470**). For Class III projects, WSDOT may adopt the EA to satisfy the requirements for a DNS under SEPA.

Similarly, a SEPA checklist supports a DNS for a state project and no EIS is required.

See WAC 197-11 Part 3 for SEPA threshold determination criteria.

✐ Implementing Agreement between the Washington State Transportation Department and the Washington State Department of Ecology Concerning Adoption of NEPA Documented Categorical Exclusions.

(2) Class I Projects (EIS)

Class I projects are actions that are likely to have significant impact on the environment because of their effects on land use, planned growth, development patterns, traffic volumes, travel patterns, transportation services, natural resources, or because they are apt to create substantial public controversy. An EIS may follow an EA if significant impacts are discovered during preparation of an EA, or may be prepared without an EA if it is evident that the project will have significant impacts. See **Section 411.05** for details on EIS documents and procedure, and **Section 411.08** for general guidance on preparing an EIS.

Examples of projects that usually require an EIS, as referenced in 23 CFR 771.115, are:

- New controlled-access freeway.
- Highway project of four or more lanes on a new location.
- New construction or extension of fixed rail transit facilities (e.g., rapid rail, light rail, commuter rail, automated guideway transit).
- New construction or extension of a separate roadway for buses or high-occupancy vehicles not located within an existing highway facility.
- Although examples are given, it is important to remember that it is the size and significance of the potential impacts that determines the need for an EIS, not the size of the project.

Class I projects that impact waters of the United States or waters of the state and require a Section 10 permit or a Section 404 permit from the U.S. Army Corps of Engineers (COE) must follow the requirements of the NEPA/SEPA/404 Merger Agreement. This agreement applies to all transportation construction projects in the state of Washington requiring a COE Section 404 permit and FHWA action under NEPA and/or WSDOT action under SEPA. See **Section 431.04** for details on the NEPA/SEPA/ 404 Merger Agreement and **Section 431.06** for details on Section 404 permits.

(3) Class II Projects – Categorical Exclusions (CE and DCE)

Categorical Exclusions are actions that meet the definition contained in NEPA rules (40 CFR 1508.4) and, based on past experience with similar actions, do not involve significant environmental impacts. Unless specifically requested by other agencies or the public, these actions do not require an EIS or an EA.

Categorical exclusions are actions which do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic, or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts.

Class II projects are defined further by two fixed subcategories as described below. The subcategory determines the documentation and approval required.

(a) Class II projects not requiring documentation for FHWA concurrence (CE)

Projects in this subcategory, Categorical Exclusions (CE), meet the requirements of the Memorandum of Understanding Between WSDOT and FHWA on Programmatic Categorical Exclusion Approvals, signed May 25, 1999. See **Exhibit 320-6**. The only NEPA documentation required is a signed Environmental Review Summary that is included in the Project Summary package sent to OSC. No other NEPA documentation or approval by FHWA is required, although some CE projects may require a Biological Assessment (BA), which may result in a "Letter of No Effect" on endangered species or habitat. If "No effect" is documented, the projects may qualify for inclusion under the Programmatic Categorical Exclusion Approvals MOU referred to above.

Examples of CE projects are found in 23 CFR 771.117 and summarized at the FHWA web site below:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then Title 23 CFR, then 771,

then 771.117. Or click on FHWA Programs, then Environment, then NEPA: Document Development Process, then Documentation, then Environmental Documentation: Categorical Exclusion.

Or by direct link:

http://www.fhwa.dot.gov/environment/nepa/doc_ce.htm

(b) Class II projects requiring documentation and FHWA concurrence (DCE)

For projects in this subcategory, Documented Categorical Exclusions (DCE), additional environmental documentation is required and FHWA approval must be obtained prior to beginning the PS&E. If indicated by the Environmental Review Summary (ERS), preliminary environmental studies are completed. The ERS is then renamed the Environmental Classification Summary (ECS), signed by the WSDOT Regional Environmental Manager, and sent with federal permits and/or documentation to FHWA for approval and signature prior to beginning the PS&E.

After obligation of project design (PE) funds, detailed environmental studies for CE documentation may be required for DCE projects to determine the environmental, economic, and social impacts. WSDOT then finalizes the ECS and submits it to FHWA for final approval. Examples of DCE projects are found in 23 CFR 771.117 and summarized at the FHWA web site below:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then Title 23 CFR, then 771, then 771.117. Or click on FHWA Programs, then Environment, then NEPA: Document Development Process, then Documentation, then Environmental Documentation: Categorical Exclusion.

Or by direct link:

http://www.fhwa.dot.gov/environment/nepa/doc_ce.htm

Any action that would normally be classified as a CE or DCE but could involve unusual circumstances will require the applicant, in cooperation with the FHWA, to conduct appropriate environmental studies to determine if the CE classification is proper. Such unusual circumstances include:

- Significant environmental impacts.
- Substantial controversy on environmental grounds.
- Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act (see Section 455.02).
- Inconsistencies with any federal, state, or local law or administrative determination relating to the environmental aspects of the action.

(4) Class III Projects – Environmental Assessment (EA)

When the significance of the impact of a proposed project on the environment is not clearly established, an EA is prepared to determine the extent of environmental impact and to determine whether an EIS is needed. WSDOT may adopt the EA to satisfy requirements for a DNS, but the EA will not satisfy the EIS requirement under SEPA. RCW 43.21C.150 provides that compliance with SEPA is not required where there has been a "detailed statement" prepared under NEPA, but an EA is generally not a detailed

document. Refer to the definitions of each under 40 CFR 1508.9 and 1508.11. No EIS is required when the EA supports a NEPA Finding of No Significant Impact (FONSI). See **Section 411.04** for details on EA documentation and procedure.

(5) Classification Procedure

(a) NEPA Classification Procedure

The NEPA documentation procedure consists of various stages during project development. Generally, the path is as follows: Scoping/ERS documents, evolving to Design/ECS documents, evolving to PS&E/Permit documents, evolving to Construction.

The procedure for NEPA classification is as follows:

- Once the project has been sufficiently developed to assess any environmental impacts, the Region completes the ERS based on the best information available at the scoping stage.
- The Regional Environmental Manager then concurs with the classification by signing the ERS and the completed form is returned to the design office for inclusion in the Project Summary package.
- If a project has been determined to be a Categorical Exclusion (NEPA-CE), the NEPA environmental review process is considered complete. If it is determined that a Documented CE, EA, or EIS is required, the Region evaluates the project schedule and arranges for preparation of the appropriate document.

(b) SEPA Classification Procedure

SEPA requires no documentation with regard to categorical exemptions; therefore, the region is responsible for verifying and monitoring these projects to assure that all necessary environmental documentation is completed. The procedure for SEPA projects is as follows:

- Once the project has been sufficiently developed to assess any environmental impacts, the region completes the ERS based on the best information available.
- The Regional Environmental Manager then concurs with the classification by signing the ERS and the completed form is returned to the design office for inclusion in the Project Summary package.
- On projects funded entirely with state funds, this ends the environmental classification process. On projects that are categorized as exempt from SEPA, the environmental process is complete, unless the project requires biological evaluation to comply with the Endangered Species Act. On projects categorized as needing a SEPA checklist or EIS, those documents are prepared as necessary prior to design approval.

(6) Revision of Project Scope and Classification

See **Section 411.10** for details on project re-evaluation and preparation of supplementary environmental documentation if warranted by the re-evaluation.

(a) NEPA Reclassification

As FHWA must concur with the NEPA classification, any major change in a project classification for a project involving federal funds requires the processing of a revised ECS form. Minor changes may be handled informally, if FHWA concurs.

(b) SEPA Reclassification

When the scope of a project is changed, a revised ERS is normally required with some exceptions. As part of that revision process, the environmental classification needs to be reassessed. The decision on whether or not to revise the ERS is made by the regional environmental office in coordination with the region program management office. For many minor scope changes, a new ERS is not required. A note to the file or a follow-up memo should then be prepared to document the revision.

In some cases, new circumstances may cause a change in the environmental classification but not a change in scope. Any changes in classification are documented by a note to the file or a follow-up memo.

320.06 Biennial Budget

For road projects, the biennial budget is tied to the State Highway System Plan and six-year plan. The budget and system plan are updated every two years to add new service objectives, action strategies, and new programs associated with service objectives. Conversely, as service objectives are met or further refined, existing programs may be reduced or eliminated in future Highway System Plan documents and biennial budgets.

320.07 Exhibits

Exhibit 320-1 – Draft and Final Project Definition.

Exhibit 320-2 – Draft and Final Design Decision Summary.

Exhibit 320-3 – Environmental Review Summary/Environmental Classification Summary.

Exhibit 320-4 – Instructions for Completing Environmental Review Summary

Exhibit 320-5 – Memorandum of Understanding between WSDOT and FHWA – Programmatic Categorical Exclusion Approvals.

Exhibit 320-6 – Implementing Agreement between WSDOT and Ecology Concerning Adoption of NEPA Documented Categorical Exclusions.

Washington State Department of Transportation

Draft and Final Project Definition

WIN	SR (WIN)	OTHER SR(S)?	REGION	COUNTY	RECORD CREATED	DATE FORM REVISED	REVISION NO.
		☐	Eastern		03/01/2001		

Title (WIN):

Type of Work:

BEGIN (WIN)	END (WIN)	CENTERLINE LENGTH	RESURFACING LENGTH
KP _____	KP _____	KM _____	Lane KM _____
MP _____	MP _____	Miles _____	Lane Miles _____

FUNCTIONAL CLASS	NHS STATUS	ROADWAY	OTHER PARTNERS?
		O 2 lane O Multi-lane O Other...	O Yes O No O Maybe

Will this Project be Value Engineered? O Yes O No

NEW/ RECONSTRUCTION? O Yes O No O Undetermined

ESTIMATED PROJECT COSTS

Date of Cost Index:

	Estimate	Variance
Prelim. Engnrg:		
ROW:		
Construction:		
Total:		

Benefit Cost (B/C) Ratio:

STATEMENT OF DEFICIENCIES/NEEDS

System Plan Page Number: *Year:*

STATEMENT OF PURPOSE

PROPOSED STRATEGY

PIN - 1	%	Sub-Program/ Category SR: Begin to End MP	Project Title (PIN)/ Description
		SR _____ Begin MP End MP	Type of Work:
		SR _____ Begin MP End MP	Type of Work:

RIGHT-OF-WAY

O No

O Yes

Relocation

O Yes

O No

PHASE DURATION

Preconstruction Duration, Months:

Comments:

Construction Duration, Months:

Comments:

Recommended Ad Time?

☐ Spring
☐ Summer
☐ Fall
☐ Winter
☐ Any

PPSC: REVISED 3/98 (MJC)

DATE PRINTED: 3/1/2001 - PAGE 1 OF 2

Washington State Department of Transportation

Draft and Final Project Definition (Continued)

WIN	SR (WIN)	*Title (WIN):* *Type of Work:*	DATE FORM REVISED	REVISION NO.

SUMMARIZE THE FOLLOWING INFORMATION BASED ON DESIGN FILE DOCUMENTATION

1) *Preliminary Environmental Review (Required environmental documentation, permits and environmental commitments):*

See Environmental Review Summary Form for additional details

2) *Design Decisions (design level, geometric, geotechnical, hydraulic, structural, or pavement design decisions made to date):*

Start MP	End MP	Pavement Type	Pre-level Amount (Tons/Lane-Mile)	Pavement Depth ft	Pavement Depth mm

See Design Decisions Summary Form for additional details

3) *Public Input (Summary of any public involvement to date):*

4) *Project Commitments*

a. *Commitments Made **To** Others:*

b. *Commitments Made **By** Others:*

5) *Potential Utility Impacts (Key utility impacts):* ◯ Yes ◯ No

6) *Work Zone Traffic Control Strategy:* ◯ Yes ◯ No

7) *Potential Railroad Impacts (Key RR related):* ◯ Yes ◯ No

8) *Specialized Workforce Expertise Required (Summarize Specialized WF for PE or construction phases):* ◯ Yes ◯ No

9) *Other Issues (Emergency Services, School, Transit, etc.):* ◯ Yes ◯ No

APPROVAL SIGNATURES

REGIONAL PROJECT APPROVAL:	DATE	OSC COMMENTS:
OSC PROGRAM MANAGEMENT APPROVAL:	DATE	

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DATE PRINTED: 3/1/2001 - PAGE 2 OF 2

Washington State Department of Transportation

Draft and Final Design Decisions Summary

PIN *	WIN	SR (PIN)	Title (PIN): Type of Work:				
PIN(S) COVERED	REGION	BEGIN (PIN)	END (PIN)	CENTERLINE LENGTH (PIN)	RECORD CREATED	FORM REVISED	REVISION NO.
	ER	KP ____ MP ____	KP ____ MP ____	KM ____ Miles ____	3/1/2001		

GEOMETRICS AND TRAFFIC

Design Matrix: *Row:*

Need for Right-of-Way? ◯ Yes ◯ No ◯ Undetermined

Design Speed { *Mainline:* *Crossroads:*

Design Year:

CURRENT DESIGN YEAR

ADT:

Truck %:

ACCESS CONTROL DESIGNATION

On Access Master Plan? ◯ Yes ◯ No

Current:

Proposed:

Access Mgmt Classification:

ROADWAY GEOMETRIC DATA	EXISTING Min/Max	EXISTING Metric(calc) Min/Max	PROPOSED Min/Max	PROPOSED Metric (calc) Min/Max	STANDARDS	
TOTAL NO. THROUGH LANES						
NO. LANES THIS PROPOSAL						
LANE WIDTH	/ ft	/ m	/ ft	/ m	ft	m
AUX LANE LENGTH	miles	km	miles	km		
AUX LANE WIDTH	/ ft	/ m	/ ft	/ m	ft	m
TOTAL ROADWAY WIDTH	/ ft	/ m	/ ft	/ m	ft	m
SHOULDER WIDTH LEFT/ INSIDE	/ ft	/ m	/ ft	/ m	ft	m
SHOULDER WIDTH RIGHT/ OUTSIDE	/ ft	/ m	/ ft	/ m	ft	m
TOTAL ROADWAY WIDTH + SHOULDER	/ ft	/ m	/ ft	/ m	ft	m
MEDIAN WIDTH	/ ft	/ m	/ ft	/ m	ft	m

ADDITIONAL PROJECT INFORMATION

PAVEMENT

Pavement Reconstruction? ◯ Yes ◯ No

Start MP	End MP	Pavement Type	Pre-level Amount (Tons/Lane-Mile)	Pavement Depth ft	Pavement Depth mm	calculated Ft	calculated mm	Super-elevation or Crown Correction	Milling

Pavement Design Complete? ◯ Yes ◯ No

P1 ROADWAY PRESERVATION

Optional Minor Safety or Minor Preservation Work

Start MP End MP

Required Safety Items of Work Deferred? ◯ Yes ◯ No

ROADSIDE RESTORATION

Roadside Classification:

☐ Forest ☐ Open ☐ Rural ☐ Semi-Urban ☐ Urban

Treatment Level:

Specific Commitments/Comments:

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** - One form used to describe design decisions for the all the PIN(s) associated with this WIN*

PAGE 1 OF 2 - DATE PRINTED:

Washington State Department of Transportation

Draft and Final Design Decisions Summary (Continued)

PIN *	SR (PIN)	Title (PIN): Type of Work:	DATE FORM REVISED	REVISION NO.

IMPROVEMENTS

Safety (curve realignment, slope flattening, illuminating, etc.):	Hydraulic Decisions:

DEVIATIONS	DESIGN VARIANCE INVENTORY (NHS P1 PROJECTS ONLY)
	Is Design Variance Inventory Complete: ◯ Yes ◯ No

APPROVAL SIGNATURES

REGIONAL OR OSC DESIGN CONCURRENCE	DATE	REGIONAL OR OSC DESIGN APPROVAL	DATE

PPSC. REVISED 3/98 (MJC)

PAGE 2 OF 2 - DATE PRINTED: 3/1/2001

Washington State Department of Transportation

Environmental Review Summary and Environmental Classification Summary

PART 1. PROJECT DESCRIPTION

WIN	SR (WIN)	OTHER SR(S)? ☐	REGION	COUNTY	RECORD CREATED	DATE FORM REVISED	
PIN	*Title (WIN):*					TOWNSHIP	
	Type of Work:					RANGE	

BEGIN (WIN)	END (WIN)	CENTERLINE LENGTH	WITHIN PUGET SOUND BASIN?	WATER RESOURCE INVENTORY AREA (WRIA) NO. & NAME
KP _____ MP _____	KP _____ MP _____	KM _____ Miles _____		

PART 2. PERMITS AND APPROVALS REQUIRED

	Permit or Approval		Permit or Approval
❍ Yes ❍ No	Corps of Engineers ☐ Section 404 ☐ Section 10 COE Type: ☐ Individual ☐ Nationwide Individual Permit #: _____ Nationwide Type:	❍ Yes ❍ No	Nat. Pollutant Discharge Elimination System (NPDES) Baseline General for Construction ☐ Stormwater Site Plan ☐ Temporary Erosion Sediment Control Plan (TESC)
❍ Yes ❍ No	Coast Guard	❍ Yes ❍ No	Shoreline Permit
❍ Yes ❍ No	Coastal Zone Management Certification	❍ Yes ❍ No	State Waste Discharge Permit
❍ Yes ❍ No	Critical Areas Ordinance (CAO) Permit	❍ Yes ❍ No	Temporary Modification of Water Quality (TWQM) standards
❍ Yes ❍ No	Flood Plain Development Permit	❍ Yes ❍ No	Tribal Permit(s) (Any)
❍ Yes ❍ No	Forest Practices Approval	❍ Yes ❍ No	Section 4(f)/6(f): Wildlife Refuges, Recreation Areas, Historic Properties
❍ Yes ❍ No	Hydraulic Project Approval	❍ Yes ❍ No	Water Use Permit
❍ Yes ❍ No	Local Building or Site Development Permits	❍ Yes ❍ No	Water quality certification – Sec. 401 Issued By:
❍ Yes ❍ No	Local Clearing & Grading Permits	Other Permits	List:
❍ Yes ❍ No	Nat. Historic Preservation Act – Section 106	❍ Yes ❍ No	
❍ Yes ❍ No	(NPDES) Municipal Stormwater Discharge		

PART 3. ENVIRONMENTAL CLASSIFICATION

NEPA	SEPA
☐ Categorically excluded per 23 CFR 771.117( )	☐ Categorically exempt per WAC 197-11-800
☐ Documented CE (DCE)	☐ Determination of Non-Significance (DNS)
☐ Environmental Assessment (EA)	☐ Environmental Impact Statement (EIS)
☐ Environmental Impact Statement (EIS)	☐ Other Action
☐ Supplemental EIS (SEIS)	☐ Adoption
	☐ Addendum

APPROVAL SIGNATURES

REGIONAL ENVIRONMENTAL MANAGER	DATE	REGIONAL ENVIRONMENTAL CONTACT	
FED. HIGHWAY ADMIN. (FOR ECS USE ONLY)	DATE	COMPLETED BY Telephone:	Fax:

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PART 4. ENVIRONMENTAL CONSIDERATIONS	WIN

Will the project involve work in or affect any of the following? Identify proposed mitigation.
Attach additional pages or supplemental information if necessary.

1. Air Quality Identify any anticipated air quality issues.

Is project included in Metropolitan Transportation Plan?	❍ Yes ❍ No
Located in an Air Quality Non-Attainment Area (for carbon monoxide, ozone, or PM 10)?	❍ Yes ❍ No
Exempt from Air Quality conformity requirements?	❍ Yes ❍ No

2. Critical/Sensitive Areas Identify any known Critical or Sensitive Areas as designated by local Growth Management Act ordinances.

a. Aquifer Recharge Area, Wellhead Protection Area, or Sole Source Aquifer

b. Geologically Hazardous Area

c. Habitat List known species.

(1) Threatened/Endangered Species or Priority Habitat or Species. Indicate state or federal listing.

(2) General Fish and wildlife habitat.

d. Wetlands. Estimate impacted categories and acreage. Are wetlands present? ❍ Yes ❍ No

Estimated Acres Impacted: Acres

3. Cultural Resources/Historic Structures Identify any historic or archaeological resources.

4. Flood Plains or Ways

Is the project located in a 100-year flood plain?	❍ Yes ❍ No
If yes, is the project located in a 100-year floodway?	❍ Yes ❍ No
Will the project impact a 100-year flood plain?	❍ Yes ❍ No

5. Hazardous and Problem Waste

Identify potential sources and type. Is project likely to involve site clean-up? ❍ Yes ❍ No

6. Noise Identify potential sensitive receptors or previous mitigation commitments.

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PART 4. ENVIRONMENTAL CONSIDERATIONS (CONTINUED)	WIN
7. Parks, Recreation Areas, Wildlife Refuges, Historic Properties, or Scenic Rivers/Byways, 4(f)/6(f) Lands Identify areas of impact.	
8. Resource Lands Identify areas of impact.	
a. Agricultural	
b. Forest/Timber	
c. Mineral	
9. Rivers, Streams (continuous, intermittent), or **Tidal Waters**	
a. Identify by name, proximity to project, and Washington Stream Catalog Number.	Fisheries WA Stream No. _____ Ecology 305b Report No. _____
b. Identify stream crossing structures by type	
10. Tribal Lands Identify.	
11. Visual Quality Will project impact roadside classification or visual aspects?	❍ Yes ❍ No
12. Water Quality/Stormwater Is project likely to increase runoff or affect water quality?	❍ Yes ❍ No
Will project include water quality/quantity treatment for the new pavement?	❍ Yes ❍ No
Will project include water quality/quantity treatment for existing pavement?	❍ Yes ❍ No
Has a NPDES municipal general permit been issued for this WRIA?	❍ Yes ❍ No
13. Have previous environmental commitments been made in project area? Identify.	❍ Yes ❍ No
14. Are long-term maintenance commitments necessary for this project? Identify.	❍ Yes ❍ No

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Environmental Review Summary Instructions

As is appropriate, indicate if the "Environmental Review Summary" form is draft or final. Or, if it is being used as the "Environmental Classification Summary." Also, indicate whether the second and third pages of this form are necessary to fully describe the anticipated environmental impacts of this project. This is accomplished by selecting the appropriate non-printing radio button: "Use First Page Only" or "2nd & 3rd page Needed/ Used."

The Environmental Review Summary (ERS) Form has four parts. Parts 1, 2 and 3 must be filled out for every project.

Use Part 4 only if a project potentially impacts any of the following environmental features.

- Air quality
- Aquifer recharge area/wellhead protection area/sole source aquifer
- Geologically hazardous area
- Threatened & endangered species/priority habitat or species
- General fish & wild habitat
- Wetlands
- Cultural resources/historic structures
- Flood plains or ways
- Hazardous & problem waste
- Noise
- Parks/recreation areas
- Wild life refuges
- Historic properties
- Scenic rivers/byways
- Section 4 (f) lands
- Section 6 (f) lands
- Agricultural resource lands
- Forest/timber resource lands
- Mineral resource lands
- Rivers
- Streams
- Tidal waters
- Tribal lands
- Visual quality
- Water quality/storm water
- Environmental commitments that may have been made in the area
- Long-term maintenance commitments.

Part 1

Part 1 includes an overall project description. The majority of these fields will be automatically filled in when entered on the Project Summary forms by Program Management, and cannot be altered by Environmental staff. The following fields requires data entry:

Date Form Revised:

Date for latest significant revision to the Environmental Review form only. This date should be changed as the record is periodically updated. It must be entered manually or using the "Update" button.

Revision No.:

Number of latest revision to an approved Project Summary (all forms). This value cannot be input manually, but is input automatically via a script.

Water Resource Inventory Area (WRIA) No. & Name:

The name and numbers of these areas along with a map are located in WAC 173-500-040.

Within Puget Sound Basin:

Will be automatically selected as 'Yes' if the project is located in the following 12 counties; Clallam, Island, Jefferson, King, Kitsap, Mason, Pierce, San Juan, Skagit, Snohomish, Thurston and Whatcom. This value is only entered when the county is first selected, but before a value is indicated for this field. The value in the fields can be overridden by highlighting and retyping.

Part 2

Part 2 of the ERS Form includes permits and approvals required by a project. Select yes or no based on if the permit is required or not.

Corps of Engineers Permit:

1. Indicate if it's a section 404, section 10 permit or both.
2. Indicate if it's an individual or nationwide.
   a. If individual enter permit number if known.
   b. If nationwide, enter the proposed nationwide permit type number.

The name and numbers of these nationwide permits are located in Corps. Special Public Notice dated 2/11/92.

(NPDES) Baseline General for Construction:

Indicate if Stormwater Site Plan or Temporary Erosion Sediment Control Plan (TESC) is required.

Part 3

Part 3 of the ERS Form includes the classification of the environmental document the proposed action may require. Projects are environmentally classified in both the NEPA and SEPA columns. Select the appropriate box for the environmental documentation that will be prepared for the project.

NEPA and SEPA Categorical Exclusion and Exemption Levels

Specify the appropriate subsection the CE falls under. If NEPA subsection D, select the documented CE (DCE) box.

Approval Signatures

Regional Environmental Manager:

The Environmental Manager must sign and date page 1 of the ERS Form.

Regional Environmental Contact:

Type the name of the Regional Environmental staff person to contact in the future.

Completed by:

Type the name of the staff person who completed the form and specify completion date.

Federal Highway Administration:

Should be left blank for the Project Summary documentation.

For the Environmental Classification form only:

When the ECS form is used, the Regional Environmental Manager signs the form initially, and then that copy is forwarded to FHWA for the appropriate signature.

Part 4

Complete only the subject areas that are appropriate. If this section is completed, indicate that the second and third pages are used, and thus should be included with the Project Summary documentation.

If the resource is present but no impacts are anticipated, describe in the remarks why there will be no impacts.

MOU – Programmatic Categorical Exclusions Approvals

Memorandum of Understanding
Between
Washington State Department of Transportation
and
Federal Highway Administration

Programmatic Categorical Exclusion Approvals

This Memorandum of Understanding (MOU) between the Washington State Department of Transportation (WSDOT) and the Federal Highway Administration (FHWA) *[words omitted on original]* agreement for classifying projects as Categorical Exclusions (CE) identified in 23 CFR Part 771.117 - Environmental Impact and Related Procedures.

A. Actions identified in 23 CFR 771.117(c) that meet the criteria of 23 CFR 771.117(a) do not require further approvals by FHWA.

B. WSDOT and FHWA concur in advance with a categorical exclusion (CE) classification for those projects identified in 23 CFR 771.117(d) which have no significant environmental impacts. Actions so identified do not require further approvals by FHWA. For these actions, WSDOT certifies that the criteria of 23 CFR 771.117(a) and all the following conditions will be satisfied for all of the projects processed under this programmatic classification and approval process.

The following conditions will apply to those actions that qualify under 23 CFR 771.117(d), which are processed by WSDOT under this programmatic approach:

1. The action does not have any significant environmental impacts as described in 23 CFR 71.117(a);

2. The action does not involve unusual circumstances as described in 23 CFR 771.117(b);

3. The action does not involve the following:

   a. The acquisition of more than minor amounts of temporary or permanent strips of right of way for construction of such items as clear vision corners and grading. Such acquisitions will not require any commercial or residential displacements;

   b. The use of properties protected by Section 4(f) of the Department of Transportation Act (49 U.S.C. 303);

   c. A determination of adverse effect by the State Historic Preservation Officer;

   d. Any U.S. Coast Guard construction permits or any U.S. Army Corps of Engineers Section 404 permits;

   e. Any work in wetlands;

   f. Any work encroaching on a regulatory floodway or any work affecting the base floodplain (100-year flood) elevations of a water course or lake;

   g. Construction in, across, or adjacent to a river designated as a component or proposed for inclusion in the National System of Wild and Scenic Rivers published by the U.S. Department of the Interior/U.S. Department of Agricultural;

h. Any changes in access control;

i. The use of a temporary road, detour, or ramp closure unless the use of such facilities satisfy the following conditions:

(1) Provisions are made for access by local traffic and so posted;

(2) Through-traffic dependent business will not be adversely affected;

(3) The detour or ramp closure, to the extent possible, will not interfere with any local special event or festival;

(4) The temporary road, detour or ramp closure does not substantially change the environmental consequences of the action;

(5) There is no substantial controversy associated with the use of temporary road, detour, or ramp closure;

j. Any known hazardous materials sites or previous land uses with potential for hazardous materials sites or previous lands uses with potential for hazardous materials remains within the right of way;

4. The action conforms to the Air Quality State Implementation Plan, which is approved or promulgated by the Environmental Protection Agency in air quality non-attainment areas;

5. The action is consistent with the state's Coastal Zone Management Plan as determined by the appropriate state agency;

6. The analysis required by Section 7 of the Endangered Species Act indicates that this project will have no effect on Federally listed threatened and endangered species.

All determinations made by the WSDOT under this blanket classification will be documented in the project summary outlined in the WSDOT Design Manual and Programming and Operations Manual, Construction Program. The project summary will be available for FHWA review upon request.

C. If one or more of the conditions outlined in Paragraph B are not satisfied, separate environmental documentation on the appropriate WSDOT environmental summary form will be required as defined in 23 CFR 771.117(d).

The environmental classification for all projects will be identified on the project authorization submitted to the FHWA Division Office. Submittal of documentation for projects identified as Categorical Exclusions under paragraphs A and B is not required.

(original signed) (Dated 5/24/99)
Donald K. Nelson Date
Assistant Secretary
Environmental & Engineering Service Center
Washington State Department of Transportation

(original signed) (Dated 5/25/99)
Gene K. Fong Date
Division Administrator
Washington State Division Field Office
Federal Highway Administration

NEPA Categorical Exclusions Implementing Agreement

Implementing Agreement
between
The Washington State Department of Transportation
and
The Washington State Department of Ecology
Concerning Adoption of NEPA Documented Categorical Exclusions

I Authority

This implementing agreement is being adopted pursuant to the Memorandum of Understanding between the Department of Ecology (Ecology) and the Department of Transportation (WSDOT) dated August 4, 1988.

State-level environmental review of projects is required by the State Environmental Policy Act (SEPA). Environmental review of WSDOT projects under the National Environmental Policy Act (NEPA) is required when a project includes federal funding or involves a federal action. SEPA adoption of NEPA documents is allowed under WAC 197-11-610 which states that an agency may adopt any environmental analysis prepared under NEPA by following WAC 197-11-600 and 197-11-630.

NEPA Documented Categorical Exclusions are authorized by the Federal Highway Administration's NEPA implementing regulation, 23 CFR §771.117.

II Background & Summary

WSDOT has requested that Ecology concur with adoption of NEPA documented categorical exclusions (DCE) as the SEPA Environmental Checklist for SEPA Determination of Nonsignificance (DNS) threshold decisions. Ecology has agreed to concur with adoption of WSDOT's existing DCE documentation form (Environmental Classification Summary - ECS) as the SEPA checklist, provided that WSDOT include in the adoption packages those elements of the SEPA Environmental Checklist-Section *A. Background*, not included in the ECS form. The adoption process will include a 15-day public/agency comment period.

The key criterion for adoption is that the adopting or lead agency (i.e., WSDOT) must independently review the content of the document and determine that it meets the adopting agency's review standards and needs. The information being adopted must be of sufficient detail and scope to allow the public and reviewing entities to comment in a reasonable fashion, i.e., in the case of a DCE substituting for a checklist, comparable information to a checklist must be contained in the document.

In the spirit of regulatory reform, both agencies agree to meet the following requirements to allow for adoption of existing DCE forms with the additional information noted herein. This agreement will benefit both agencies by reducing paperwork and permit processing time, and eliminating repetitive information preparation and review.

NOTE: Many WSDOT projects are funded using Title 23 transportation funding as provided by the USDOT through either FHWA or FTA (EPM Revision, March 2003).

III. Agreement

Department of Ecology (Ecology):

1 Ecology concurs that the adoption of a NEPA documented categorical exclusion (DCE) under the Federal Highway Administration's NEPA implementing regulation, 23 CFR §771.117, is allowable under the State Environmental Policy Act (SEPA). Rules in lieu of completing a SEPA checklist, provided the requirements of WAC 197-11-610 and 197-11-630 are met.

2 Ecology will prepare a notice for the SEPA Register notifying other agencies and the public of Ecology's interpretation that an adoption of a NEPA documented categorical exclusion is allowable under the SEPA Rules.

3. Ecology will review and may provide comments, if appropriate, during the 15-day public/agency comment period for each proposed project for which adoption of a DCE is planned to comply with SEPA

Department of Transportation (WSDOT):

1. As lead agency, WSDOT will review the content of adoption packages and determine that they meet the adopting agency review standards, as per WAC 197-11-630, prior to submitting the package.

2 WSDOT will submit an adoption package for Ecology's review concurrently with initiation of public notice. The package will consist of:

a. A completed Environmental Classification Summary form;

b. *A Determination of Nonsignificance and Adoption of Existing Environmental Document*, essentially in the format of Ecology form ECY 050-46(b); and

c. The following items required in a SEPA checklist, but not contained in the ECS form, will be included as an attachment to the package, or otherwise provided within the documentation:

i. Proposed timing of project (including phasing if applicable).

ii. List future additions, expansions, or further activity related to project.

iii. List any environmental information that has been prepared, or will be prepared, that relates to this proposal.

iv. Give complete project description, and location information, including zoning classification of site.

v. Earth: give approximate slope of site, soil type, source of fill material, percent of increased impervious surfaces, erosion potential, and measures to reduce erosion.

vi. Water: List and describe any impacts to lakes or other surface waters not included in the ECS form. List any proposed surface or ground water withdrawals, diversions or discharges.

3. WSDOT's adoption process will include a 15-day public/agency comment period, including publication of a public notice of the adoption and DNS in a newspaper serving the project area. A copy of the adoption package will be sent to all permitting agencies.

4. WSDOT will consider revision of the Environmental Classification Summary form to include the additional information required for this adoption process.

IV. Duration of Implementing Agreement

This Implementation Agreement will remain in effect until terminated. Either party may terminate this Agreement upon 30-day written notice to the other. Written notice of termination shall include the reason[s] for termination.

V. Revisions to Implementing Agreement

Revisions to this Implementing Agreement may be initiated by either party and wil1 become final after both parties are in agreement and appropriate signatures are attached.

VI. Execution

The undersigned hereby agree that WSDOT and Ecology will complete the above listed requirements when proposing adoption of, or reviewing for adoption, a NEPA documented categorical exclusion as the SEPA checklist.

Jerry Alb, Director
Environmental Services
Department of Transportation

(Signed Original)

Date: (Dated 6/20/96)

David Bradley, Supervisor
Environmental Review & Sediments
Department of Ecology

(Signed Original)

Date: (Dated 6/14/96)

NOTE: The public/agency comment period was changed to 14 days in the April 1998 revision to the WAC (EPM Revision, March 2003).

400.01 Introduction
400.02 Organization of Part 400
400.03 Exhibits

400.01 Introduction

Part 400 covers environmental analysis and documentation requirements during project development, which has two phases: (1) the design phase, beginning after the legislature has allocated funds to the project, and ending with approval of the project design and environmental documents; and (2) the PS&E phase, during which plans, specifications, and estimates (PS&E) are approved and permits are obtained. At the end of the project development phase, the project goes to bid. **Figure 400-1** illustrates this process. **Figure 400-2** shows the relationship between design and permitting once the final design and environmental documents are approved.

During the design phase, the project is completed to the level needed to do the environmental analysis and compare alternatives. Most environmental analysis is done in tandem with project design, and re-design to accommodate an environmental issue is common. An environmental document is drafted after analyzing environmental issues, developing mitigation measures, consulting with resource agencies for any permits involved, and making a determination about the significance of the environmental impacts. When the environmental document is finalized, the final design stage begins, and the project cost, scope, and schedule can be set.

The design phase is generally considered complete with approval of the design file and environmental documents. A Finding of No Significant Impact (FONSI) for EAs, and a Record of Decision (ROD) for FEISs are the final federal approval of environmental documents. (The WSDOT Design Manual states that an "8 Point Access Report" is required for approval of an FEIS for a Limited Access Highway.)

Key environmental compliance activities are:

- Agency coordination and public involvement
- Analysis of environmental impacts
- Comparison of impacts for each alternative
- Preparation of mitigation plans
- Documentation
- Preparation of project commitment file
- Preliminary permit applications

After the design phase is complete, preliminary and final contract PS&Es are prepared, and rights-of-way and permits are acquired. If a project is currently funded, the acquisition of rights-of-way can occur before the PS&Es are completed. If funding for construction is unavailable, the PS&Es may be completed, but "shelved" until funding is available.

Key environmental compliance activities during this phase are:

- Final mitigation plans
- Final permits

Certain environmental activities continue late into the development process. Removal of hazardous materials, mitigation and compensation measures, and permit issues all could potentially span into the post-design phases of a project, and could result in additional duties, tasks, and costs.

400.02 Organization of Part 400

Part 400 first gives an overview of the NEPA/ SEPA process of environmental review and analysis that occurs during project development. **Section 410** gives an overview of NEPA and SEPA legislation and implementing regulations that specify the process to be followed. **Section 411** gives step-by-step guidance on preparing environmental documents: categorical exclusions and/or exemptions, environmental assessments and/or checklists, environmental impact statements, and supplemental documentation if required. **Section 412** describes internal processes and procedures followed within WSDOT, including guidance on planning the environmental analysis and permitting process, involving the public, and coordinating with other agencies.

The rest of Part 400 (**Section 420** through **Section 480**) gives detailed guidance for completing the environmental analysis done during project development to meet NEPA/SEPA requirements, and to obtain state and federal permits. For most sections, WSDOT Discipline Report checklists are used as guides to what is required. The guidance refers extensively to the relevant authorizing legislation and regulations, and wherever possible points to web sites where resource materials are available online.

Section 420 through **Section 480** also serve as a reference for environmental analysis done during earlier phases of planning (**Section 230**) and project definition (**Section 320**), as well as during construction (**Section 510**), maintenance (**Section 520**), and disposal of surplus real property (**Section 530**).

Section headings correspond to those in environmental assessments/checklists and environmental impact statements, as described in **Section 411.08**. These topics include but are not limited to:

- Earth – geology and soils.
- Air Quality.
- Water Quality – surface water, floodplain, groundwater.
- Plants and animals – wetlands, threatened and endangered species, wildlife, fisheries, and habitat.
- Energy.
- Environmental health – noise and hazardous materials.

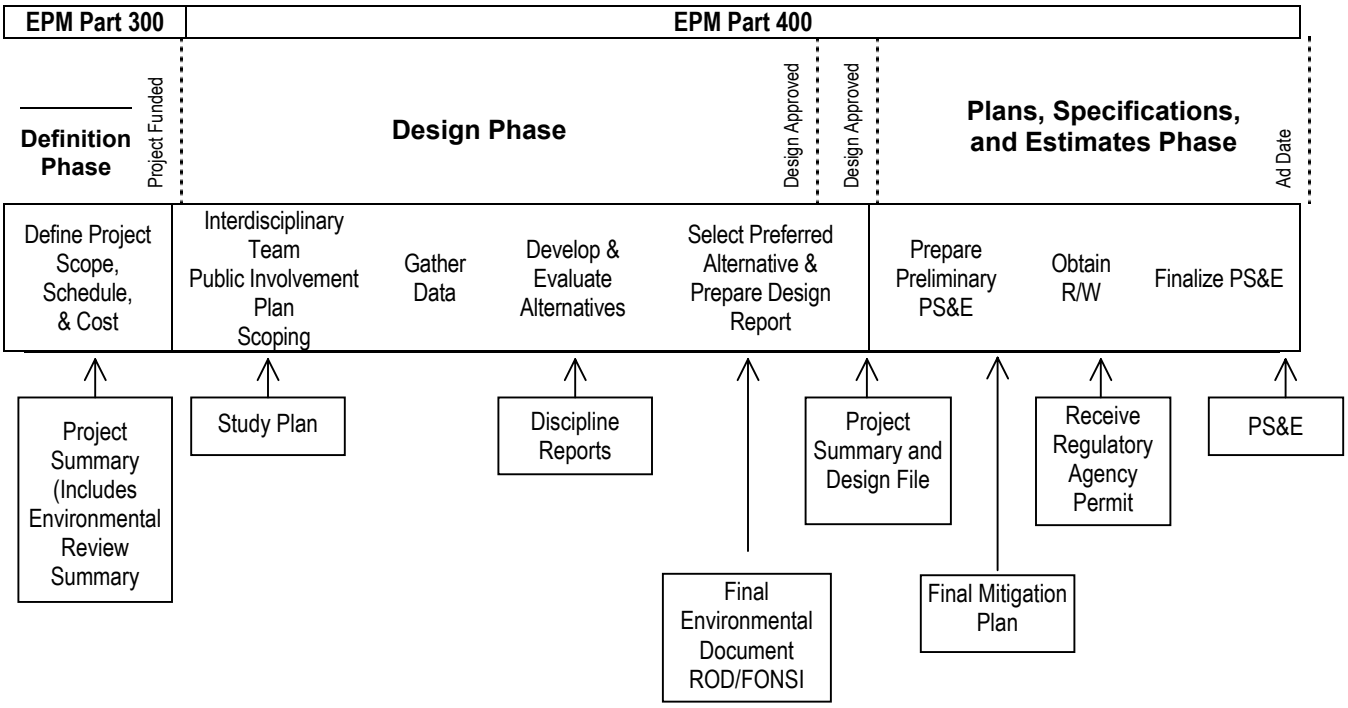


Figure 400-1:
WSDOT Project Development Process

- Land use – population/land use and growth management, shorelines, wild and scenic rivers, farmlands, public lands (Section 4(f), Section 6(f), and forest lands), historic and cultural resources (Section 106), social and economic issues including relocation, environmental justice, and aesthetics and visual quality.
- Transportation – vehicular traffic, parking, waterborne, rail, and air traffic.
- Public services and utilities.
- Secondary and cumulative effects.
- Irreversible and irretrievable commitment of resources.
- Relationship of short-term uses of environment and long-term productivity.

The section on each element of the environment follows the same outline:

- Introduction – summary of requirements, elements included, abbreviations and acronyms.
- Applicable statutes and regulations.
- Policy guidance.
- MOUs, MOAs and interagency agreements.
- Technical guidance.
- Permits and approvals.
- Special non-road project requirements.
- Exhibits.

Each section is organized to present the statutory and regulatory framework first, followed by policies and specific procedural requirements. Memoranda of Understanding (MOUs) typically address procedural issues defining the responsibilities of each agency. However, some contain substantive permit requirements. For most sections, the WSDOT Discipline Report provides the subject-specific documentation for preparation of EISs and other environmental documents. The permit section identifies applicable permits and discusses

what is required with varying degrees of specificity. Any special requirements for non-road projects such as ferries, airports or rail are listed. In the absence of such information, the user should assume the requirements described in the previous sub-sections apply to those facilities as well.

400.03 Exhibits

None.

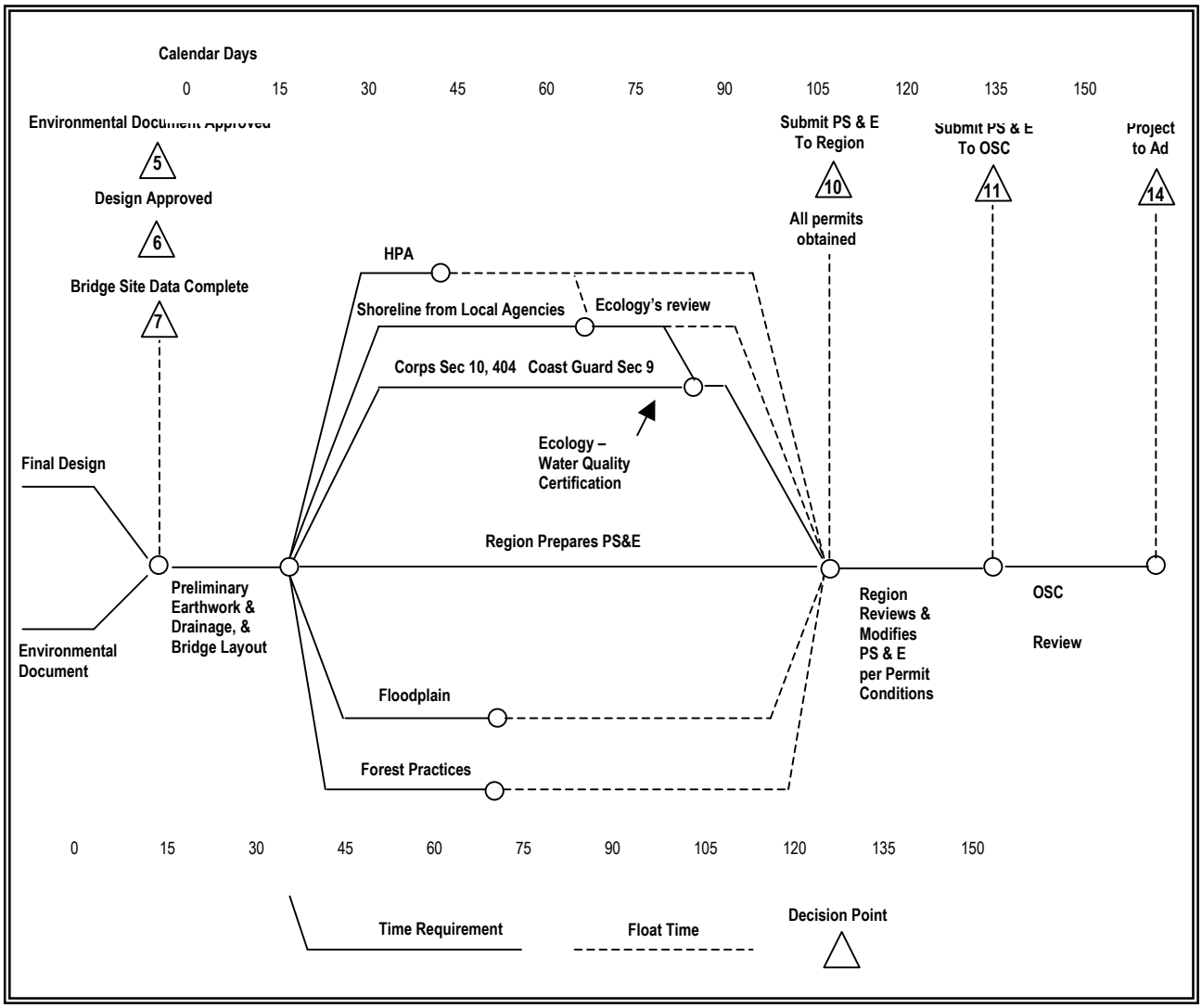


Figure 400-2:
Relationship Between Design and Permitting

410.01 Overview
410.02 NEPA Legislation and Implementing Regulations
410.03 SEPA Legislation and Implementing Regulations
410.04 Relationship of NEPA and SEPA
410.05 Agency Roles and Responsibilities
410.06 Project Classifications
410.07 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

410.01 Overview

Sections 410 through **Section 412** describe the environmental review procedures that currently occur primarily during the design phase of WSDOT projects. Detailed guidance is given for the major steps in the environmental review process. **Section 410** focuses on:

- Understanding NEPA/SEPA legislative authority, agency roles and responsibilities.
- Defining and illustrating the NEPA/SEPA review process for the three major project classifications.
- **Section 411** gives detailed guidance on the documents and procedures for each classification, and **Section 412** describes internal WSDOT procedures for environmental review.
- Environmental analysis is done to some degree at each stage of project development. The first formal analysis occurs during project definition, with preparation of the Environmental Review Summary (**Section 320.03**). The most extensive analysis occurs during project design, for the purpose of preparing environmental documents (e.g., environmental assessments/ checklists and EISs) and permit applications. **Section 420** through **Section 480** give specific guidance for analysis of each of the environmental elements required by federal and state laws and regulations.

(1) Abbreviations and Acronyms

Abbreviations and acronyms used in **Section 410** through **Section 412** are listed below. Others are found in the general list in the appendix.

CE	Categorical Exclusion (NEPA) Categorical Exemption (SEPA)
CEQ	Council of Environmental Quality (federal)
CFR	Code of Federal Regulations
DCE	Documented Categorical Exclusion (NEPA)
DEIS	Draft Environmental Impact Statement
DNS	Determination of Non-Significance (SEPA)
DS	Determination of Significance (SEPA)

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
EPF	Essential Public Facilities
ERS	Environmental Review Summary
FEIS	Final Environmental Impact Statement
FONSI	Finding of No Significant Impact (NEPA)
GIS	Geographic Information System
IDT	Interdisciplinary Team
MDNS	Mitigated Determination of Non-Significance (SEPA)
NAT	Notice of Action Taken (SEPA)
NEPA	National Environmental Policy Act
NOI	Notice of Intent (NEPA)
ROD	Record of Decision (NEPA)
SEPA	State Environmental Policy Act

(2) Glossary

Categorical Exclusion/Exemption – An action that does not individually or cumulatively have a significant environmental effect, as defined in NEPA/SEPA regulations, and is classified as excluded (NEPA) or exempt (SEPA) from requirements to prepare an Environmental Assessment/Checklist or Environmental Impact Statement.

Council on Environmental Quality (CEQ) **–** An oversight council established within the Executive Office of the President with passage of the National Environmental Policy Act of 1969. The Council has been assigned the task of ensuring that federal agencies meet their obligations under NEPA. Its role is to advise and assist the President on environmental policy development; recommend strategies and oversee implementation; report, coordinate, support, interpret, and approve procedures; and issue guidance. Regulations are codified as 40 CFR 1500-1508.

Cumulative Impact/Effect **–** Cumulative impacts from past actions or the incremental effect of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. For NEPA, see 40 CFR 1508.7. (See **Section 480** for guidance.)

Direct Impact/Effect **–** A direct impact (or effect) is caused by the proposed action or alternative and occurs at the same time and place, most often during construction. Impacts may be ecological, aesthetic, historic, cultural, economic, social, or health-related. For example, a highway crossing a stream may directly impact its water quality, though such impacts can be mitigated. For NEPA, see 40 CFR 1508.8.

Discipline Report – A WSDOT report prepared by Regional Offices or Divisions to document environmental studies and investigations. The discipline reports form the basis of the Environmental Impact Statement.

Environmental Document **–** Includes Environmental Assessments (NEPA), Threshold Determinations (DS or DNS) and associated Environmental Checklists (SEPA), Draft and Final EISs, Section 4(f) Evaluations, Section 106 Reports, and other documents prepared in response to state or federal environmental requirements.

Environmental Review **–** Consideration of environmental factors as required by NEPA and SEPA. The "environmental review process" is the procedure used by agencies and others to give appropriate consideration to the environment in decision making.

Indirect Impact/Effect **–** Indirect impacts (or effects) are caused by the proposed action or alternative and are later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects

related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems. For example, a road project may shift existing or projected housing growth into a different area of a region. The growth was happening already, but "indirectly" the road project influenced where it took place. (Note: "Indirect" is defined somewhat differently under NEPA and ESA rules). For NEPA, see 40 CFR 1508.8.

Mitigation – (1) Avoiding the impact altogether by not taking a certain action or parts of an action, (2) minimizing impacts by limiting the degree of the action, (3) rectifying the impact by repairing or enhancing the affected environment, (4) reducing or eliminating the impact over time, (5) compensating for the impact by replacing or substituting resources or environment, or (6) monitoring the impact and taking appropriate corrective measures. Also referred to as "mitigation sequencing". For NEPA, see 40 CFR 1508.2. For SEPA, see WAC 197-11-768.

Project Description – A narrative written by the proponent to describe the project proposal. It may include explanations of the existing physical, environmental, social, and economic setting in which the proposed project is situated, a legal description of the location, and an explanation of the intended improvements.

Responsible Official – Official of the lead agency who has been delegated responsibility for complying with NEPA/SEPA procedures. For most WSDOT projects, the Responsible Official is the Director of Environmental Services. For SEPA-only projects the Regional Administrator is the Responsible Official.

Scoping – Formal scoping for an EIS includes identifying the range of proposed actions, alternatives, environmental elements and impacts, and mitigation measures to be analyzed in an environmental document. Public and agency scoping meetings are generally associated with this activity for NEPA scoping activities. (SEPA does not require a public hearing during the SEPA scoping for an EIS.)

Secondary Effect/Impact – Same as indirect effect under NEPA.

Significant Impact – The significance of potential impact on the natural or built environment depends upon context, setting, likelihood of occurrence, and severity, intensity, magnitude, or duration of the impact. WAC 197-11-330 specifies a process, including criteria and procedures, for determining whether a proposal is likely to have a significant adverse environmental impact.

Determining the "significance" of an impact is not defined in black and white. It is based on past experience of the person preparing the document and is influenced by court interpretations. Ultimately, the definition may rest with the legal system if the document is challenged. WSDOT and FHWA practice is to not use the word "significant" in an environmental document unless the document is referring to a 4(f) or Section 106 resource or quoting a regulation or law. Use a synonym such as substantial, primary, major, or high level.

Threshold Determination – The decision by the responsible official of the lead agency whether or not an EIS is required for a proposal that is not categorically exempt.

410.02 NEPA Legislation and Implementing Regulations

The National Environmental Policy Act (NEPA, Public Law 91-190) was signed by President Nixon in January 1970 as the "national charter for protection of the environment" (40 CFR Part 1500.1). It was enacted to ensure that information on the environmental impacts of any federal action is available to public officials and citizens before decisions are made and before actions are taken.

The intention of NEPA was stated as follows: "Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork –

even excellent paperwork – but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose." (40 CFR 1500.1(c)).

Under NEPA, the Congress directs federal agencies to integrate in their planning and decision-making consideration of the natural and social sciences, environmental amenities and values, and design arts along with economic and technical concerns. NEPA is a broad-reaching mandate for federal agencies to work together with state, local, and tribal governments, public and private organizations, and the public, to achieve and balance national social, economic, and environmental goals while accomplishing their missions.

Federal agencies are required to integrate the NEPA process with other planning at the earliest possible time to ensure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. This integration of planning processes for FHWA projects is illustrated below in Figure 410-1.

NEPA implementing regulations applicable to all federally aided projects were developed by the Council on Environmental Quality (CEQ) and are codified as 40 CFR 1500 – 1508, Regulations for Implementing the Procedural Provisions of NEPA. FHWA regulations applicable to federally aided highway projects are codified as 23 CFR 771, Environmental Impact and Related Procedures.

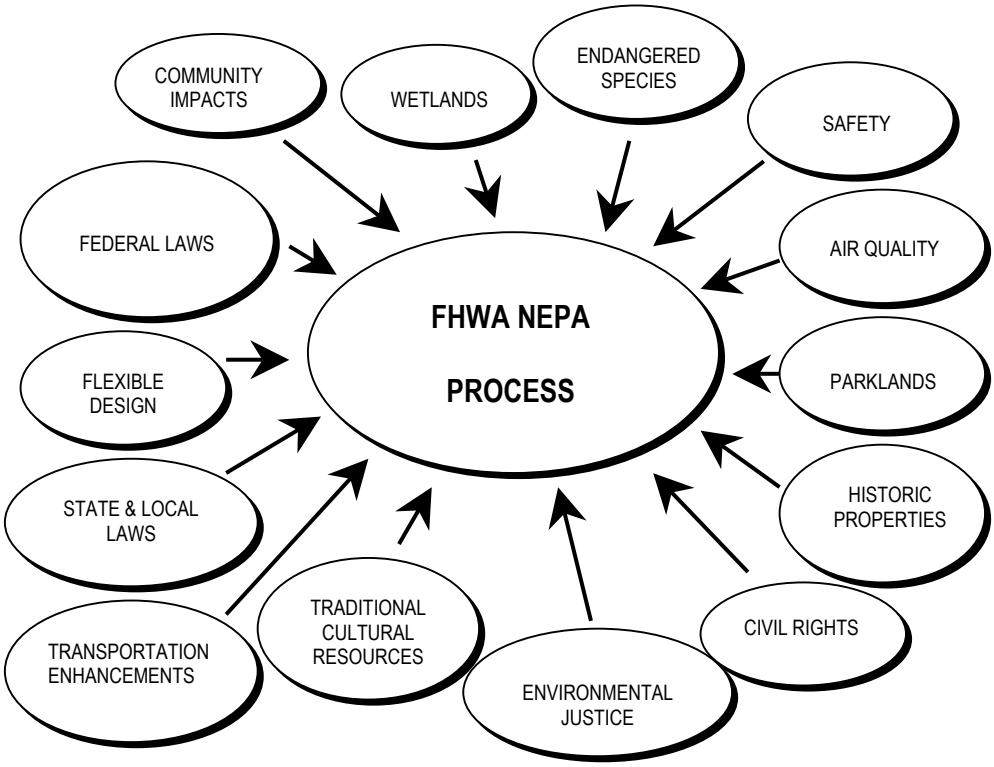


Figure 410-1.
Integration of NEPA and Other Planning Processes for FHWA Projects.

The full text of NEPA (42 USC 4321-4347), CEQ implementing regulations (40 CFR 1500-1508), and other guidance is online at:

http://www.whitehouse.gov/CEQ/

Click on NEPAnet.

Or by direct link:

http://ceq.eh.doe.gov/nepa/nepanet.htm

FHWA environmental impact and related regulations (23 CFR 771) are at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then Title 23 CFR, then 771.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0771.htm

For FHWA policy and other guidance on Transportation Project Development and NEPA:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then NEPA Project Development.

Or by direct link:

http://www.fhwa.dot.gov/environment/00001.htm

FHWA's Technical Advisory, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, (T6640.8A, October 30, 1987) is at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

FHWA has other useful information at:

http://www.fhwa.dot.gov/

Click on Programs, then Environment, then Environmental Guidebook, then Environmental Documentation or General Environmental Requirements.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

410.03 SEPA Legislation and Implementing Regulations

(1) Overview

Washington's State Environmental Policy Act (SEPA), adopted in 1971, directs state and local decision-makers to consider the environmental consequences of their actions. Implementing regulations, in the form of the SEPA Rules (WAC 197-11) establish uniform requirements for agencies to use in evaluating the possible adverse environmental impacts of a proposal. The process also allows review of possible project alternatives or mitigation measures that will reduce the environmental impact of a project. The *SEPA Handbook* gives specific guidance on the steps required for the SEPA environmental review process.

For WSDOT projects, the Transportation Commission and Department Environmental Policy Act Rules (WAC 468-12) integrate the policies and procedures of SEPA into the programs, activities, and actions of the department.

The SEPA (RCW 43-21C), SEPA Rules (WAC 197-11), *SEPA Handbook*, and forms, including the Environmental Checklist, are on Ecology's web site:

http://www.ecy.wa.gov/

Click on Services, then Environmental Review (SEPA).

Or by direct link:

http://www.ecy.wa.gov/programs/sea/sepa/e-review.html

The WSDOT SEPA procedures (WAC 468-12 as amended) are located at the Statute Law Committee web site:

http://slc.leg.wa.gov/

Click on WAC, then Title 468, then 468-12.

Or by direct link:

http://search.leg.wa.gov/wslwac/WAC 468 TITLE/WAC 468 - 12 CHAPTER/WAC 468 - 12 Chapter.htm

(2) SEPA Appeals

SEPA Rules (WAC 197-11-680) allow three types of appeals:

- Administrative procedural appeals.
- Administrative substantive appeals (if both substantive and procedural appeals are allowed, they must be consolidated).
- Judicial appeals.

Anyone wishing to appeal a project must contact the lead agency and obtain information on that agency's appeal process. A Notice of Action Taken document submitted by the lead agency will begin the 90 day appeal period. (See **Section 411.06(8)** and **Section 411.07(8)**.)

Agencies may provide an administrative review process for SEPA determinations prior to issuing a permit or approval. This review is limited to final threshold determinations or final EISs. (Final threshold determination means a determination of significance or a determination of nonsignificance after the close of the comment period.)

If a decision on a proposed action has been made, one appeal is allowed, including both the SEPA determination and the substantive decision (WAC 197-11- 680(3)).

The time frame for administrative appeals at the local level must be specified in the agency's SEPA procedures. If there is an appeal period for the action being taken (e.g., building permit or rezone), then the timing of the SEPA administrative appeal is the same as for appeal of the action.

If an agency has an administrative appeal process, it must be used prior to initiating judicial appeal. The judicial appeal combines appeal of the governmental action (permit/approval) and the SEPA document.

(3) Appellate Court Decisions on SEPA

The *SEPA Handbook* contains general information, discussions, and examples of the major steps of SEPA, including a summary of important appellate court decisions on SEPA These decisions form the basis for interpretations of the SEPA Rules and the

statutes. These decisions may be useful in resolving questions of law when the circumstances of a project are unusual.

410.04 Relationship of NEPA and SEPA

(1) Projects Covered by NEPA and SEPA

NEPA applies to decisions made with a federal nexus, meaning any involvement by federal agencies: federal permits, federal lands, or federal funding. Any federal project, or a private or state project funded by or requiring a permit from a federal agency, must meet NEPA requirements. This includes almost all WSDOT projects and many local government projects.

SEPA is intended to ensure that environmental values are considered during decision-making by state and local agencies. The policies and goals of SEPA supplement those in existing authorizations of all branches of government in Washington, including state agencies, counties, cities, districts, and public corporations. Any government action may be conditioned or denied pursuant to SEPA.

Most WSDOT projects must comply with both NEPA and SEPA. For example, because a highway project involving a bridge over a major river requires a permit from the U.S. Army Corps of Engineers, it would have to meet NEPA requirements. As an action of a state agency, the project would have to meet SEPA requirements.

(2) Environmental Review Process

Figure 410-2 is a generalized flow chart illustrating the environmental review process, participants, and documentation. **Exhibit 411-1** gives more detail for NEPA Class I, II, and III projects.

Four basic questions are common to both NEPA and SEPA.

- First, is the project subject to either or both statutes?
- Second, will the project result in a probable significant adverse environmental impact, and is there an option of modifying the proposal or identifying mitigation that would allow the issuance of a Mitigated DNS? If the Responsible Official determines that the project will have such impacts, the agency proposing the action must prepare an EIS.
- Third, what elements of the environment are adversely affected by the project and must be included in the EIS? The answer to this question determines the scope of the EIS.
- Fourth, what are the relative environmental impacts of the proposed action and alternatives? The comparative analysis of alternatives is the heart of the EIS.

While the above discussion encapsulates the substance of the NEPA/SEPA process, the actual steps are complex and require attention to the details. Deciding upon the proper level of environmental documentation and preparing adequate documents are critical. Both NEPA and SEPA grant discretion to the Responsible Official to decide how detailed the studies should be and what issues to cover. These steps are described in more detail in **Section 411.03** through **Section 411.08**.

After the NEPA/SEPA documentation has been reviewed and approved, the final step of implementation begins. Environmental conditions that may be imposed as mitigation through the environmental process require implementation and monitoring during project construction and maintenance. These steps are discussed in more detail in **Section 510** and **Section 520.**

(3) Adoption of NEPA Documents Under SEPA Rules

The SEPA Rules allow an agency to adopt environmental analysis prepared under NEPA to satisfy SEPA requirements (WAC 197-11-610). In general, a NEPA EA may be adopted to satisfy requirements for a SEPA Determination of Nonsignificance (DNS) or EIS and a NEPA EIS may be adopted as a substitute for a SEPA EIS. Federal documents may also be incorporated by reference as support for issuance of a SEPA document (WAC 197-11-635).

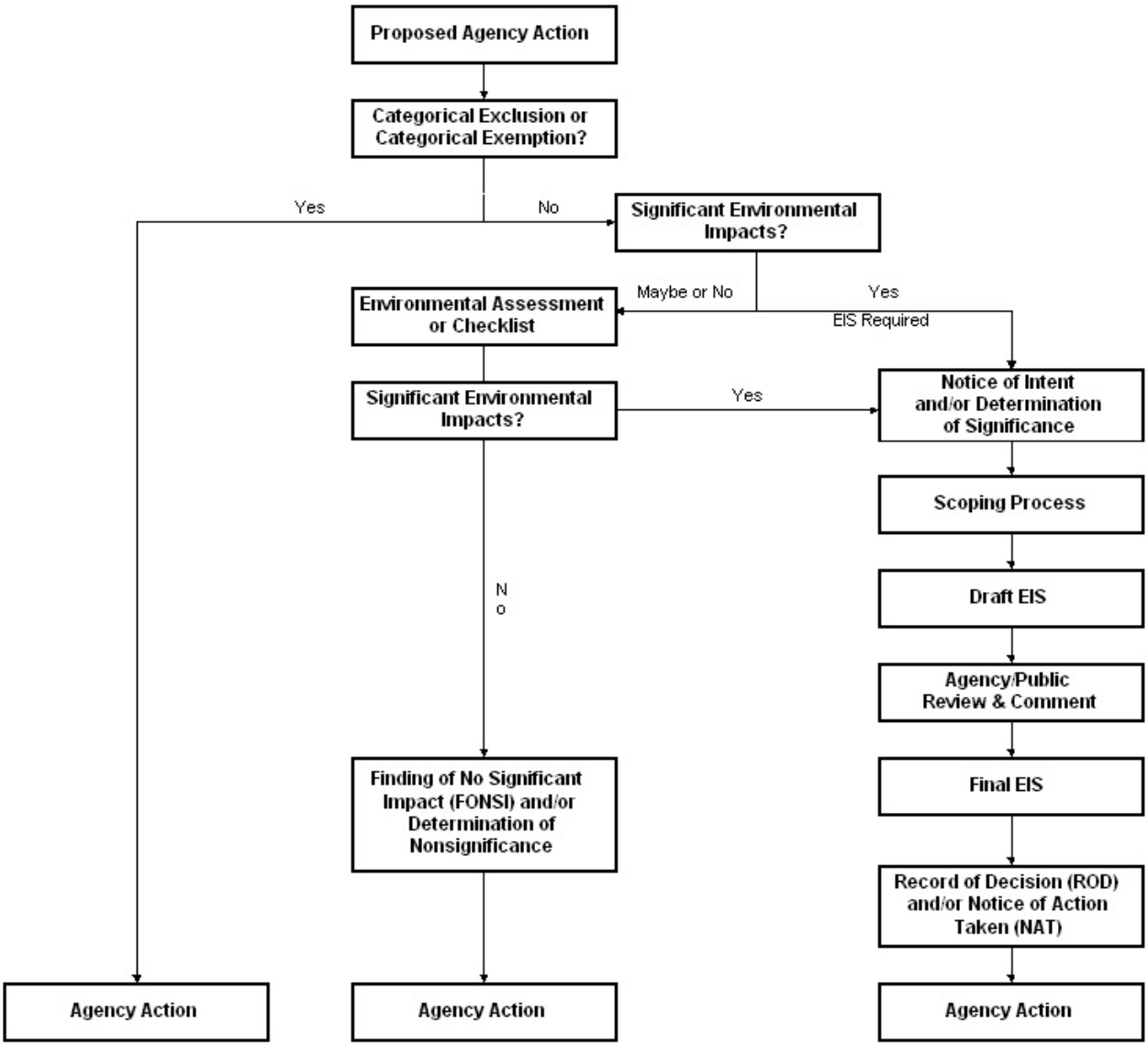
(4) Combined NEPA/SEPA EISs

When a decision is made by WSDOT and FHWA (via the signed Environmental Classification Summary form) to prepare a NEPA EIS, WSDOT policy is to prepare a joint NEPA/SEPA EIS. This has two advantages:

- The interests of SEPA agencies are raised in the proposed project because the document also pertains to their review authority under SEPA.
- Issues that may surface later under SEPA are identified earlier in the joint environmental process.

In the case of a conflict between the NEPA and SEPA regulations, the more stringent (lengthy) of the two is employed by WSDOT. There are cases where SEPA regulations have to be incorporated into the process on a parallel path, for example the Determination of Significance (DS). For details see **Section 411.06.**

Figure 410-2.
NEPA and SEPA Environmental Review Process Overview



LEGEND

FEDERAL (NEPA)

CE	Categorical Exclusion
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
EIS	Environmental Impact Statement
NOI	Notice of Intent
ROD	Record of Decision

STATE OF WASHINGTON (SEPA)

CE	Categorical Exemption Checklist
DNS	Determination of Nonsignificance
DS	Determination of Significance
EIS	Environmental Impact Statement
NAT	Notice of Action Taken (optional)

Adapted from: *Background and Implementation of NEPA:Training Manual*, Chapter 1, Planning, Environmental, and Land Use Publications, Point Arena. CA. www.solano.com.

410.05 Agency Roles and Responsibilities

(1) General

Depending on the project, a federal, state, or local agency may serve in any of the roles described below.

(a) Lead Agency

The Lead Agency is responsible for ensuring that NEPA/SEPA requirements are met. For state transportation projects, WSDOT is the lead agency for SEPA (WAC 197-11-926) and FHWA is the lead agency for NEPA (23 CFR 771.109). Although FHWA is the NEPA lead agency for federal highway projects, NEPA allows the EIS document to be prepared by the state transportation agency so long as FHWA provides guidance and independently evaluates the EIS (42 USC 4332(2)(D)). FHWA and WSDOT also may decide to be joint lead agencies for NEPA. For local projects, a city or county is usually the lead agency for SEPA (WAC 197-11-926).

For Washington State Ferries (WSF) projects without FHWA funding, responsibility for ensuring compliance with NEPA is assumed by the U.S. Corps of Engineers.

The lead agency appoints a Responsible Official to sign off on environmental documents. For WSDOT projects this is usually the Director of Environmental Services.

(b) Applicant

Under the NEPA Rules, WSDOT is an applicant as the agency that initiates a project to FHWA, which has approval authority. The applicant may do the actual work of preparing environmental documentation, which must be approved by the lead agency before release to the public. WSDOT Regional Offices and municipalities often act in a dual role as the applicant under NEPA and lead agency under SEPA.

(c) Cooperating Agency

Under NEPA, a cooperating agency has a vested interest in a proposed project for which the environmental document will be prepared. The agency might own needed property, issue required permits, or have special expertise in an affected element of the environment. The level of involvement varies with the project. Cooperating agencies participate in "scoping" a project during preliminary planning to identify potential environmental impacts, alternatives and mitigating measures, and required permits. They review and comment formally and/or informally on environmental assessments and environmental impact statements. They may also prepare special studies or share in the cost of the environmental documentation. Cooperating agencies may include federal and state resource agencies, local governments, tribal governments, and special districts. See **Section 412.05** for details.

(2) *FHWA and Other Federal Oversight Agencies*

FHWA is the lead agency under NEPA as the federal agency responsible for funding and approving most highway projects. FHWA directly funds most WSDOT projects and funds many local government projects through WSDOT.

Federal lead agencies for other transportation modes are:

Ferries – Corps of Engineers.
Mass transit – Federal Transit Administration (FTA).
Aviation – Federal Aviation Administration (FAA).
Navigable waters – United States Coast Guard (USCG).
Rail – *Federal Railroad Administration (FRA).*

These agencies may have different regulations to implement NEPA, so advance coordination (early and often) is imperative when developing environmental documents with co-lead federal agencies. For example, the FTA does not recognize programmatic 4(f) statements unless it adopts the FHWA policy on this issue on an individual project basis.

(3) *WSDOT Olympia Service Center*

(a) *Environmental Services Office (ESO)*

The ESO supports the Regional Offices and develops central programs and initiatives. The ESO can act as the lead agency for SEPA and as the applicant under NEPA for projects initiated by WSDOT. ESO staff reviews NEPA and Section 4(f) environmental documents prepared by Regional Offices before they are submitted for approval by FHWA or other federal oversight agency; ESO also reviews environmental documents prepared by local governments after initial review by the Highways and Local Programs Office.

(b) *Highways and Local Programs Office (formerly TransAid)*

The Highways and Local Programs Office oversees the pass-through of federal funds from FHWA and other federal sources to cities and counties. Prior to ESO review, the office reviews NEPA environmental documents submitted by local governments for approval by FHWA. WSDOT's *Local Agency Guidelines* (M 36-63) provides more details on NEPA and SEPA procedures for WSDOT and local governments. See **Section 220.04**

(4) *WSDOT Regional Offices*

The Regional Offices act as the SEPA lead agency and NEPA applicant for highway projects within their boundaries. NEPA documents are reviewed by the ESO before they are submitted to FHWA or other federal oversight agency. The Regional Offices may also be lead agency for non-WSDOT projects proposed on state right-of-way. The Regional Administrator is the Responsible Official for SEPA-only projects.

(5) *WSDOT Divisions*

For aviation, ferry, and rail projects, the sponsoring WSDOT division generally acts as its own lead agency or applicant. For example, the WSF is lead agency for a proposal to rebuild a ferry terminal. WSDOT divisions may choose to have the ESO act as lead agency because of its environmental expertise.

(6) *Ecology*

The Implementing Agreement between WSDOT and Ecology Concerning Adoption of NEPA Documented Categorical Exclusions, approved June 20, 1996, states: "Ecology concurs that the adoption of a NEPA documented categorical exclusion (DCE) under the Federal Highway Administration's NEPA implementing regulation, 23 CFR 771.117 is

allowable under the SEPA Rules in lieu of completing a SEPA checklist, provided the requirements of WAC 197-11-600 and 197-11-630 are met. Ecology will prepare a notice for the *SEPA Register* notifying other agencies and the public of Ecology's interpretation that an adoption of a NEPA documented categorical exclusion is allowable under SEPA Rules. Ecology will review and may provide comments, if appropriate, during the 15-day public/agency comment period for each proposed project for which adoption of a DCE is planned to comply with SEPA." See **Exhibit 320-6** for a copy of this agreement.

(7) Local Governments

For local government transportation projects receiving federal aid, cities, counties, and special districts such as a sewer, water, school and port districts are in the role of "proponent." WSDOT serves as the co-lead agency with FHWA for NEPA purposes, through its Highways and Local Programs office. Local projects involving federal permits, federal lands, or federal funding are also categorized Class I, II, or III. Whether or not federal funds are involved, local governments are generally the lead agency and are responsible for following the requirements of SEPA. For detailed procedures, see the *Local Agency Guidelines* manual (M 36-63).

WSDOT generally is SEPA lead agency for its own projects. In practice, this means that in evaluating permits, the local government entity cannot require an environmental review process in addition to the one WSDOT decides to undertake, but it can require supplemental SEPA review if the agency's comments on a DEIS were not addressed (WAC 197-11-600(3). For example, a local government should not issue its own SEPA threshold determinations unless it is assuming lead agency responsibility as provided in WAC 197-11-948.

If a local entity has permit authority, it may add conditions to a project using its own authority. A local agency also has SEPA supplemental authority and can condition or deny a license to mitigate impacts identified in a SEPA document (WAC 197-11-660). However, a local government or other agency cannot impose conditions disproportionate or unrelated to the impact. The basis for the condition comes from amendments to the Growth Management Act (GMA), specifically, the Essential Public Facilities (EPF) sections, which allow a local authority to condition, but not prevent, a subregional or regional project. The EPF process and adoption must be articulated in an enacted policy or ordinance. The condition must be reasonable and capable of being accomplished under SEPA itself and reasonably proportionate to the identified impact. Most local governments combine their adopted EPF process with SEPA. See **Section 451.02** for more on the GMA and EPF.

410.06 Project Classifications

Projects are classified for environmental review purposes during the project definition phase. This process is documented using WSDOT's Environmental Review Summary. **Section 320.05** contains a detailed description of the classification system and examples of projects falling into each class. Briefly, Class I projects require an EIS; Class II projects are Categorically Excluded or Exempt (CE) from NEPA/SEPA requirements; and Class III projects require an Environmental Assessment (EA) or a SEPA Threshold Determination (DS, DNS, or Mitigated DNS) and accompanying Environmental Checklist to determine whether significant impacts are likely (23 CFR 771.115).

Exhibit 411-1 illustrates the review process for Class I, II, and III projects.

410.07 Exhibits

None.

411 Environmental Documentation and Procedures

411.01 Overview
411.02 Document Standards
411.03 Documents and Procedures for Class II (CE) Projects
411.04 Documents and Procedures for Class III (EA and Checklist) Projects
411.05 Documents and Procedures for Class I (EIS) Projects
411.06 Procedures for a Joint NEPA/SEPA EIS
411.07 Procedures for a SEPA-only EIS
411.08 Preparation of an EIS
411.09 Section 4(f) and Section 106 Documents and Procedures
411.10 Re-Evaluations and Supplemental Documents
411.11 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

411.01 Overview

This section describes the environmental documentation requirements during the design phase of WSDOT projects. Detailed guidance is given for the major steps in the environmental review process. The section focuses on documentation and procedural requirements:

- Standards applicable to all environmental documents.
- Documents and procedures required for three classes of projects: those Categorically Exempt or Excluded from environmental requirements (CE), those requiring an Environmental Assessment (EA) or Checklist, and those requiring an Environmental Impact Statement (EIS).
- Specific guidance for NEPA/SEPA EISs and for SEPA-only EISs.
- Preparation of EIS document
- Guidance for Section 4(f), Section 106 evaluations, reevaluations and supplementary documents.

Overall guidance on NEPA documentation requirements are online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then NEPA: Project Development Process, then Documentation.

Or by direct link:

http://www.fhwa.dot.gov/environment/nepa/document.htm

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this section are listed in **Section 410.01**. Others are found in the general list in the appendix.

(2) *Glossary*

For a glossary of terms used in this section, see **Section 410.01**.

411.02 Document Standards

This section contains standards for documents prepared during the environmental analysis and review process

(1) *Level of Detail*

EISs should be as concise as possible. For a NEPA EIS, the main body of text for average proposals should not exceed 150 pages. A NEPA EIS of unusual scope or complexity should not exceed 300 pages (40 CFR 1502.7). SEPA EISs should not exceed 75 pages, unless unusually complex and then no more than 150 pages (WAC 197-11-415).

The level of detail provided for each element of the environment analyzed should be commensurate with the significance of its potential impact.

Impacts and alternatives should be discussed only to the level of detail appropriate to the level of planning for the proposal. The EIS discussion of alternatives should be limited to a general discussion of the impacts of the alternative proposals including any required mitigation. Under SEPA, sufficient information is needed to make a reasoned choice among alternatives. If there is insufficient information available, a worst case scenario may be required (WAC 197-11-080). The level of effort is also dictated by the amount of project design effort required to determine the footprint of the proposal. This allows the type, size, and location of the facility to be identified, which in turn allows the analysis of the impacts. Impacts can usually be properly assessed when design is 15 to 30 percent complete.

For a draft EIS, all reasonable alternatives under consideration (including no-build) need to be developed to a comparable level of detail in the draft EIS so their comparative merits may be evaluated (40 CFR 1502.14(b) and (d)).

An exception to the comparable level of detail is described in *FHWA Technical Advisory* T 6640.8A (October 30, 1987), Section V, Part E. Alternatives: "Development of more detailed design for some aspects (e.g., Section 4(f), COE or CG permits, noise, wetlands) of one or more alternatives may be necessary during preparation of the draft and final EIS to evaluate impacts or mitigation measures or to address issues raised by other agencies or the public."

(2) *Using Existing Documents*

NEPA CEQ regulations and SEPA rules allow the use of existing documents to reduce duplication and unnecessary paperwork. If an analysis has already been done for the proposed project or a similar project, it does not need to be duplicated. Existing

documents can be used in any of the following ways:

- Adoption (CEQ 40 CFR 1506.3, and WAC 197-11-630). See **Section 411.04(5)**.
- Addendum (CEQ 40 CFR 1502.9, and WAC 197-11-625.
- Incorporation by reference (CEQ 40 CFR 1502.21, and WAC 197-11-635).
- Supplemental EIS (CEQ 40 CFR 1502.9, and WAC 197-11-620). See **Section 411.10**.

(3) *EIS Format Standards*

WSDOT has developed publication format standards so the department can prepare EISs that are consistent in appearance and easy to read and reference. These standards must be followed when preparing a WSDOT EIS, unless an exception is approved by the ESO. Three format options are available. For details, refer to WSDOT's *EIS Format Standards* (M 31-14) or contact the Publications Support Branch at OSC.

FHWA guidelines describe three options for preparing a NEPA Final EIS: traditional, condensed, and abbreviated. See FHWA Technical Advisory T 6640.8A, online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

Ecology's technical assistance on SEPA EIS guidelines describe format (WAC 197-11-430), content (WAC 197-11-440), differing formats (WAC 197-11-560), and non-project proposals (WAC 197-11-442 and 197-11-443) within the Ecology's SEPA Rules section. The information is online at Ecology's web site:

http://www.ecy.wa.gov/

Click on Services, then Environmental Review (SEPA).

Or by direct link:

http://www.ecy.wa.gov/programs/sea/sepa/lawandrule.html

(4) *Tri-Message Page*

On the back of the title page, three standard messages should be displayed:

- Information access for people with disabilities (ADA requirement).
- Assurance of compliance with the Civil Rights Act, Title VI.
- Note on units of measurement (English or metric) – now optional since metric units are no longer required by FHWA.

(a) *Information Access for Persons with Disabilities*

Below is a notice that is to be included in all environmental documents distributed to the public. This notice should be on a separate page, immediately following the title page of the EIS or EA, and in larger type than the rest of the document. Refer to the "Tri-Message Page" on **Exhibit 411-2**, page 2.

> Persons with disabilities may request this information be prepared and supplied in alternate forms by calling the WSDOT ADA Accommodation Hotline collect 206-389-2839. Persons with vision or hearing impairments may access the WA State Telecommunications Relay Service at TT 1-800-833-6388, Tele-Braille 1-800-833-6385, or Voice 1-800-833-6384, and ask to be connected to 360-705-7097.

For general information, this ADA message pertains to advertising a public meeting or written material such as a newsletter: "The site is accessible to persons with disabilities. Individuals requiring reasonable accommodation may request written materials in alternative formats, sign language interpreters, physical accessibility accommodations, or other reasonable accommodation by calling

[add name of an optional Region contact for a local presence] (collect) at (___) ___-____ or] the WSDOT ADA Accommodation Hotline (collect) at (360) 664-9009. Persons with hearing impairments may access WA State Telecommunications Relay Service (TTY) at 1-800-833-6388, Tele-Braille at 1-800-833-6385, or Voice at 1-800-833-6384, and ask to be connected to (360) 705-7097."

(b) Civil Rights Assurance

Include the following statement: "Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898, and the related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, national origin, or low income, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which WSDOT receives federal financial assistance."

(c) Metric Measurement Units

WSDOT's current policy is to require only English units of measurement. FHWA no longer requires use of metric units for environmental documents such as ECSs, CEs, EAs, EISs, and Section 4(f) Evaluations published under FHWA rules.

Since federal and state permitting agencies are not accustomed to working in metric units, all permit drawings should be submitted in English units with no reference to metric equivalence. National Oceanic and Atmospheric Administration Fisheries apparently accepts either metric or English units for Biological Assessments.

ASTM E 380-92 is recommended as a source of information on metric conversion. When both measures are used, the metric unit should come first, followed by the English unit in parenthesis; for example: "The HOV lane is separated from adjacent lanes by a designated buffer width of 0.6 to 1.2 m (2 to 4 ft)."

(5) Availability and Cost of Environmental Documents

The lead agency shall retain NEPA documents and make them available to the public in accordance with 23 CFR 771.119(e) and (f), 23 CFR 771.123(g), and 23 CFR 771.125(g). Normally, copies are furnished free of charge. However, with FHWA concurrence, parties requesting an EIS may be charged a fee not to exceed the actual cost of reproducing the document.

The lead agency shall retain SEPA documents and make them available in accordance with RCW 42.17, charging only those costs allowed plus mailing costs. However, no charge shall be levied for circulation of documents to other agencies. Agencies are encouraged to waive the charge of an environmental document requested by a public interest organization (WAC 197-11-504).

WSDOT practice is that copies of all environmental documents are distributed during the initial circulation free of charge. Requests for documents received after the initial circulation, or for additional copies of a document, may be subject to a fee not to exceed the actual cost of reproducing the document.

If a fee is charged for a document, the document should include the following statement: "The cost of this document is $____, which does not exceed the cost of printing."

The document should include a statement that "This document is available for public review at the following locations…" such as WSDOT Regional Office, Ecology, Office of Community Development, FHWA or other federal agency offices, public libraries, and city or county government offices. Preliminary environmental documents are not subject to Freedom of Information Act requirements for public disclosure.

For preliminary review, a DEIS or FEIS is distributed for agency review prior to release of the DEIS or FEIS to the public. Pursuant to FHWA legal guidance, the following language should be added to the outside cover of a preliminary Draft EIS or preliminary EIS circulated for agency review:

"WSDOT and FHWA [co-lead agencies] have determined that the review comments on this preliminary document are an intergovernmental exchange that may be withheld under the freedom of information act request. Premature release of this material to any segment of the public could give some sectors an unfair advantage and would have a 'chilling effect' on intergovernmental coordination and the success of the cooperating agency concept. For these reasons, we respectively request that the public not be given access to this document."

(6) Use of Consultant Logo

Neither WSDOT nor FHWA advertises or endorses any particular consultant firm. In general, consultant logos on documents are acceptable only when the product is the intellectual property of the consultant or the consultant is liable for the contents.

A consultant logo is not displayed on:

- Promotional material for an open house or other WSDOT event (e.g., pamphlets, displays, newsletter, flyers, ads).
- Studies (e.g., route development or corridor feasibility studies) which compile different discipline studies to reflect a WSDOT position on an issue.
- Environmental documents (such as an EIS, EA, or Documented CE). These documents typically contain a compilation of discipline study results that may be extracted and displayed out of context. Without the logo, the consultant is released from liability for the environmental document.

A consultant logo can be displayed on the types of documents described below.

(a) Discipline Reports

The consultant is liable for the contents of the product. It is inappropriate for WSDOT to change the report. WSDOT provides written comments on drafts for the consultant to address. If WSDOT staff disagree with the report and modify it, the consultant logo should come off and WSDOT logo added. The following text is included in the title page: "Prepared for the Washington State Department of Transportation."

(b) Environmental Documents

Consultant logos/names are appropriate in two places in WSDOT environmental documents:

- In an appendix titled "Discipline Studies Prepared By." Reference is made to the consulting firm and the individual responsible for preparing the work. In the same appendix, WSDOT and FHWA staff are identified, either as "Prepared By" or "Guidance and Review By."
- On a SEPA fact sheet included in a combined NEPA/SEPA EIS. The SEPA fact sheet appears in the front of the EIS, just behind the NEPA title/signature

sheet and the page containing the "alternate format," "Title VI," and "Metric" messages. The SEPA fact sheet contains an entry for "prepared by." The name of the consultant firm appears there.

411.03 Documents and Procedures for Class II (CE) Projects

Actions that do not individually or cumulatively have a significant environmental effect, as defined in NEPA/SEPA regulations, are excluded from requirements to prepare an EA or EIS. Such projects are classified as Categorical Exclusions (NEPA) and Categorical Exemptions (SEPA). Some projects are excluded from NEPA review, but still require SEPA review (e.g., any state or local action may require SEPA review, WAC 197-11-660). Similarly, some projects categorically exempt with respect to SEPA may require additional documentation in the NEPA process. See **Exhibit 411-1(a)** for the NEPA Class II process flow chart.

Projects that qualify as categorical exclusions under NEPA are listed in FHWA rules (23 CFR 771.117). Projects that qualify as categorically exempt under SEPA are listed in WAC 197-11-800 through 880. WSDOT, as SEPA lead agency, has another list of SEPA-exempt projects in WAC 468-12-800 and WAC 468-12-880.

WSDOT has an implementing agreement (June, 1996) with the Washington Department of Ecology (Ecology) covering adoption of documented Categorical Exclusions. See **Exhibit 320-5** for a copy of the agreement.

(1) Required Documentation

(a) NEPA

Projects meeting the CEQ and FHWA criteria for Categorical Exclusions (CEs) are listed in FHWA regulations (23 CFR 771.117 (c)). The Programmatic Categorical Exclusion Approvals Memorandum of Understanding (MOU) between FHWA and WSDOT (May 25, 1999) identifies projects that are categorically excluded under certain conditions and do not require further approval by FHWA or further federal environmental documentation (see **Exhibit 320-6**). Other actions, such as those listed in 23 CFR 771.117 (d), may be classified as Documented CEs upon FHWA approval of the Environmental Classification Summary (ECS) as described in **Section 320.05**. An action that would normally be classified as a CE may be classified as a DCE if any of the following unusual circumstances apply:

- Any federal lands are affected or impacted.
- A federal Corps of Engineers Section 10 or Section 404 (Nationwide or Individual) permit is required.
- Substantial or uncertain impact may occur on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act. In such cases a separate Section 4(f), Section 106 evaluation, or Cultural Resource Survey and accompanying State Historic Preservation Officer (SHPO) concurrence is required. See **Section 411.09**, **Section 455.05**, and **Section 456.05.**
- Possible impact on habitat or species protected under the Endangered Species Act (ESA). Supporting documentation is submitted to FHWA with the ECS form.

Although most project design is approved by the "Certified Acceptance" authority delegated to the Regions by FHWA, specialty areas of expertise still currently require approval from WSDOT Headquarters in specific cases, such as construction improvements proposed for the Interstate system, Landscape plans, and certain Hydraulic reports and studies.

A project that is classified as a NEPA CE must still satisfy SEPA requirements if state funds are being used.

(b) SEPA

A project is considered a Categorical Exemption (CE) when it meets the requirements of WAC 197-11-305, WAC 197-11-800, WAC 197-11-860, WAC 468-12-800, or WAC 468-12-880). The Environmental Review Summary (ERS) identifying the project as a SEPA CE is the only environmental documentation necessary.

(2) Public Notice

There are no public notice requirements for CEs. However, most projects classified as categorically excluded under NEPA will need to be examined to determine if they are also exempt under SEPA. If not exempt under SEPA, the project will often require the distribution of a threshold determination (DS or DNS) and Environmental Checklist, associated public comment period, and Public Notice published in an area newspaper serving as typical public involvement. A typical impact associated with a routine excluded and/or exempt project could include a short-term delay or nuisance during construction. The main goal is to inform the public when the work will occur and how to avoid problems.

News releases and other appropriate public contact should begin shortly before construction. These communications should continue as needed during the construction period. See also **Section 412.06.**

411.04 Documents and Procedures for Class III (EA and Checklist) Projects

All EA documentation must comply with the requirements of NEPA and implementing regulations (CEQ 40 CFR 1501-1508 and FHWA 23 CFR 771.119 - 121).

Other environmental documentation, such as issuance of a threshold determination (DS, DNS, or Mitigated DNS) and accompanying Environmental Checklist, follows SEPA Rules as the controlling authority (WAC 197-11-315 *et seq*.). See **Exhibit 411-1(b)** for the NEPA Class III process flow chart.

(1) Overview

(a) NEPA EA and Section 4(f) Evaluation

Any WSDOT project that involves federal funding, federal lands, or federal permits must comply with NEPA procedures. These are listed below and described in detail in this section:

- Hold partner confirmation meeting (see **Section 412.02**).

- Prepare the Environmental Assessment (EA) and Section 4(f) Evaluation if required (see **Section 411.09** and **Section 455.05).**
- Publish a notice of availability and/or public hearing notice.
- Review and respond to comments and incorporate into Finding of No Significant Impact (FONSI). The FONSI includes the Final 4(f) Evaluation, unless there is a programmatic 4(f); then a final 4(f) is not required.
- Submit to FHWA with request for a Finding of No Significant Impact.
- Notify agencies that FONSI is available.

(b) SEPA Threshold Determination/ Environmental Checklist

For projects using state funds but no federal funds, where minor environmental impacts are anticipated, SEPA requires distribution of the threshold determination and accompanying Environmental Checklist. There is no direct SEPA equivalent of the NEPA EA.

If the project does not involve proposed actions listed in SEPA Rules, Part Nine – Categorical Exemptions, WAC 197-11-800, or any other action that is not exempt under SEPA, the Regional Office:

- Prepares the SEPA Environmental Checklist and threshold determination (DNS, or mitigated DNS).
- Obtains the signature of the Regional Administrator or designee.
- Submits a copy to Ecology for listing in the SEPA register.

If the project requires approvals from other agencies with jurisdiction, the Region:

- Prepares the checklist and threshold determination (DNS, or mitigated DNS).
- Obtains the signature of the Regional Administrator or designee.
- Circulates for a 14-day review and comment period in accordance with WAC 197-11-340(2)(b) or WAC 468-12-510(a).

The Region then evaluates comments and proceeds to:

- Confirm the validity of the DNS; or
- Prepare a mitigated DNS and revised checklist and recirculate in accordance with WAC 197-11-350; or
- Withdraw the DNS in accordance with WAC 197-11-340, prepare a Determination of Significance (DS), and proceed with an EIS.

(2) NEPA Preliminary Environmental Assessment (EA) and Section 4(f) Evaluation

The Region prepares a preliminary EA as shown in **Exhibit 411-2**. Include an area map, vicinity map, site plan, photogrammetric maps (to depict the environmental setting), summaries of discipline reports, and any agency coordination letters such as endangered species listings, prime and unique farmland determinations, Section 106 tribal consultation, and archaeological/historic reports. If the project involves Section 4(f) lands, a separate evaluation is required and is included as a separate section in the EA. See **Section 411.09** and **Section 455.05** for details.

(a) Federal Agency Review

The preliminary EA and Section 4(f) evaluation are submitted to the federal lead agency for review and comment. If the reviewers determine that the proposal may have significant environmental impacts, the proposal is reevaluated to determine whether the significant impacts can be appropriately mitigated or eliminated. If the impacts cannot be eliminated, an EIS is required. If no significant impacts are found, the Regional Office makes any needed revisions and requests federal lead agency concurrence to publish a notice announcing the public availability of the EA.

(b) Public Review and Comment

The public review and comment period for an EA is a minimum of 30-days. If a Section 4(f) evaluation is included, a minimum of 45 days is required. Since the comment period (for scoping and hearings) remains open under NEPA until the FONSI or ROD is issued by the federal agency, it is WSDOT practice to use the term "comments are requested by (fill in date)" in advertisements and notices to ensure timely receipt of comments for meaningful consideration. After that date expires, WSDOT has the option to extend the comment period if requested by the public or another agency, and it is judged reasonable for meaningful submittal of project comments. Following notification only to the requesting party, no further public advertisement of the comment period extension is required.

WSDOT practice is to advertise the availability of the EA and the public hearing, though there is no requirement to hold a hearing for EA documents. The document must be made available for public inspection at the Regional Office of WSDOT and the office of FHWA or other federal lead agency.

(1) Notice of Availability

The Region publishes a notice in the newspaper of general circulation in the area where the project is located (WAC 468-12-510(1)(b)(i)). The notice, similar to a public hearing notice, advises the public that the EA is available for review and comment and where the document may be obtained. It should briefly describe the proposed action and impacts identified in the assessment.

The notice of the EA's availability must be sent to affected units of federal, state, tribal, and local government. The notice must also be sent to the SEPA Coordinator at Ecology, who serves as the state intergovernmental review contact, and the Office of Community, Development (OCD).

(2) Public Hearing

Public hearings are not required for Class II projects, but may be requested by an agency or organization. If a request for a hearing can be anticipated, it is best to plan ahead rather than wait until the end of the comment period to start preparing for the hearing.

EAs normally have less potential for environmental impacts and public controversy and, consequently, less potential for public hearings. The public hearing notice requirements follow the format and time schedule outlines in WSDOT's *Design Manual,* Section 220.04(9) and WAC

468-12-510. The notice of the public hearing published in local newspapers announces the availability of the EA and where it can be obtained or reviewed.

(3) Document Distribution

The EA is distributed to the Ecology SEPA Coordinator, any federal, state, or local agency or tribe known to have interest or special expertise in the areas addressed in the EA or that may be significantly affected. For example, if Section 4(f) property is involved, the document is sent to the Department of the Interior and to the agency with jurisdiction over the property. The U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration Fisheries should be included in the distribution for projects that may affect wetlands or endangered species. If an individual Section 404, Section 10, or Section 9 (Coast Guard) permit is required, a copy of the EA should be sent to the agency in accordance with the U.S. Department of Transportation/Corps of Engineers Memorandum of Agreement, or the FHWA/Coast Guard Memorandum of Under-standing (see **Section 431.04**). See also FHWA's Technical Advisory T 6640.8A, online via FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(3) Revised Environmental Assessment or Errata and Final Section 4(f) Evaluation

At the conclusion of the public review period, the Region evaluates all comments received, including comments from public hearings, meetings, and open houses. The Region responds to the comments and writes an errata or revises the document as necessary. The Region Environmental Office or Headquarters Environmental Services Office reviews FONSI package which includes the revised EA, and the WSDOT Director of Environmental Services signs the title page. The Region may choose to issue an erratum as part of the FONSI, referencing minor changes in the EA.

After the federal agency issues the FONSI, the signed FONSI is returned to the Region who forwards a copy to HQ ESO. The Regional Environmental Office notifies OCD via a letter that a FONSI is available from WSDOT or the federal lead agency.

If the public review reveals significant impacts (or controversy), the federal agency may determine that an EIS is necessary. See **Section 411.05**.

(4) Issue FONSI (NEPA)

(a) Contents

Typical contents of a FONSI include:

- Cover (include Summary Statement of No Significant Impacts)
- Title Sheet (use EIS format in WSDOT Format Manual – see **Exhibit 411-9**)
- Description of Proposed Action (recap from the EA)
- EA Coordination and Comments (list EA issue date, hearing date, and summary of comments)

- Supportive Environmental Findings
  - Farmland Finding
  - Wetland Finding
  - Environmental Justice (Minority Populations and Low-Income Populations)
- Attachments (indicate that the EA and EA/design hearing transcript are incorporated by reference into this FONSI. Indicate where copies of both documents can be obtained).
  - Errata to EA and Hearing Transcript
  - Notice of Availability of FONSI and Notice of Adoption of EA under SEPA with Publication Listing (text of notice and newspaper listing for notice)
  - FONSI distribution list
  - Mitigation commitment list
  - Written comments with responses
  - Hearing comments with responses

For guidance on the form and process for a NEPA FONSI, see FHWA Technical Advisory T6640.08A, on line at FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(b) Distribution

Federal regulations do not require formal distribution of a FONSI. Agencies must send a notice of the FONSI's availability to federal, state, and local government agencies likely to have an interest in the project. However, WSDOT practice is to circulate the FONSI in the same manner as EAs and EISs. This distribution normally includes, but is not limited to:

- Any federal agency that has jurisdiction by law or special expertise in any environmental impact involved.
- Any appropriate federal, state, or local agency authorized to develop and enforce environmental standards.
- Any affected tribe.
- Any person, organization, or agency that requests a copy of the document.
- Public officials, private interest groups, and members of the public having or expressing an interest in the proposed project, for example by submitting a comment on the EA.

Technical Advisory T 6640.8A encourages the lead agency to inform commenting agencies (or those requesting to be informed) of the status of the project and the disposition of their comments, and to provide them with a copy of the FONSI.

(5) *Environmental Checklist/DNS (SEPA)*

When the responsible official of the lead agency determines that the project will have no significant impacts, or that mitigation measures will reduce significant impacts to nonsignificance, a Determination of Nonsignificance (DNS) or a Mitigated Determination of Nonsignificance (MDNS) is issued.

(a) *Adoption of NEPA EA Under SEPA Rules*

Under WAC 197-11-610, an agency may adopt a NEPA Environmental Assessment to satisfy requirements for a Determination of Non-Significance or (SEPA) EIS, if the requirements of WAC 197-11-600 and WAC 197-11-630 are met, using the adoption form in WAC 197-11-965. See **Exhibit 411-3**. The adopting agency shall ensure that the adopted document is readily available to agencies and the public by:

- Sending a copy to agencies with jurisdiction, and
- Placing copies in libraries and other public offices, or distributing copies to those who request one.

(b) *Additional Environmental Documentation*

If environmental documentation is needed to support the DNS, such as a preservation of farmlands determination, historical or cultural resource surveys, wetland reports, shoreline analyses, critical area analyses, or floodplain evaluations, the Region requests the preparation of discipline reports and coordinates the processing of the reports to the appropriate agencies. The environmental documentation needed to support the DNS must be prepared before the DNS is issued.

(c) *Public Review and Comment*

Other agencies and the public are given an opportunity to comment through the public notice process. A comment period is not always required for a DNS. Criteria for determining when a comment period is required is stated in WAC 197-11-340(2)a. WSDOT's public notice procedures, described in WAC 468-12-510, include:

- Publishing a notice in a newspaper of general circulation in the area where the project is located (WAC 197-11-510(1)(b) and WAC 468-12-510(1)(a)(i)). See **Exhibit 411-4** for a DNS and public notice and **Exhibit 411-5** for a public notice of DNS and permit application.
- Sending a copy of the checklist and DNS to any agency, organization, or member of the public requesting information, in writing, concerning the project (WAC 468-12-510 (1)(a)(ii)).
- Posting the property (an option under SEPA rules).

The environmental checklist and DNS or MDNS are also sent for comment to any local agency or political subdivision that may be affected by the project. Agencies with jurisdiction, Ecology headquarters and regional office, and any affected tribes also receive a copy of the checklist/DNS (or MDNS) for comment (WAC 197-11-508(1)(a)).

(6) Mitigation Commitments

When either NEPA or SEPA proposals involve mitigation commitments, these commitments are recorded and completed as part of the project design file, as required. The Region prepares a commitment file consisting of proposed mitigating measures, commitments made to resource agencies or other agencies with permitting authority, and any other commitment made on behalf of the project. The file normally consists of design and environmental commitments. When project documents reach headquarters, the HQ Design Office reviews the design file and PS&E for inclusion of appropriate commitments. See *Design Manual* Section 220.08(3) and Section 412.10.

(7) Proceed with Design and Plans, Specifications, and Estimates (PS&E)

After all environmental documents and the project design file (and the Eight-Point Access Report if applicable for limited access highways) have been approved, the project may advance to right of way acquisition and preparation of the plans, specifications, and estimate (PS&E).

411.05 Documents and Procedures for Class I (EIS) Projects

For projects requiring federal funds or federal permits, all EIS documentation must comply with the requirements of NEPA and implementing regulations (CEQ 40 CFR 1501-1508 and FHWA 23 CFR 771.123 - 125).

Other EIS documentation uses SEPA guidelines as the controlling authority (WAC 197.11 Part 4). There is no guarantee that a NEPA EIS will meet SEPA requirements. The lead agency must independently evaluate the NEPA document to ensure adequate compliance with SEPA before deciding whether to adopt the EIS. See **Section 411.06** for detailed procedures for joint NEPA/SEPA EISs and **Section 411.07** for SEPA-only EISs.

On projects where one or more federal agencies have funding or permitting responsibility, one or more federal agencies are the lead agencies (typically FHWA for WSDOT highway projects). Other federal agencies may be involved as cooperating agencies. Projects jointly developed with a federal agency are prepared to comply with that agency's regulations and guidelines. For combined NEPA/SEPA EIS documents, a SEPA lead agency will also be designated.

See **Exhibit 411-1(c)** for the NEPA Class I process flow chart.

For further guidance on preparing EISs, see the SEPA Rules (WAC 197-11, Sections 360, 400 through 460, 560, 600 and 980) and FHWA Technical Advisory T6640.8A online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(1) NEPA Overview

A WSDOT project that anticipates substantial environmental, social, or economic impacts, and involves federal funding, federal lands, or federal permits, must comply with NEPA process and procedures for public involvement. An overview of the combined NEPA/SEPA process and procedures is outlined below and described in detail in **Section 411.06**.

- Hold partner confirmation meeting
- Establish interdisciplinary team (IDT) and begin draft study plan

- Publish Notice of Intent (NEPA) and Determination of Significance (SEPA)
- Conduct scoping process
- Develop and apply screening criteria to alternatives developed so far
- Select alternatives to study in DEIS and process final study plan
- Begin discipline studies
- Prepare draft EIS
- Circulate DEIS and file with USEPA and Ecology
- Hold EIS/design public hearing if required or desired
- Select preferred alternative and prepare Final EIS
- Issue Final EIS and file with USEPA and Ecology
- Prepare and issue Record of Decision (NEPA) and Notice of Action Taken (SEPA)
- Wait for seven days prior to approving design file or eight-point access study

(2) SEPA Overview

The primary purpose of a SEPA EIS is to ensure that SEPA's policies are an integral part of the ongoing programs and actions of state and local government. The EIS process is intended to provide an impartial discussion of significant environmental impacts and inform decision makers and the public of reasonable alternatives, including mitigation measures, that would avoid or minimize adverse impacts or enhance environmental quality. An outline of the SEPA process and procedures is outlined below and described in detail in **Section 411.07**.

- Hold partner confirmation meeting
- Establish interdisciplinary team (IDT) and begin draft study plan
- Publish Determination of Significance (SEPA)
- Conduct scoping process
- Develop and apply screening criteria to alternatives developed so far
- Select alternatives to study in DEIS and process final study plan
- Begin discipline studies
- Prepare draft EIS
- Circulate DEIS and file with Ecology
- Hold EIS/design public hearing if required or desired
- Select preferred alternative and prepare Final EIS
- Issue Final EIS and file with USEPA and Ecology
- Issue Notice of Action Taken
- Wait for seven days prior to approving design file or eight-point access study

411.06 Procedures for a Joint NEPA/SEPA EIS

A WSDOT project that involves federal funding, federal lands, or federal permits, and is likely to have substantial environmental, social, or economic impacts, must comply with NEPA process and procedures for preparing an EIS. Since WSDOT is a state agency, most WSDOT projects must comply with both NEPA and SEPA requirements. An overview of the combined NEPA/SEPA EIS process and procedures is described in detail in this section. See **Section 411.08** for guidance on preparing the EIS document.

(1) *Notice of Intent (NEPA)/ Determination of Significance and Scoping Notice (SEPA)*

(a) *Notice of Intent (NOI)*

If an EIS will be required for a project involving federal funds or federal permits, the Regional Office submits a draft Notice of Intent (NOI) to FHWA or the federal lead agency for publication in the *Federal Register*. The NOI advises federal agencies that an EIS will be prepared. The contents and guidelines for preparation of the notice are found in FHWA Technical Advisory T6640.8A.

(b) *Declaration of Significance (DS)/ Scoping Notice*

The SEPA Declaration of Significance (DS)/Scoping Notice is the state equivalent of the Notice of Intent. This notice is for joint NEPA/SEPA EISs, projects using only state and local funds, or by the need for a state or local "action". SEPA scoping requires a minimum 21-day comment period, public notice, and distribution (WAC 197-11-360, 408, and 411). It is not required for a NEPA EIS that will be adopted under SEPA.

A DS is prepared by the Region when it is determined that an EIS is needed. The DS/Scoping notice form is available in WAC 197-11-980. The Regional Office sends it directly to the Department of Ecology for inclusion in the daily update of the SEPA Register (currently found in Ecology's Web page on the Internet), and to other agencies, tribes, etc. with interest in the project.

The DS describes the main elements of the proposal, site location, and the major potential environmental impacts. See **Exhibit 411-6** for a sample DS with scoping notice. **Exhibit 411-3** is a sample DS and adoption of an existing environmental document.

(2) *Scoping*

The scoping process identifies the range of alternatives and impacts and the significant impacts to be addressed in the EIS. Scoping allows the resource agencies and the public to identify potential environmental concerns or controversy early in the project development. NEPA and SEPA rules require scoping during preparation of the draft EIS (40 CFR 1501.7, 23 CFR 771.123, WAC 197-11-408). NEPA does not require scoping for a supplemental EIS, however, the co-lead agencies can decide to hold an open house early in the supplemental EIS process that serves the same purpose. WSDOT practice is to hold agency and public scoping meetings for EAs and some documented CE projects. The decision to hold scoping meetings for these latter categories is made in consultation with the federal agency partner. For details, see **Section 412.07**; see **Exhibit 411-6** for a sample scoping notice.

(3) *Draft Environmental Impact Statement (DEIS)*

The DEIS is the initial WSDOT project report. It identifies the alternative actions and presents an analysis of their relative impacts on the environment. It may identify a recommended course of action if one alternative is clearly preferred. The DEIS summarizes the early coordination and scoping process, identifies key issues, and presents pertinent information obtained through these efforts.

The Regional Office or Division prepares a preliminary DEIS using discipline reports and/or data supplied by the IDT and other sources, and begins a commitment file (see **Section 412.11**). The same office coordinates reviews by various OSC experts, the Attorney General's office (on controversial projects), and appropriate federal agencies. Review comments are returned to the Region for revision of the preliminary DEIS. After reviewing changes made in response to comments on the preliminary DEIS, the Regional

Office submits the DEIS to the WSDOT Director of Environmental Services, who approves the DEIS by signing the title page, and obtains concurrence for circulation by signature of appropriate federal official on the title page. The signed title page and approval to print the DEIS are returned to the Regional Office and the document is printed and made available for public review as described below.

(4) Notice of Availability/ Public Hearing Notice

The Regional Office submits the DEIS to USEPA for processing and placement of a Notice of Availability in the *Federal Register*. A comment period of not less than 45 days begins upon publication of the notice in the *Federal Register*. For state-funded projects, the DEIS is also submitted to Ecology.

WSDOT is required to use the public notice procedures detailed in WAC 468-12-510(c) to inform the public that the DEIS is available and that a public hearing may be requested. If a hearing is required to fulfill any legal requirements, include information on the availability of the DEIS in the notice.

The hearing date is a minimum of 15 days after circulation of the DEIS if a design hearing is incorporated with the environmental hearing. The end of the comment period should be about two weeks or 15 days following the date of the public hearing.

Public notice requirements include:

- Publishing the notice in a newspaper of general circulation in the county, city, or general geographic area where the proposal is located.
- Notifying agencies with jurisdiction, affected tribes, and groups known to be interested in the proposal or who have commented in writing about the proposal.
- Contacting news media and placing notices in appropriate regional, neighborhood, or ethnic periodicals.
- Giving public notice at least 30 days in advance of a public hearing. The environmental document continues to be available for 15 days after the hearing date.

The DEIS Notice of Availability contains the following:

- Location of project.
- Brief description.
- Information on wetlands, floodplains, Section 4(f) lands, or endangered species if applicable.
- Purpose of EIS.
- Responsible agency.
- Federal lead agency (NEPA).
- Where documents are available.
- Where to send comments.
- "Comments are requested by (date)."
- Date, time, and location of public hearing or invitation to request a public hearing.

(5) Public Hearing

(a) NEPA

Public hearings are required for all NEPA EIS projects and for other NEPA projects when:

- There are identified environmental issues (e.g. heavy traffic volumes on local streets, visual quality), which should be discussed in a public forum. If a

request for a hearing can be anticipated, planning for a hearing can save time, rather than waiting until the end of the comment period to start the procedures for the public hearing.

- WSDOT has a substantial interest in holding a hearing to further public comment and involvement.
- An agency with jurisdiction over the proposal (permitting agency) requests a hearing.

As a minimum, a notice of opportunity for a hearing is published in newspapers. The WSDOT Hearing Coordinator (OSC) can provide examples and advice. Where hearings are not required by statute, informational meetings may serve as a useful forum for public involvement in the environmental process. See **Section 412.06** and *Design Manual* Section 210 for further hearing requirements.

(b) SEPA

Public hearings on SEPA projects (WAC 197-11-502, 197-11-535, 468-12-510) are held when one or more of the following situations occur:

- The lead agency determines that a public hearing would assist in meeting its responsibility to implement the purposes and policies of SEPA.
- An appeal is filed or there is a related land use action tied to the SEPA action.
- When two or more agencies with jurisdiction over a proposal make written request to the lead agency within 30 days of the issuance of the draft EIS.
- When 50 or more persons residing within a jurisdiction of the lead agency, or who would be adversely affected by the environmental impact of the proposal, make written request to the lead agency within thirty days of issuance of the draft EIS.

(6) Circulation of DEIS

Circulation of Draft and Final EISs is required under state and federal regulations (40 CFR 1502.19, WAC 197-11-455 and 460, and WAC 468-12-455 and 460). Generally, all copies sent out during the circulation of the DEIS are free of charge. After initial circulation, a fee may be charged which is not more than the cost of printing. See **Section 411.02**.

NEPA DEISs must be distributed by the Regional Office no later than the time the document is filed with the US Environmental Protection Agency for publication in the *Federal Register*. Required distribution is as follows:

- Federal or agencies with jurisdiction or environmental expertise on the project.
- Tribes (affected by project, both "usual and accustomed areas" and fishery resources).
- Cities and counties in which adverse environmental impacts identified in the EIS may occur, if the proposal were implemented.
- Local agencies of political subdivisions whose public services would be changed as a result of implementation of the proposal (e.g., public works, parks, planning, local SEPA office, schools, water or sewer districts).

- The applicable local, areawide, or regional agency, if any, that has been designated under federal law to conduct intergovernmental review and coordinate federal activities with state or local planning (e.g., Clean Air Agency, ports, Indian Fisheries Commission, transit authorities).
- Ecology Environmental Coordination Sec-tion (two copies).
- Media (legal and local newspapers).
- Public officials, private interest groups, and members of the public having or expressing an interest in the proposed project or DEIS.

The latter category normally includes:

- Each private interest group, but not each member.
- Public officials, private interest groups, or individuals who provided significant input during meetings and/or hearings.
- Individuals who have shown interest by attending several meetings, even though they did not provide specific input.
- Any individual who has shown interest by visiting an FHWA, WSDOT, or local agency office for information on the proposed project or by requesting a copy of the DEIS from the lead agency.

The DEIS is also distributed to:

- HQ Environmental Services Office
- Transportation Commission
- Attorney General
- State Library

When visual impacts are a significant issue, the DEIS should be circulated to officially designated local arts councils and other organizations interested in design, art, and architecture.

(7) Final Environmental Impact Statement (FEIS)

(a) Preliminary FEIS

After the public comment period, public and agency comments are evaluated to determine whether:

- Additional studies are required to respond to those comments.
- Impacts of the preferred alternative fall within an envelope of impacts for alternatives described in the DEIS (especially if a modified or hybrid alternative is selected as preferred).
- A supplemental EIS is required to provide additional or missing information prior to issuing a Final EIS.

The FEIS contains WSDOT's final recommendation or preferred alternative, lists or summarizes by group the comments received on the DEIS, summarizes citizen involvement, and describes procedures required to ensure that mitigation measures are implemented. The FEIS also documents compliance with environmental laws and Executive Orders.

- If a DEIS adequately identifies and quantifies the environmental impacts of all reasonable alternatives, evaluate the next step by reviewing the FHWA Technical Advisory T 6640.8A, which gives three options for preparing a Final EIS: traditional approach, condensed Final EIS, and abbreviated Final EIS.

WSDOT practice is to produce reader friendly documents with conclusions in one document. In the traditional approach, preferred by FHWA, the FEIS incorporates the DEIS (essentially in its entirety) with changes made as appropriate throughout the document. Changes may reflect the selection of an alternative, modifications to the project, updated information on the affected environment, changes in the assessment of impacts, selection of mitigation measures, and wetland and floodplain findings. These are the results of coordination, comments received on the DEIS, and responses to these comments. Since so much information is carried over from the draft to the final EIS, important changes are sometimes difficult for the reader to identify. These can be highlighted in an introductory section or attached summary.

(b) Review and Publication of FEIS

The Regional Office reviews the preliminary FEIS and submits the document for review by the Attorney General's office (on controversial projects) and the appropriate lead federal and state agencies.

After reviewing the preliminary FEIS and incorporating comments, the Regional Office prepares a draft Record of Decision (ROD) and submits it to the HQ Environmental Services Office along with the FEIS. The Environmental Services Office reviews the FEIS, and the WSDOT Director of Environmental Services signs the title page. The federal agency approval to print is demonstrated by signature on the title page, possibly with a short list of minor changes to make prior to printing. The FEIS is then submitted to USEPA for publication of the FEIS Notice of Availability in the *Federal Register*.

(c) Distribution

After approval, the Regional Office distributes copies of the FEIS as follows (40 CFR 1502.19(d), WAC 197-11-460):

- Federal agencies (do not list co-lead agencies).
- Tribes (affected by project, both "usual and accustomed areas" and fishery resources).
- Ecology Environmental Coordination Section (two copies).
- State agencies (see Ecology's SEPA agency list; do not list co-lead agencies).
- Regional agencies (e.g., Clean Air Authority, transit, Indian Fisheries Commissions).
- County (public works, SEPA official).
- Local agencies (public works, parks, SEPA official, schools, water/sewer district).
- Libraries.
- Media (legal and local newspapers).

- Organizations and individuals who have expressed interest.
- OSC, Attorney General, and State Library.

Under NEPA rules, FEISs must be distributed no later than the time the document is filed with USEPA for publication of the FEIS Notice of Availability in the *Federal Register.* Under SEPA rules, the FEIS is issued within 60 days of the end of the comment period for the DEIS, unless the proposal is unusually large in scope, the environmental impact associated with the proposal is unusually complex, or extensive modifications are required to respond to the public comments.

(d) Notice of Availability

WSDOT notifies the public in a similar manner as for the DEIS, except there is no official comment period. Comments received during the 30 days following the issue of the FEIS will be noted and responded to in the Record of Decision and made available to the public upon request. For SEPA FEISs, the Region sends the FEIS, or notice that the FEIS is available, to anyone who commented on the DEIS and to those who received but did not comment on the DEIS. If the agency receives petitions from a specific group or organization, a notice or EIS may be sent to the group and not to each petitioner. The Region makes additional copies available in its offices for review (WAC 197-11-460). FEIS notification procedures are detailed in WAC 468-12-510(d).

(8) Record of Decision (NEPA) and Notice of Action Taken (SEPA)

(a) Record of Decision (ROD)

The draft Record of Decision (ROD), prepared by the Regional Office, accompanies the FEIS through the review and approval process. The ROD explains the reasons for the project decision, summarizes any mitigation measures that will be incorporated in the project, and documents any required Section 4(f) approval (CEQ 40 CFR 1505.2). Guidance on preparing and distributing the ROD is in FHWA's Technical Advisory T6640.8A, online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

The ROD is intended by the CEQ to be an environmental document (CEQ 40 Questions, #34a). Therefore, it must be made available to the public through appropriate public notice as required by 40 CFR 1506.6(b). However, there is no specific requirement for publication of the ROD itself, either in the *Federal Register* or elsewhere. It is WSDOT practice to publish a Notice of Availability in the newspapers previously used for project notices.

Under NEPA, FHWA or other federal lead agency issues the final ROD. The Regional Office obtains the approved ROD from the federal agency and circulates it to the State Construction Engineer and the State Operations and Maintenance Engineer, and advises that the project may advance to final design or (PS&E) permitting.

The following format is used in preparing a ROD:

- ***Decision*** – Identify the selected alternative. Refer to the FEIS to avoid repetition.
- ***Alternatives considered*** – Briefly describe each alternative (with reference to the FEIS, as above), explain and discuss the balancing of values underlying the decision. Values for economic, environmental, safety, traffic service, community planning, and other decision factors may vary in relative importance. Identify each significant value and the reasons why some values were considered more important than others. The ROD should reflect the manner in which these values were considered in arriving at the decision. Identify the environmentally preferred alternative or alternatives. In addition, if Section 4(f) property is used, summarize the Section 4(f) evaluation.
- ***Measures to minimize harm*** – Describe all measures to minimize environmental harm that have been adopted for the proposed action. State whether all practicable measures to minimize environmental harm have been incorporated into the decision, and if not, why.
- ***Monitoring or enforcement program*** – Describe any monitoring or enforcement program that has been adopted for the specific mitigation measures, as outlined in the FEIS.
- ***Commitment list*** – Include an item-by-item list of commitments and mitigation measures from the commitment file. The list serves as a ready reference for the design, construction, and maintenance of the project (see **Exhibit 412-5**).

(b) Notice of Action Taken (NAT)

Under SEPA, the Notice of Administrative Review and Notice of Action Taken (NAT) establish a statute of limitations on challenges to an environmental document. See **Exhibit 411-7** for a sample.

Under SEPA Rules (WAC 197-11-704), an "action" includes:

- New and continuing activities (including projects and programs) entirely or partly financed, assisted, conducted, regulated, licensed, or approved by agencies.
- New or revised agency rules, regulations, plans, policies, or procedures.
- Legislative proposals.

Issuance of an environmental document is not an action under SEPA, and the NAT should not be filed until an action such as approval of the design file has been taken by WSDOT.

The decision to publish a NAT is made by the Region. The State Design Engineer, or official designated at the beginning of the project, concurs and signs the NAT.

A NAT can be issued whether or not a public hearing has been held. It is an optional process for the purpose of limiting potential court challenges of an environmental document. SEPA was amended in 1995 to change the appeal period to within 21 days of the last newspaper publication of the NAT for both private and governmental projects (RCW 43.21C.080). A NAT should be published any time

there is reason to believe challenges to the environmental document will be filed. Substantial controversy or known threats of challenges by project opponents are indicators that judicial review is likely. By limiting appeals to a certain time period, project schedules are less likely to be disrupted.

The NAT should be substantially in the form documented in WAC 197-11-990. The following notification procedure is specified in RCW 43.21C.080:

- Publishing notice on the same day of each week for two consecutive weeks in a legal newspaper of general circulation in the area where the property which is the subject of the action is located.
- Filing notice of such action with Ecology at its main office in Olympia prior to the date of the last newspaper publication.
- Notifying adjacent property owners and others by one of the following methods prior to the date of first newspaper publication (except for non-project actions):
    1. Mailing to the latest recorded real property owners, as shown by the records of the county treasurer, who share a common boundary line with the property upon which the project is proposed, by U.S. mail, first class, postage prepaid.
    2. Posting of the notice in a conspicuous manner on the property upon which the project is to be constructed.

(c) Notice of Administrative Review

Under SEPA, the Notice of Administrative Review may be used at WSDOT's option, where there has been no public hearing and WSDOT wants an opportunity to develop a more extensive administrative record prior to a challenge to the agency action in Superior Court. Otherwise, a challenge would be filed in Superior Court within the time limit after publication of a Notice of Action Taken on the administrative record compiled by WSDOT.

The Notice of Administrative Review establishes a 30-day period in which a party may make a written request for administrative review to the WSDOT Assistant Secretary for Program Development. Upon receipt of such a request, and if the concerns cannot be resolved through negotiations, WSDOT shall afford the party a hearing in accordance with RCW 34.04 and WAC 468-10 in an attempt to reach a decision.

If the party then wishes to seek judicial review of the administrative review decision, the aggrieved party shall first file a notice of intent to do so within 90 days of the issuance of the Notice of Administrative Review or within 30 days of the decision, whichever is later.

The Notice of Administrative Review is prepared by the Regional Office. The State Design Engineer concurs and signs the notice. The Notice of Administrative Review should be prepared and filed as shown in WAC 468-12-510(e) and 468-12-680.

(9) Proceed with Design

After all environmental documents in the environmental and design stages have been approved and finalized (including environmental documents, eight-point access report for limited access highways, and Access Hearings, and R/W plan revisions if applicable), the project may advance to right of way acquisition and preparation of the PS&E.

411.07 Procedures for a SEPA-Only EIS

For a WSDOT project that does not involve federal funding, federal lands, or federal permits, but is expected to have substantial environmental, social, or economic impacts, only SEPA EIS process and procedures must be followed. These procedures are described in detail in this section. See **Section 411.08** for guidance on preparing the EIS document.

(1) Declaration of Significance (DS)/ Scoping Notice

The SEPA Declaration of Significance (DS)/Scoping Notice is for projects using only state and local funds, or requiring a state or local action. SEPA scoping requires a minimum 21-day comment period, public notice, and distribution (WAC 197-11-360, 408, and 411).

A DS is prepared by the Region when it is determined that an EIS is needed. The DS/Scoping notice form is available in WAC 197-11-980. The Regional Office or Division sends it directly to the Department of Ecology for inclusion in the daily update of the SEPA Register (currently found in Ecology's Web page on the Internet), and to other agencies, tribes, etc. with interest in the project.

The DS should describe the main elements of the proposal, site location, and the major potential environmental impacts. See **Exhibit 411-6** for a sample DS with scoping notice. **Exhibit 411-3** is a sample DS and adoption of an existing environmental document.

(2) Scoping

The scoping process identifies the range of alternatives and impacts and the significant impacts to be addressed in the EIS. Scoping allows the agency to identify potential environmental concerns or controversy early in the project development. SEPA rules require scoping during preparation of the draft EIS (WAC 197-11-408). For details, see **Section 412.07**; see **Exhibit 411-6** for a sample scoping notice.

(3) Draft Environmental Impact Statement (DEIS) and Commitment File

The DEIS is the initial WSDOT project report. It identifies the alternative actions and presents an analysis of their relative impacts on the environment. It may identify a recommended course of action if one alternative is clearly preferred. The DEIS summarizes the early coordination and scoping process, identifies key issues, and presents pertinent information obtained through these efforts.

The Regional Office or Division prepares a preliminary DEIS using discipline reports and/or data supplied by the IDT and other sources and begins the commitment file (see **Section 412.11**).

The same office coordinates reviews by various OSC experts, the Attorney General's office (on controversial projects), and appropriate federal agencies. Review comments are returned to the Region for revision of the preliminary DEIS. After reviewing changes made in response to comments on the preliminary DEIS, the Regional Office submits the DEIS to the WSDOT Director of Environmental Services, who approves the DEIS by signing the title page. The signed title page and approval to print the DEIS are returned to the Regional Office and the document is printed and made available for public review as described below.

For SEPA-only projects, the DEIS is submitted to Ecology and a comment period of not less than 30 days is established from the date Ecology receives the document.

(4) Public Hearing Notice/Notice of Availability

WSDOT is required to use the public notice procedures detailed in WAC 468-12-510(c) to inform the public that the DEIS is available and the procedures for requesting a public hearing. If a hearing is required to fulfill any legal requirements, include information on the availability of the DEIS in the notice.

Public notice requirements include:

- Publishing the notice in a newspaper of general circulation in the county, city, or general geographic area where the proposal is located.
- Notifying agencies with jurisdiction, affected tribes, and groups known to be interested in the proposal or who have commented in writing about the proposal.
- Contacting news media and placing notices in appropriate regional, neighborhood, or ethnic periodicals.
- Giving public notice at least 30 days in advance of a public hearing.

The DEIS Notice of Availability contains the following:

- Location of project.
- Brief description.
- Information on wetlands, floodplains, shorelines, or endangered species if applicable.
- Purpose of EIS.
- Responsible agency.
- Where documents are available.
- Where to send comments.
- Deadline for receiving comments (30 days for SEPA projects).
- Date and location of public hearing or invitation to request a public hearing.

(5) Public Hearing

Public hearings on SEPA projects (WAC 197-11-502, 197-11-535, 468-12-510) are held when one or more of the following situations occur:

- The lead agency determines that a public hearing would assist in meeting its responsibility to implement the purposes and policies of SEPA.
- An appeal is filed or there is a related land use action tied to the SEPA action.
- When 50 or more persons residing within a jurisdiction of the lead agency, or who would be adversely affected by the environmental impact of the proposal, make written request to the lead agency within 30 days of issuance of the draft EIS.
- When two or more agencies with jurisdiction over a proposal make written request to the lead agency within 30 days of the issuance of the draft EIS.

(6) Circulation of DEIS

Circulation of Draft and Final EISs is required under SEPA regulations (WAC 197-11-455 and 460, and WAC 468-12-455 and 460). Generally, all copies sent out during the circulation of the DEIS are free of charge. After initial circulation, a fee may be charged which is not more than the cost of printing. See **Section 411.02**.

The distribution requirements of SEPA DEISs should follow the following procedures (WAC 197-11-455). The Region is responsible for distribution:

- Ecology Environmental Coordination Section (two copies).

- Each agency with jurisdiction over or environmental expertise on the proposal.
- Each city/county in which adverse environmental impacts identified in the EIS may occur, if the proposal were implemented.
- Each local agency of political subdivision whose public services would be changed as a result of implementation of the proposal.
- Any affected tribe.
- The applicable local, areawide, or regional agency, if any, that has been designated under federal law to conduct intergovernmental review.
- Any person requesting a copy of the EIS from the lead agency.

When visual impacts are a significant issue, the DEIS should be circulated to officially designated local arts councils and other organizations interested in design, art, and architecture.

(7) Final Environmental Impact Statement (FEIS)

(a) Preliminary FEIS

After the public comment period, the Regional Office or Division prepares a preliminary FEIS. The FEIS contains WSDOT's final recommendation or preferred alternative, discusses substantive comments received on the DEIS, summarizes citizen involvement, and describes procedures required to ensure that mitigation measures are implemented. The FEIS also documents compliance with environmental laws and Executive Orders.

(b) Review and Publication of FEIS

The Regional Office reviews the preliminary FEIS and submits the document for review by the Attorney General's office (on controversial projects) and the appropriate lead agencies.

Following any revisions, the Regional Environmental Office or HQ Environmental Services Office reviews the Final EIS and the WSDOT Director of Environmental Services signs the title page.

Under SEPA rules, the FEIS is issued within 60 days of the end of the comment period for the DEIS, unless the proposal is unusually large in scope, the environmental impact associated with the proposal is unusually complex, or extensive modifications are required to respond to the public comments.

(c) Distribution

After approval, the Regional Office distributes the FEIS to all state and local agencies with jurisdiction; and agencies, private organizations, and members of the public who provided substantive comments on the draft EIS or who requested a copy of the FEIS (WAC 197-11-460). Copies must be sent to Ecology's Environmental Coordination Section (two copies), OSC, Attorney General, and State Library.

(d) Notice of Availability

WSDOT notifies the public in a similar manner as for the DEIS except there is no comment period. For SEPA FEISs, the Region shall send the FEIS, or notice that the FEIS is available, to anyone who commented on the DEIS and to those who received but did not comment on the DEIS. If the agency receives petitions from a specific group or organization, a notice or EIS may be sent to the group and not to

each petitioner. The Region shall make additional copies available in its offices for review-(WAC 197-11-460). FEIS notification procedures are detailed in WAC 468-12-510(d).

(8) Notice of Action Taken (SEPA)

Under SEPA, the Notice of Administrative Review and Notice of Action Taken (NAT) establish a statute of limitations on challenges to an environmental document. See **Exhibit 411-7** for a sample; see also WAC 197-11-990.

Under SEPA Rules (WAC 197-11-704), an "action" includes:

- New and continuing activities (including projects and programs) entirely or partly financed, assisted, conducted, regulated, licensed, or approved by agencies.
- New or revised agency rules, regulations, plans, policies, or procedures.
- Legislative proposals.

Issuance of an environmental document is not an action under SEPA, and the NAT should not be filed until an action such as approval of the design file has been taken by WSDOT.

The decision to publish a NAT is made by the Region. The State Design Engineer, or official designated at the beginning of the project, concurs and signs the NAT.

A NAT can be issued whether or not a public hearing has been held. It is an optional process for the purpose of limiting potential court challenges of an environmental document. SEPA was amended in 1995 to change the appeal period to within 21 days of the last newspaper publication of the NAT for both private and governmental projects (RCW 43.21C.080). A NAT should be published any time there is reason to believe challenges to the environmental document will be filed. Substantial controversy or known threats of challenges by project opponents are indicators that judicial review is likely. By limiting appeals to a certain time period, project schedules are less likely to be disrupted.

(a) Notification Procedure

The following notification procedure is specified in RCW 43.21C.080:

- Publishing notice on the same day of each week for two consecutive weeks in a legal newspaper of general circulation in the area where the property which is the subject of the action is located.
- Filing notice of such action with Ecology at its main office in Olympia prior to the date of the last newspaper publication.
- Notifying adjacent property owners and others by one of the following methods prior to the date of first newspaper publication (except for non-project actions):
  1. Mailing to the latest recorded real property owners, as shown by the records of the county treasurer, who share a common boundary line with the property upon which the project is proposed, by U.S. mail, first class, postage prepaid.
  2. Posting of the notice in a conspicuous manner on the property upon which the project is to be constructed.

(b) Notice of Administrative Review

Under SEPA, the Notice of Administrative Review may be used at WSDOT's option, where there has been no public hearing and WSDOT wants an opportunity to develop a more extensive administrative record prior to a challenge to the agency

action in Superior Court. Otherwise, a challenge would be filed in Superior Court within the time limit after publication of a Notice of Action Taken on the administrative record compiled by WSDOT.

The Notice of Administrative Review establishes a 30-day period in which a party may make a written request for administrative review to the WSDOT Assistant Secretary for Program Development. Upon receipt of such a request, and if the concerns cannot be resolved through negotiations, WSDOT shall afford the party a hearing in accordance with RCW 34.04 and WAC 468-10 in an attempt to reach a decision,

If the party then wishes to seek judicial review of the administrative review decision, the aggrieved party shall first file a notice of intent to do so within 90 days of the issuance of the Notice of Administrative Review or within 30 days of the decision, whichever is later.

The Notice of Administrative Review is prepared by the Regional Office. The State Design Engineer concurs and signs the notice. The Notice of Administrative Review should be prepared and filed as shown in WAC 468-12-510(e) and 468-12-680.

(9) Proceed with Design

After all environmental documents have been approved and finalized, the project proceeds to final design (PS&E) and permitting.

411.08 Preparation of an EIS

The primary purpose of an environmental impact statement is to ensure that the intent of NEPA and/or SEPA becomes an integral part of programs and actions of state and local governments. The EIS is used by agency officials in conjunction with other relevant materials and considerations to plan actions and make decisions.

The EIS is to provide an impartial discussion of significant environmental impacts and inform decision makers and the public of reasonable alternatives, including mitigation measures, that would avoid or minimize adverse impacts or enhance environmental quality. The EIS process enables government agencies and interested citizens to review and comment on proposed government actions. The process is intended to assist the agencies and applicants to improve their plans and decisions, and to encourage the resolution of potential concerns or problems prior to issuing a final statement.

See Exhibit 411-8 through Exhibit 411-11 for sample NEPA and SEPA EIS outlines and cover sheets.

(1) Purpose and Need Statement

The purpose and need section is in many ways the most important section of an environmental impact statement. It explains to the public and decision makers that the expenditure of funds is necessary and worthwhile and that the priority the project is being given relative to other needed highway projects is warranted. In addition, although significant environmental impacts may result from the project, the purpose and need section should justify why impacts are acceptable based on the project's importance. It demonstrates problems that exist or will exist if a project is not implemented, and drives the process for alternative consideration, analysis, and selection of the preferred alternative. It should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the general public.

Various elements of purpose and need can be explored for any given project, including such concerns as mobility, safety, or economic development. See **Exhibit 411-10** for details.

(2) Alternatives to the Proposal

The EIS includes a comparison of impacts for different alternatives. The DEIS must evaluate all reasonable alternatives to the action and discuss why other alternatives that may have been considered were eliminated from detailed study.

SEPA rules require that reasonable alternatives include actions that could feasibly attain or approximate the objectives of a proposal, but at a lower environmental cost or decreased level of environmental degradation. See **Exhibit 411-10** for details.

(a) Typical Alternatives

Alternatives normally include the following:

- The no-action alternative, including routine maintenance and repair (such as safety improvements) that are part of routine operation of an existing roadway, and continued operation of the existing roadway system. This alternative does not include improvements that would increase capacity through widening an existing structure or roadway segment, or change the footprint of the structure or roadway prism. The consequences of the no-action alternative must be considered. The no-action alternative establishes a baseline condition for comparison with the other alternatives, which can be considered in order to fulfill the purpose of the project.
- Alternatives to improve the existing facility, including resurfacing, restoration, and rehabilitation (3-R) plus reconstruction (4-R) types of activities, high occupancy vehicle (HOV) lanes, park and ride facilities, and other minor improvements.
- Multimodal alternatives, including public transit, rail, water, and air transportation, or other modes of transportation dictated by the characteristics of the study area. These may be under the jurisdiction of other lead agencies and require early coordination.
- Alternative routes and/or locations.
- A combination of the above alternatives.

(b) NEPA Criteria

Identifying and studying alternatives to a proposal is the key to the NEPA process objective of finding transportation solutions that help preserve and protect the value of environmental and community resources. Evaluation of alternatives should present the proposed action and all the alternatives in comparative form, to define the issues and provide a clear basis for choice among the options. CEQ implementing regulations (40 CFR 1502.14) call the alternatives analysis section the "heart of the EIS," and require that agencies shall:

- Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives that were eliminated from detailed study, briefly discuss the reasons for eliminating them.

- Devote substantial treatment to each alternative considered in detail, including the proposed action, so reviewers may evaluate their comparative merits.
- Include reasonable alternatives not within the jurisdiction of the lead agency.
- Include the alternative of no action.
- Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft EIS and identify such alternative in the final EIS unless another law prohibits the expression of such a preference.
- Include appropriate mitigation measures not already included in the proposed action or alternatives.

For FHWA guidance on alternatives, see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then NEPA: Project Development, then Transportation Decisionmaking, then Development and Evaluation of Alternatives.

Or by direct link:

http://www.fhwa.dot.gov/environment/alts.htm

(c) SEPA Criteria

The SEPA Rules (WAC 197-11-440(5)) require the EIS to describe and present the proposal (or preferred alternative, if one or more exist) and alternative courses of action. The rules include the following guidance:

- Reasonable alternatives shall include actions that could feasibly attain or approximate a proposal's objectives, but at a lower environmental cost or decreased level of environmental degradation.
- The word "reasonable" is intended to limit the number and range of alternatives, as well as the amount of detailed analysis for each alternative.
- The "no-action" alternative shall be evaluated and compared to other alternatives.
- Reasonable alternatives may be those over which an agency with jurisdiction has authority to control impacts either directly, or indirectly through requirement of mitigation measures.

(3) Organization of the EIS

Table 411-1 and **Figure 411-1** compare the typical organization of an EIS under NEPA and SEPA; they are not intended to include all topics covered. WSDOT EISs generally follow the NEPA format. The main difference is that in NEPA documents, the affected environment and environmental impacts are presented in separate sections, whereas in SEPA EISs the impacts to a particular element of the environment are in the same section as the discussion of the existing environment for that element. Because EIS formats are not mandatory, agencies sometimes prepare EISs with the more reader-friendly format, presenting information regarding a particular topic in the same section. Sample DEIS outlines are attached as **Exhibit 411-10** (NEPA) and **Exhibit 411-11** (SEPA).

Additional guidance concerning the organization and format of the EIS documents can be obtained from the following sources:

- Council on Environmental Quality (40 CFR Section 1502.10) – Recommended Format:

  http://ceq.eh.doe.gov/nepa/nepanet.htm

  Click on Regulations on Implementing NEPA from CEQ

  Or by direct link:

  http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm

- FHWA guidance from Technical Advisory T6640.8A:

  http://www.fhwa.dot.gov/

  Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

  Or by direct link:

  http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

  SEPA guidance from SEPA Rules WAC 197-11-430(3), 440, 444:

  http://www.ecy.wa.gov/

  Click on Services, then Environmental Review (SEPA), then SEPA and related Rules, then SEPA Rules (Chapter 197-11 WAC).

  Or by direct link:

  http://www.ecy.wa.gov/programs/sea/sepa/197-11_toc.html

Table 411-1:

Affected environment Animals Water Traffic Cultural resources	Affected environment: Natural environment (earth, air, water, plants and animals, energy and natural resources) Built environment (environmental health, land and shoreline use, transportation, public services and utilities)
Environmental impacts Animals Water Traffic Cultural resources	Significant impacts of alternatives Reasonable mitigation measures Intended environmental benefits of mitigation measures Significant adverse impacts that cannot or will not be mitigated

(4) *Elements of the Environment*

Table 411-2 compares the elements of the environment to be considered under NEPA, SEPA, and other state and federal legislation, with references to sections of this manual where guidance on analyzing each type of impact can be found. See also **Table 100-2** in **Section 100,** which lists the permits required for transportation projects.

In addition to NEPA requirements, Section 4(f) of the Department of Transportation Act applies to projects affecting publicly owned parks, recreation areas, wildlife and

waterfowl refuges, and historic sites. Section 6(f) of the Land and Water Conservation Funds Act applies to conversion of outdoor recreation property acquired or developed with grant assistance from an Interagency Committee for Outdoor Recreation. For guidance on preparing Section 4(f) and Section 6(f) evaluations, see **Section 411.09** and **Section 455.05**.

(5) Affected Environment

CEQ regulations (40 CFR 1502.15) require EISs to succinctly describe the environment of the area(s) to be affected by the alternatives under consideration. Descriptions should be no longer than is necessary for the reader to understand the relative impacts of the alternatives. Data and analysis should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced.

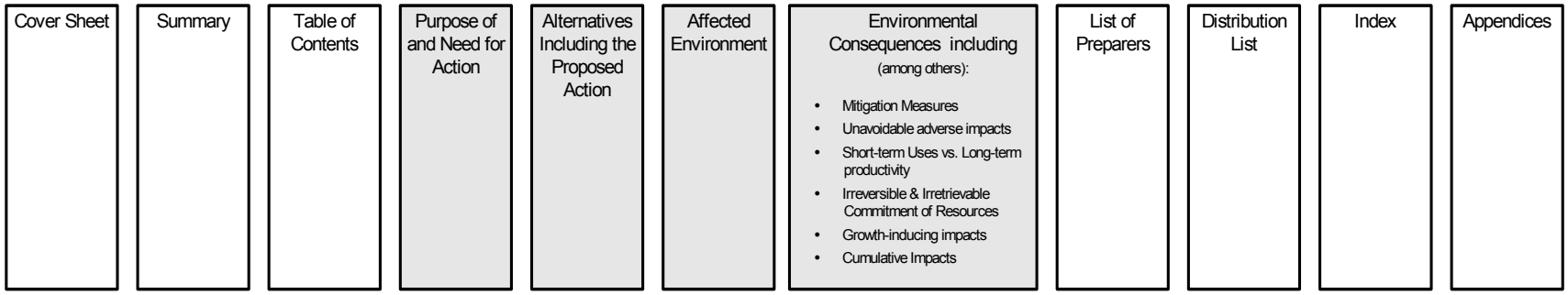
(6) Analysis of Impacts

Under CEQ regulations (CFR 1502.16) the EIS discussion of impacts forms the scientific and analytical basis for comparisons of alternatives. It consolidates the results of discipline reports (see **Section 412.09**) prepared by Regional Offices and Divisions.

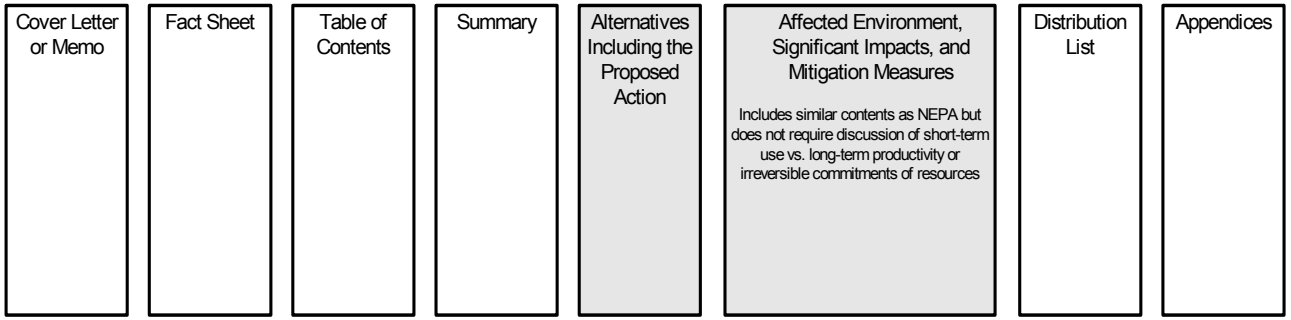
The EIS must discuss impacts on the natural environment (air, water, land). As appropriate, the EIS must also discuss impacts on urban quality, historical and cultural resources, and the design of the built environment, including reuse and conservation potential of various alternatives and mitigation measures.

Figure 411-1: Generalized Content Organization for EISs under NEPA and SEPA

Federal (NEPA)



Washington (SEPA)



* Note: The most important sections of an EIS are shaded for comparison. Note that SEPA combines the discussion of the affected environment, proposal impacts, and mitigation measures in one section.

(Source: Adapted from Diori L. Kreske, Environmental Impact Statements: A Practical Guide for Agencies, Citizens, and Consultants.)

Table 411-2: Comparison of NEPA and SEPA Elements of the Environment

NATURAL ENVIRONMENT			
Earth Geology; Soils; Topography; Unique Physical Features; Erosion.	Construction Impacts.	Critical Areas Review.	420
Air Air Quality; Odor; Climate.	Air Quality.	Regional Air Pollution Control Authorities (permit/concurrence, point source-emissions, traffic related-concurrence).	425
Water Surface; Runoff; Flood; Groundwater; Public Water Supply.	Water Quality, Floodplain, Water Body Modifications.	Section 10 Permit, NPDES, 401 Water Quality Certification, Floodplain Analysis, 404 Permit, USCG Section 9 Permit.	431 432 433
Plants & Animals Habitat; Eelgrass; Unique Species; Migration Routes.	Wetlands, Threatened & Endangered Species, Wildlife.	404 Permit, Section 10 Permit, ESA Section 7 consultation, HPA, Critical Areas Review, Shoreline Permit, Forest Practices Application.	436 437
Energy & Natural Resources Amount Used; Source/ Availability; Non-renewable; Conservation & Renewable Resources; Scenic Resources.	Energy, Local Short-Term vs. Long-Term Productivity, Irreversible and Irretrievable Commitment of Resources.		440 480
BUILT ENVIRONMENT			
Environmental Health Noise; Risk of Explosion; Hazardous Materials.	Noise, Hazardous Waste Sites, Construction Impacts		446 447
Land & Shoreline Use Land Use Plans/Population; Housing; Light & Glare; Aesthetics; Recreation; Historical/Cultural; Agricultural.	Land Use, Farmland, Coastal Barriers, Coastal Zone Impacts, Historical/Archaeological/ Cultural, Visual, Joint Develop-ment, Social Impacts, Economic Impact, Environmental Justice, Wild & Scenic Rivers, Relocation	Local land-use and shoreline permits.	450- 459
Transportation Transportation Systems; Vehicular Traffic; Water, Rail & Air Traffic; Parking; Movement of People or Goods; Traffic Hazards.			460
Public Services & Utilities Fire; Police; Schools; Parks/ Recreational; Maintenance; Communications; Water/ Stormwater; Sewer/Solid Waste; Other.		Local utility approval.	470
Secondary and Cumulative Impacts	Cumulative Impacts		480

Impacts must be discussed for each alternative, and summarized in comparing the relative impacts of the alternatives including the proposal (CEQ 1502.14). For each alternative, the energy, natural and depletable resource requirements and conservation potential must be discussed.

The EIS should discuss in general terms the relationship of local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity, and the irreversible and irretrievable commitment of resources resulting from the proposed action. For guidance on this discussion, see **Section 480.05.**

In addition, the EIS must describe possible conflicts between the proposed action and the objectives of federal, regional, state, local and tribal land use plans, policies, and controls for the area affected by the project.

Both NEPA and SEPA require analysis of direct, indirect, secondary, and cumulative impacts. For example, a direct impact would be that a new highway will result in filling a wetland; an indirect impact would be that the highway will encourage increased development because of improved access; a cumulative impact would be that increased runoff and contaminants from the highway would be added to the volume and level of contamination from other development around the wetland. For guidance on analysis of cumulative impacts, see **Section 480.05**.

Impacts may be temporary, such as the short-term impacts associated with the construction phase of a project, or permanent, such as the long-term impact of increasing runoff and contamination from a widened highway. A summary of significant adverse impacts remaining after mitigation should follow the discussion of all impacts.

(a) Direct Impacts

Direct impacts are easiest to conceptualize and identify. They are defined as effects that are caused by the proposed action or alternative and that occur at the same time and place. Impacts, or effects, may be ecological, aesthetic, historic, cultural, economic, social, or health-related.

(b) Indirect Impacts

Indirect impacts must be quantified if possible. When no reasonable assessment of indirect impacts can be made, the discipline report needs to identify the agency or agencies with jurisdiction and the specific regulations that would govern additional impacts caused by others. For example, construction of a new interchange does not cause additional development; however, it could facilitate such development.

In most cases, predicting the type, location, or timing of future development with any accuracy is impossible. It is therefore impractical to attempt to predict associated impacts. In such cases, address indirect impacts by identifying the regulatory authority(ies) (city, county, regional, state, and/or federal) and the specific regulation(s), e.g., Section 14.8 of Queen County's Comprehensive Land Use Plan.

Example: "Construction of Alternative A2 would result in eliminating approximately 2.3 acres of wetlands. Future development along the highway corridor could affect additional wetland areas. Any such development affecting wetlands would have to comply with Executive Order 11990, and Section 14.8 of Queen County's Comprehensive Land use Plan."

(c) *Cumulative Impacts*

Cumulative or secondary impacts result from the incremental effect of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time. See **Section 480.05** for detailed guidance on analyzing cumulative impacts.

(7) *Mitigation*

The EIS also must discuss the proposed means to mitigate the identified environmental impacts. Proposed mitigation should be in addition to standard mitigation incorporated into all contracts.

Under CEQ regulations (40 CFR 1508.20), mitigation may include:

- Avoiding the impact altogether.
- Minimizing impacts by limiting the scale of the action.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations.
- Compensating for the impact by replacing or providing substitute resources or environments.

For FHWA guidance on mitigation, see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then NEPA: Project Development Process, then Transportation Decisionmaking, then Mitigation and Enhancement of the Environment.

Or by direct link:

http://www.fhwa.dot.gov/environment/mitig2.htm

411.09 Section 4(f) and Section 106 Documents and Procedures

(1) *Section 4(f) Evaluation*

When a project involves Title 23 federal funding and requires the use of any publicly owned land from a park, recreation area, wildlife or waterfowl refuge, or a cultural resource site on or eligible for the National Register of Historical Places, a Section 4(f) evaluation must be included in a separate section of the EA or EIS. A separate evaluation is prepared for each location within the project where the use of Section 4(f) property is being considered. For details, see **Section 455.05**. **Exhibit 455-1** is the Discipline Report checklist for 4(f) evaluations; **Exhibit 455-2** is an evaluation outline.

The DEIS/Section 4(f) evaluation report must be circulated to the Secretary of the U.S. Department of the Interior for a 45-day review and comment period. When appropriate, the U.S. Secretary of Housing and Urban Development and the Secretary of Agriculture are also given an opportunity to review the proposal. When a Section 4(f) property is identified after the DEIS and/or FEIS has been processed, a separate Section 4(f) evaluation is prepared, circulated for comment, and finalized.

(a) *Contents (Draft & Final)*

The Section 4(f) document should include the sections listed below.

- ***Introduction –*** Include the following statement: "Federal regulations prohibit the FHWA from using land from a significant publicly owned park, recreation area, wildlife or waterfowl refuge, or from a significantly historical site. An exception occurs if the United States Secretary of Transportation makes a determination that (1) there is no feasible and prudent alternative to the use of such land; and (2) the proposed action includes all possible planning to minimize harm to the property." Feasible is defined as being possible to construct using sound engineering practices. It disregards limitations and cost. Prudent is defined as not involving extraordinary cost or community disruption.
- Description of Action.
- Description of 4(f) Resource – with figure(s) showing the entire resource.
- Impacts on the Resource – resulting from construction and/or operation.
- Avoidance Alternatives – can refer to and incorporate discussion from EIS.
- Measures to Mitigate Harm – Detailed discussions of mitigation measures in the EIS or EA may be referenced and appropriately summarized, rather than repeated.
- Record of Coordination – Include information on all agencies contacted. As applicable, include: Department of Interior, Regional Office of HUD, USDA, Forest Supervisor of the affected National Forest, SHPO, local agency with jurisdiction. Include the National Park Service position on the land transfer if Section 6(f) land is impacted.
- ***Conclusion (FEIS only) –*** The conclusion that there are no feasible and prudent alternatives is not addressed at the draft Section 4(f) evaluation stage. Such conclusion is made only after the draft Section 4(f) evaluation has been circulated and coordinated and any identified issues adequately evaluated. With the FEIS include this concluding statement: "Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the [identify Section 4(f) property] and the proposed action includes all possible planning to minimize harm to the [Section 4(f) property] resulting from such use." (Source: FHWA Technical Advisory T 6640.8A.)

(b) 4(f) Inventory Questions

Avoiding impacts to possible 4(f) resources is a prime concern as alternatives are defined and design decisions are made. To document an inventory of existing recreational resources within the study area, request the owner agency for information on the areas of interest below.

- Provide a detailed map or drawing of sufficient scale to identify the resources on your property.
- What is the size (in acres or square feet) and location (maps, sketches) of the resources?
- What is the type or nature of the property (e.g., recreation, boat launch, historic, passive recreation)?

- What is the function of or what are available activities on the property (e.g., swimming, golfing, baseball, picnic table)?
- Describe and locate all existing and planned facilities on your map/sketch (tennis courts, baseball diamonds, picnic table, restroom, etc.). Are the parcels part of any existing or proposed State Recreation Master Plan?
- What is the access (pedestrian and vehicles), and usage (e.g., approximate number of users/visitors) in a time period of the owner's choice?
- Is there a relationship to other similarly used public lands in the vicinity?
- Are there any applicable clauses affecting ownership, such as lease, easement, covenants, restrictions or conditions, including forfeiture?
- Are there any unusual characteristics (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property?
- Has the acquisition of land or any improvements to the resource used funds from the Land and Water Conservation Fund Act of 1965, administered by the Interagency Committee for Outdoor Recreation (IAC)?

(c) Nationwide 4(f) Programmatic Evaluations

The following categories of impact on 4(f) resources can use a programmatic 4(f) evaluation if certain requirements are met:

- Minor involvement with public parks, recreation lands, and wildlife and waterfowl refuges.
- Minor involvement with historic sites.
- Use of historic bridges.
- Independent bikeway or walkway construction projects.

For details, see **Section 455.05**.

(d) Final Section 4(f) Evaluation

When the selected alternative involves the use of Section 4(f) property, a Section 4(f) evaluation is included as a separate section in the FEIS. Ensure that the proper procedures are followed as stated in the Memorandum of Agreement with the Council on Historic Preservation. See **Exhibit 456-2.**

(e) Circulation of Section 4(f) Evaluations

Normally, Section 4(f) evaluations are included in an EA or EIS and are circulated with the environmental document. If an EA is involved, the draft 4(f) evaluation is combined and issued with the EA. After the environmental hearing and comment period, the final 4(f) evaluation is combined and issued with the FONSI as a public document.

If a Section 4(f) evaluation is processed separately, it should be sent to HQ Environmental Services Office. The Environmental Services Office reviews the evaluation and the WSDOT Director of Environmental Services signs the title page. FHWA approval to print is demonstrated by their signature on the title page, possibly with a short list of minor changes to make prior to printing. The region should

distribute the document to officials having jurisdiction over the Section 4(f) property, and to the U.S. Department of Housing and Urban Development and the U.S. Department of Agriculture when these agencies have an interest in or jurisdiction over the affected Section 4(f) resource (23 CFR 771.135(i)). The Section 4(f) evaluation report, along with any supporting expertise reports, must be circulated to the Secretary of the U.S. Department of the Interior for a 45-day review and comment period.

(2) Section 106 – Historic and Cultural Resources

Section 106 of the Historic Properties Act applies to transportation projects affecting a historic property listed on or eligible for listing on the National Historic Register. Special provisions apply to the use of historic bridges for highway projects. Under the Archeological Resources Protection Act, projects that involve the acquisition of right of way or excavation within existing right of way may need to be surveyed and inventoried to determine if cultural resources exist. See **Section 456.05** for details. **Exhibit 456-4** is the WSDOT Discipline Report checklist for cultural resources

Section 106 property may also meet the requirements for a Section 4(f) evaluation if it has been determined that the proposed project will have an adverse effect on the site. In this case, one document, the Section 106 Preliminary Case Report and Draft Section 4(f) evaluation, will satisfy the requirements of both laws. For details, see the *Federal Register*, Vol. 64, No. 95, May 18, 1999 – Rules and Regulations for Part 800, Protection of Historic Properties for more information.

The need for protection of a Section 106 historic resource is documented by preparing a Determination of Eligibility and Determination of Effect. Both documents are processed through the State Historic Preservation Officer (SHPO) for concurrence. Section 106 requires consultation with affected tribes at the beginning of the project and throughout the project.

411.10 Re-Evaluations and Supplemental Documents

Once an EIS, FONSI, or CE designation has been approved for a project, the environmental document or CE designation must be reviewed at various stages of project development to determine if the approved document or CE designation remains valid. Prior to any major action, such as approval of the Design Summary, PS&E, or right of way purchase, the environmental document or CE designation is re-examined to establish that it is still valid and to ensure that any mitigating measures or commitments are contained in the appropriate documents.

If a project meets the conditions listed below, a formal written reevaluation of the existing document or CE designation is required. While the procedures may vary, this formal reevaluation is applicable to both NEPA and SEPA projects.

For regulatory guidance, see 23 CFR 771.129 – 130, FHWA Technical Advisory T6640.8A, Sections XI and XII, and WAC 197-11-600(4), 620, 625.

(1) Re-Evaluations

For NEPA implementing regulations on project reevaluations, see 23 CFR 771.129.

(a) When Re-Evaluation Is Required

The Region may reevaluate a document any time single or cumulative conditions have changed which might result in new or more severe environmental impacts. Reevaluation is required when any one of the following conditions exist:

- An acceptable FEIS has not been submitted to FHWA within three years from the date of DEIS circulation (23CFR771.129(b)).
- Major steps to advance the project (such as approval to acquire a substantial portion of the right of way or approval of PS&E) have not occurred within three years from a NEPA Administrative Decision.
- Any change is made to the proposed action and it is uncertain if a supplemental EIS is required. The Region reevaluates the project by conducting appropriate environmental studies, or, if necessary, by preparing an EA to assess the impacts of the changes.
- When any change in laws or regulations occur (such as listing a new species under ESA).
- When the wetland delineation may be older than three years.

(b) Documentation

When any of the above conditions apply, the Regional Office prepares a written reevaluation to determine if a supplement to the DEIS or a new DEIS is required.

The written reevaluation should address all current environmental requirements. The focus should be on changes to the project, its surroundings, environmental impacts, and/or any new issues identified since either the CE, FONSI, DEIS, or FEIS was issued. The results of any field reviews, additional studies, and/or coordination with other agencies should be included in the reevaluation.

WSDOT's Reevaluation/Consultation form provides a consistent method of documenting reevaluations. See **Exhibit 411-12** for the Reevaluation and Consultation form and **Exhibit 411-13** for a sample completed form. Any additional information required to explain changes in environmental impacts or to support a conclusion should be attached to this form. An optional method is to combine the form and any supplemental information into a single document.

(c) Federal Review and Approval

The Regional Office forwards the re-evaluation for review and approval to the same federal office that approved the original EIS. If, after reviewing the written re-evaluation, the FHWA or other federal lead agency concludes that a supplement to the DEIS or a new DEIS is not required, the decision should be appropriately documented and included in the project file. If the next major step in the process is preparation of a FEIS, the FEIS may be used to document the decision. The conclusions reached and any supporting information should be briefly summarized in the summary section of the FEIS. Public involvement is not part of the re-evaluation process.

(d) SEPA Reevaluation Procedures

If changes occur to a project or its surroundings or if potentially significant new or increased adverse environmental impacts are identified during other phases of project development, the approved document or exemption designation must be reevaluated. SEPA has no specific requirements for reevaluation, but the reevaluation should be accomplished in a manner similar to that described for NEPA projects. The Regional Office determines if the approved environmental documentation or exemption designation is still valid.

(2) *Supplemental Environmental Documents*

Supplemental environmental documentation is required if the reevaluation identifies significant new or increased adverse environmental impacts or if changes have occurred to the project that were not addressed in the original document.

For NEPA projects, supplemental documentation may be a supplemental DEIS, a new DEIS, the addition of new or additional information in a FEIS, or an EA (23 CFR 771.130 and CEQ 40 CFR 1502.9). For SEPA projects, a supplemental EIS, (SEIS) or an addendum to the DEIS or FEIS may be required (WAC 197-11-620).

(a) *Contents*

There is no required format for a NEPA SEIS, however the FHWA Technical Advisory T 6640.8A on pages 49 and 50 directs that following information should be supplied:

- Sufficient information to briefly describe the proposed action.
- The reason why the SEIS is being prepared.
- Status of previous DEIS or FEIS.
- Only address changes that required the SEIS to be written and new information that was not available.
- Reference and summarize previous EIS as appropriate.
- Update status of compliance with NEPA and the results of any re-evaluations.

Supplemental environmental impact statements shall be reviewed and distributed in the same manner as DEISs and FEISs. Scoping is not required for NEPA SEIS documents. Scoping is optional under SEPA.

411.11 Exhibits

Exhibit 411-1 – NEPA/SEPA Process Flowcharts.

Exhibit 411-2 – Environmental Assessment Outline.

Exhibit 411-3 – DNS/DS and Adoption of Existing Environmental Document.

Exhibit 411-4 – Public Notice and DNS (SEPA).

Exhibit 411-5 – Public Notice of Permit Application and DNS (SEPA).

Exhibit 411-6 – Sample Scoping Notice and DS (SEPA).

Exhibit 411-7 – Sample Notice of Action Taken by WSDOT.

Exhibit 411-8 – NEPA EIS Sample Cover Sheet.

Exhibit 411-9 – SEPA EIS Sample Title Sheet and Fact Sheet.

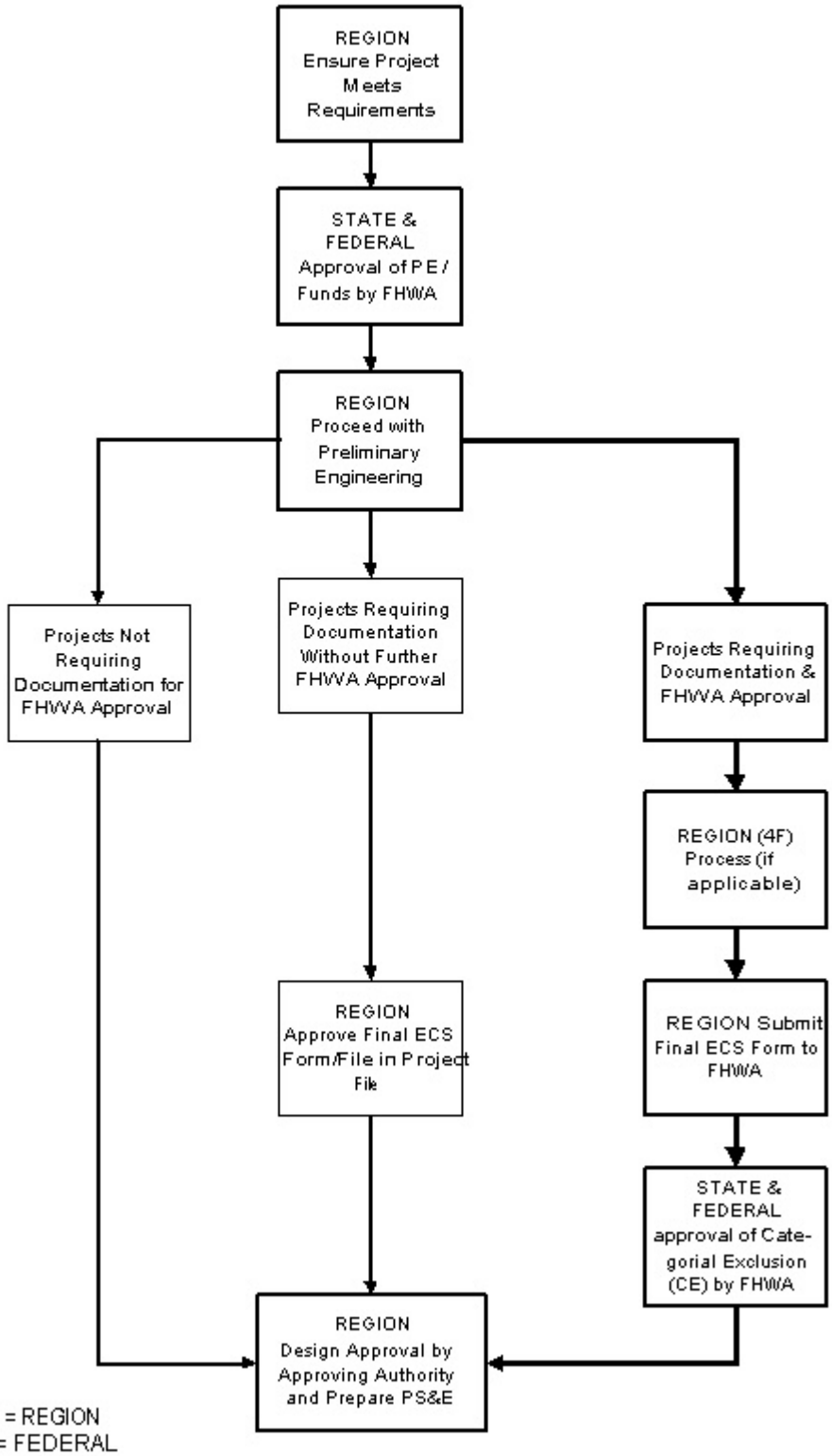
Exhibit 411-10 – NEPA EIS Outline.

Exhibit 411-11 – SEPA EIS Outline.

Exhibit 411-12 – Environmental Reevaluation and Consultation Form (NEPA).

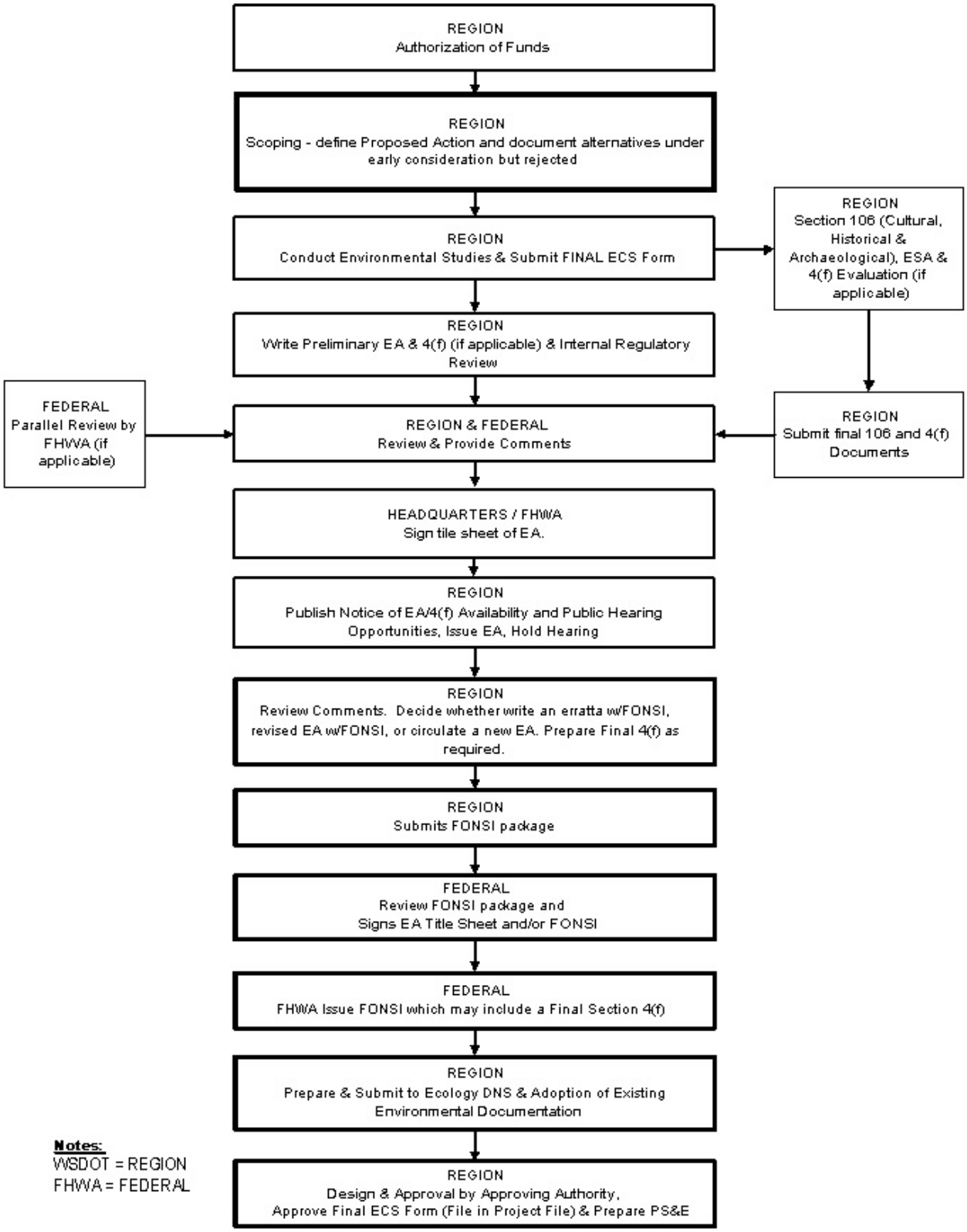
Exhibit 411-13 – Sample Environmental Reevaluation/Consultation Form.

(a) Class II Projects
Categorical Exclusions
No Probable Significant Adverse Impact

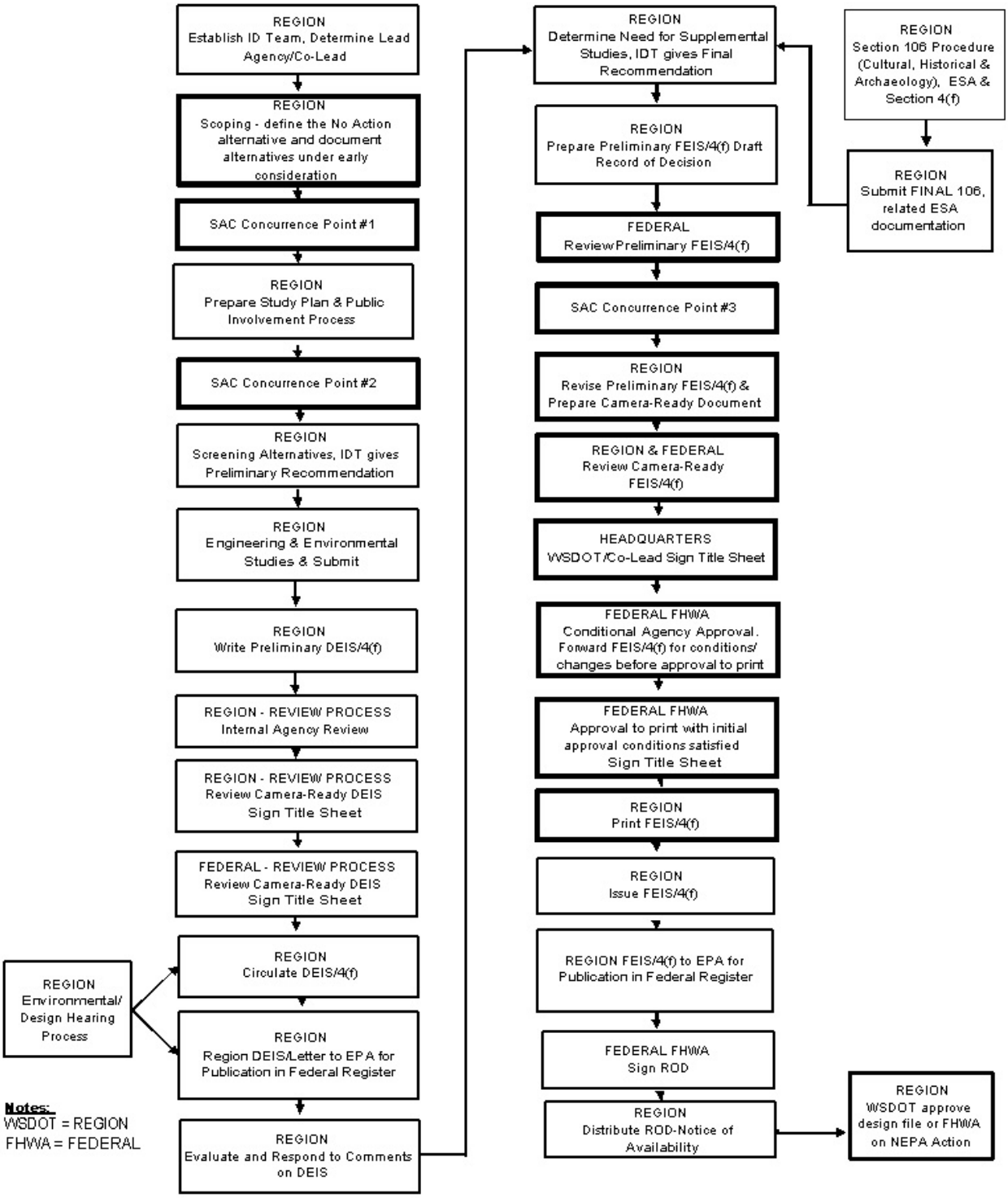


Notes:
WSDOT = REGION
FHWA = FEDERAL

(b) Class III Projects
Environmental Assessment Required
Significance of Impact Unknown



(c) Class I Projects
Environmental Impact Statement Required
Significant Adverse Impacts



Environmental Assessment Outline

PREFACE

This outline[1] is provided for the guidance of preparers and reviewers of Environmental Assessments (EAs). It is intended to ensure that EAs are complete and in compliance with National Environmental Policy Act (NEPA) regulations 40 CFR 1500 to 1508, and Federal Highway Administration (FHWA) regulations and guidelines set forth at 23 CFR 771, and in Technical Advisory T 6640.8A.

An environmental assessment must be prepared for all actions involving Federal funds and/or approvals which do not qualify as a categorical exclusion and do not clearly require an environmental impact statement (EIS). The purpose of an EA is twofold. First, an EA should resolve any uncertainty as to whether an EIS is needed. Should the need for an EIS become evident at any time during the EA process, one should be started. The second purpose of an EA is to provide sufficient information to serve as the record for all environmental approvals and consultations required by law.

If an EIS is not required, the EA is made available to resource agencies and the public for a 30-day review and comment period. Following public availability period, an erratum is written, or the EA, is revised or a supplemental EA is prepared, as appropriate, to (1) describe changes to the proposed action or mitigation resulting from comments received on the EA or at the public hearing, if one is held; (2) include any necessary findings, agreements, or determinations (e.g., wetlands, Section 106, etc.); and (3) include a copy of pertinent comments received on the EA and the agency's responses to the comments. This supplemental EA is then submitted to FHWA along with a copy of the public hearing transcript (if one is held), and a request for a finding of no significant impact (FONSI). If FHWA concurs with the finding, the EA process is completed with a determination that the action will have no significant impact to the environment (the FONSI), issued by FHWA.

This EA outline is designed to be a guide. It should not be viewed as an inflexible format for every EA. Although the regulations do not set page limits, the Council on Environmental Quality recommends that the length of EAs usually be less that 15 pages. *To minimize volume, an EA should use good quality maps and exhibits.* Background data and technical reports should be incorporated by references and summarized to support concise discussions of the alternatives and their impacts.

FHWA no longer requires use of metric units in addition to English (see **Section 411.02(4)**). ASTM E 380-92 is recommended as a source of information on metric conversion. The metric unit should come first, followed by the English unit in parenthesis, as shown on the following page.

Include the following items on a separate page, immediately following the title page of the document:

- ADA Disabilities Notice
- Civil Rights Notice
- Note on metric usage (if applicable)

[1] Source: WSDOT Project Development Office, July 1988.

Persons with disabilities may request this information be prepared and supplied in alternate forms by calling the WSDOT ADA Accommodation Hotline collect 206-389-2839. Persons with vision or hearing impairments may access the WA State Telecommunications Relay Service at TT 1-800-833-6388, Tele-Braille 1-800-833-6385, or Voice 1-800-833-6384, and ask to be connected to 360-705-7097.

"Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898, and the related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which WSDOT receives federal financial assistance."

Where metric measurements are used in this document, the metric unit is given first, followed by the English unit in parenthesis; for example: "The HOV lane is separated from adjacent lanes by a designated buffer width of 0.6 to 1.2 m (2 to 4 ft)."

ENVIRONMENTAL ASSESSMENT OUTLINE CONTENTS

Page

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Examples:

- **EA Cover Sheet** **8**
- **Elements Not Affected by Proposal** **9**
- **Potential Impacts of Proposal** **10**

COVER SHEET

There is no required format for an EA cover sheet. The sample included as **Example 1** is recommended as a guide.

TABLE OF CONTENTS

A. Include all sections as well as a list, if possible, of any documents which are appended, adopted, or serve as technical reports for the EA.

B. Include a list of all maps, illustrations, and figures.

DESCRIPTION OF THE PROPOSED ACTION

Describe the proposed action. If more than one alternative is being considered, describe each alternative. Include maps, illustrations, exhibits, etc.

Be careful to include sufficient design data to allow an accurate assessment of impacts without committing to specific details which are subject to refinement or change. Lane and shoulder widths, median widths, etc., may be omitted or expressed as a variable if not definitely known. For example, *"The proposed project would provide two lanes in each direction with a continuous, center, two-way left turn lanes. Including shoulders, the total roadway width would be 76 feet";* or *"The proposed project would widen the existing roadway to two 12-foot lanes with 8 to 10 foot paved shoulders."* Do not assume that proposed design deviations will be approved at a future date.

A. Location, length, termini, and why the termini are logical.

B. Major design features (brief description, not a complete design report).

1. Number of lanes, tracks, or runways
2. Median type/ function.
3. Pavement or construction type.
4. Typical cross-section(s).
5. Provisions for mass transit.
6. Provisions for high occupancy vehicles.
7. Interchange and/or structural locations.
    a. Interchanges.
    b. Grade separations.
    c. At-grade intersections.
    d. Railroad crossings.
    e. River crossings.
    f. Pedestrian, bicycle, or equestrian crossings.
8. Right of way acquisition requirements. (Identify whether additional right of way will or will not be required. Specific right of way acquisition impacts are discussed under impacts elsewhere in the EA.)

9. Illumination.
10. Pedestrian and bicycle facilities.
11. Displacement of utilities.
12. Estimated cost and construction schedule.
13. Identify permits needed, including name of permitting agency.

PURPOSE OF AND NEED FOR ACTION

Identify and describe the transportation problem(s) which the proposed action is designed to address and how the problem will be resolved. The following is a list of items which may assist in clearly demonstrating the need for the action. All of the items are not applicable in every situation.

A. Transportation Demand and Capacity Needs. Is the present facility inadequate for existing traffic? Will the proposed action alleviate traffic congestion? Include relationship to any regional, state, or local plans or urban transportation plan.

B. Safety Needs. Are existing accident rates excessively high? How will the proposed action decrease the accident rate? (Include quantitative accident figures before and predicted rate after construction.) Is the proposed action necessary to correct an undesirable situation?

C. System continuity. Is the proposed action necessary to complete a gap in the existing transportation system?

D. Structural Needs. Is the proposed action needed to improve the structural condition of the existing facility?

E. Social Service Demands or Economic Development Needs. What projected economic development/land use changes indicate the need to improve or add to the highway capacity? Consider new employment, schools, land use plans, recreation, etc.

F. Environmental Impact Mitigation Needs. Is the proposed action designed to mitigate impacts caused by a related project?

G. Modal Interrelationship Needs. How will the proposed action interface with air, rail, and/or port facilities, mass transit services, etc.?

H. Legislative Mandate. Is there a Federal, state, or local governmental mandate for action?

ALTERNATIVES TO THE PROPOSED ACTION

Discuss alternatives to the proposed action, including the "no-action" alternative. Reasons for elimination of alternatives should be included.

IMPACTS OF THE PROPOSED ACTION

The primary purpose of an EA is to help the agency and the FHWA decide whether or not an EIS is needed. *Therefore, the EA should address only those resources or features which the agency and the FHWA decide will have a likelihood for being significantly affected*. Impact areas which do not have a reasonable possibility for individual or cumulative significant environmental

impacts need not be discussed. However, if it would be unclear to a layman why an impact area is unaffected, the EA should *briefly* explain why there is no effect. The EA should list those elements of the environment which will not be significantly affected. See **Examples 2, 3, and 4**.

Discuss any social, economic, and environmental impacts that would be caused by the proposed action, or by each alternative if more than one proposal is under consideration, whose significance is uncertain. The level of analysis should be sufficient to adequately identify the impacts and appropriate mitigation measures, and to address known to foreseeable public and agency concerns. Discuss why these impacts are not considered significant.

For each element analyzed, include the following information:

A. Studies performed and coordination conducted.

B. Affected environment. The description of the affected environment shall be no longer that is necessary to understand the effects of the proposed action.

C. Impacts of the proposed action during construction.

D. Impacts of the proposed action during operation.

E. Mitigation measures, commitments, and monitoring procedures.

F. Why the impacts are not considered significant.

The following areas should be identified or addressed in the document as not affected, or as not being significantly affected, by the project. When an analysis of an individual element is required to assess the significance of an impact, refer to Chapter 3 of the NEPA EIS Outline (**Exhibit 411-10**) for additional information.

- Land use
- Farmland
- Community Distribution
- Right of Way Acquisition and Displacement
- Economics
- Pedestrians/Bicyclists
- Air Quality
- Noise
- Water Quality
- Wetlands
- Fish and Wildlife
- Floodplain
- Ecologically Sensitive Areas
- Wild and Scenic Rivers
- Coastal Barriers
- Coastal Zone Impacts
- Threatened or Endangered Species

- Historic Archaeological Preservation
- Hazardous Waste
- Asbestos
- Visual Quality
- Energy Conservation
- Construction Activity Impacts
- Secondary and Cumulative Impacts
- Irreversible and Irretrievable Commitment of Resources
- Relationship of Short-term Uses of Environment and Long-term Productivity

COMMENTS AND COORDINATION

Describe all early and continuing coordination efforts, and summarize the key issues and pertinent information received from government agencies and the public. Include a list of agencies and, as appropriate, members of the public consulted.

APPENDICES (if any)

The appendices should include only information that substantiates an analysis important to the EA (e.g., a biological assessment for threatened or endangered species). Other material should be referenced only (i.e., identify the material and briefly describe its contents).

SECTION 4(f) EVALUATION (if any)

If the EA includes a Section 4(f) evaluation, the EA/draft Section 4(f) evaluation must be circulated to the appropriate agencies for Section 4(f) coordination (23 CFR 771.135 (i)). The revised EA or EA Errata/final Section 4(f) evaluation would then be required to specifically address: (1) the reason(s) why the alternatives to the proposed action that would avoid each Section 4(f) property are not feasible and prudent; and, (2) all measures which will be taken to minimize harm to each Section 4(f) property. If a revised EA or EA *errata* is not required, the final Section 4(f) property evaluation discussion of avoidance alternatives and mitigating measures will be included in the FONSI.

Refer to **Section 455.05** for specific guidance on preparing or reviewing Section 4(f) evaluations.

ENVIRONMENTAL COMMITMENT LIST

A list of environmental commitments (if any) should be developed in conjunction with the preparation of an EA. Refer to **Section 412.10** for guidance on the preparation, timing, circulation, and tracking of commitments.

Federal Highway Administration
Region 10

Example No. 1

ROUTE
TERMINI
CITY OR COUNTY, AND STATE

ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 U.S.C. 4332 (2)(c)
and (where applicable) 49 U.S.C. 303 (Section 4 (f) evaluation)

by the
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
and
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
and
CITY OR COUNTY (if local agency project)

COOPERATING AGENCIES
(as applicable)

_____	_____
Date of Approval	For City or County (if local agency)
_____	_____
Date of Approval	(Name) Director of Environmental Services Washington State Department of Transportation
_____	_____
Date of Approval	Federal Highway Administration Official

The following persons may be contacted for additional information concerning this document:

(Name) Division Administrator Federal Highway Administration 711 South Capitol Way, Suite 501 Olympia, WA 98501 (206) 753-9480	(Name of Transportation Official) Region Administrator (usually) Department of Transportation Address of Named Official Telephone Number

A one- paragraph abstract of the assessment.

Comments on this environmental assessment are due by (date) and should be sent to (name and address).

Example No. 2

This project will be constructed entirely within existing right of way and will, therefore, have no effect on the following elements of the environment:

Land Use
Farmland
Disruptions and Displacements

Example No. 3

The following areas will not be affected, directly or indirectly, by the proposed project:

Ecologically Sensitive Areas

There are no ecologically sensitive areas within the project limits.

Endangered Species

The project will no affect any threatened or endangered species, based on coordination with:

Traffic and Parking

There will be no impact on the existing traffic patterns and parking facilities, because:

Wetlands

There are no wetlands in the project vicinity as defined in Executive Order 11990 or USDOT Order 5610.

Land Acquisition and Displacements

The project is entirely within right of way owned by WSDOT; therefore, no land acquisition will be necessary. There will be no displacements of homes or businesses.

Land Use and Zoning

The proposed project is compatible with surrounding land use and zoning.

Historic Properties and Parklands

The proposal will have no impact on any Historic Properties or Parklands (include documentation, correspondence, from SHPO, etc.).

Example No. 4

The following is a brief summary of potential impacts that could occur as a direct result of this project:

Air Quality

There will be no long-term change in air quality due to the project. During construction, equipment may cause localized temporary deterioration of ambient air quality and create objectionable odors.

Noise

Construction equipment will cause a temporary increase in noise levels during normal working hours. This increase will be temporary.

Water Quality

The driving of piles may cause a temporary increase in turbidity.

Navigable Waterways and Coastal Zones

Because there is an existing facility, no new or additional impact will be caused by the planned construction and/ or modifications. Acquisition of a shoreline substantial development permit will assure compliance with the coastal zone management program.

Energy Requirements and Potential for Conservation

The Project construction will require the use of petroleum products and steel and wood products. The walkway will use luminaires after construction. These uses are not considered substantial.

Construction

Construction related impacts are addressed under each appropriate environmental element. All practical measures will be taken to avoid construction related impacts.

DNS/DS and Adoption of Existing Environmental Document

DETERMINATION OF NONSIGNIFICANCE (SEPA)
AND ADOPTION OF EXISTING ENVIRONMENTAL DOCUMENT

Description of current proposal _____

_____

_____

Proponent _____

Location of current proposal_____

_____

_____

Title of document being adopted_____

Agency that prepared document being adopted_____

Date adopted document was prepared_____

Description of document (or portion) being adopted _____

_____

_____

If the document being adopted been changed (WAC197-11-630), please describe:

_____

_____

The document is available to be read at (place/time) _____

_____

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

[ ] There is no comment period for this DNS.

[X] This DNS is issued under WAC 197-11-340(2); the lead agency will not act on the proposal for 14 days from the date below. Comments must be submitted by _____.

We have identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decision-maker.

Name of agency adopting document_____

Contact person, if other than responsible official _____ Phone _____

Responsible official_____

Position/title _____ Phone_____

Address _____

Date _____ Signature_____

ECY 050-46(b) (Rev. 4/98)

DETERMINATION OF SIGNIFICANCE (SEPA)
AND ADOPTION OF EXISTING ENVIRONMENTAL DOCUMENT

Description of current proposal _____

_____

_____

Proponent _____

Location of current proposal_____

_____

_____

Title of document being adopted_____

Agency that prepared document being adopted_____

Date adopted document was prepared_____

Description of document (or portion) being adopted _____

_____

_____

If the document being adopted been changed (WAC197-11-630), please describe:

_____

_____

The document is available to be read at (place/time) _____

_____

EIS REQUIRED. The lead agency has determined this proposal is likely to have a significant adverse impact on the environment. To meet the requirements of RCW 43.21C.030(2)(c), the lead agency is adopting the document described above. Under WAC 197-11-630, there will be no scoping process for this EIS.

We have identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decision-maker.

Name of agency adopting document_____

Contact person, if other than responsible official _____ Phone _____

Responsible official_____

Position/title _____ Phone_____

Address _____

Date _____ Signature_____

ECY 050-46(a) (Rev. 4/98)

NOTICE OF DETERMINATION
OF NONSIGNIFICANCE

(Agency name) issued a determination of non-significance (DNS) under the State Environmental Policy Act Rules (Chapter 197-11 WAC) for the following project: *(project description and location)* proposed by *(applicant's name)*. After review of a completed environmental checklist and other information on file with the agency, *(agency name)* has determined this proposal will not have a probable significant adverse impact on the environment.

Copies on the DNS are available at no charge from *(name), (address)*. The public is invited to comment on this DNS by submitting written comments no later than *(date)* to *(name)* at the above address.

*(**NOTE:** Whenever possible, combine the public notice for DNS comment period with the public notice for any comment period and/or public hearing held on the permit or license. See **Exhibit 411-5** as an example.)*

DETERMINATION OF NON-SIGNIFICANCE (DNS)

Description of proposal:

Proponent: Washington State Department of Transportation

Location of proposal, including street address, if any:

Lead Agency: Washington State Department of Transportation

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An Environmental Impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed Environmental Checklist and other information on file with the lead agency. This information is available to the public on request.

[ ]	There is no comment period for this DNS.
[X]	This DNS is issued under 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by XXXXXXXXXXX, 2001.

Responsible Official: XXXXXXXXXXXXXXXXXXX

Position/Title: Regional Environmental Manager

Address: XXXXXXXXXXXXXXXXXXX

Phone: XXXXXXXXXXXXX

Date: _____ **Signature:** _____

Public Notice of Permit Application and DNS (SEPA)

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS AND NOTICE OF SEPA DETERMINATION

TAKE NOTICE:

That _____

of _____ on _____

under Application No._____ filed for permit to appropriate public waters, subject to existing rights, from _____

in the amount of _____each year, for

_____

The source of the proposed appropriation is located within _____

_____

of Section _____, Township_____ N., Range _____W.M., in _____County.

The project for which the appropriation has been requested is (*briefly describe the entire proposal for which the DNS was issued).*

The Department of Ecology, as SEPA lead agency for this project, has determined it will not have a probable significant adverse impact on the environment. The department has issued a DETERMINATION OF NONSIGNIFICANCE for the project which can be obtained from the address shown below.

Protests or objections to approval of this application OR comments on the determination of non-significance must be filed with the department, at the address shown below, within thirty (30) days from _____.

Protests or objections to the application must include a detailed statement of the basis for objections and be accompanied by a two-dollar ($2.00) recording fee. Commenting on the determination of non-significance does not requires a recording fee.

Department of Ecology
Southwest Regional Office
7272 Cleanwater Lane MS-7775
Olympia, WA 98504

Determination of Significance
and Request for Comments on Scope of EIS

Description of Proposal: The Washington State Department of Transportation (WSDOT) will prepare an Environmental Impact Statement (EIS) for a proposal to improve 1.4 miles of SR 520 between the SR 901 Interchange and SR 202 near Redmond. The proposal will include construction of an interchange at the intersection of SR 520 with SR 202. The proposed project is necessary to reduce traffic congestion, provide additional capacity for projected population increases, and to improve vehicular and pedestrian safety within the project area.

Other possible improvements include construction of a second bridge over the Sammamish River, ramp modification at the existing SR 901 Interchange, and widening SR 520 to six lanes between SR 901 and SR 202. The proposed design of this project will consider design year 2005 traffic projections and compatibility with planned local road improvement projects.

Proponent: Washington State Department of Transportation.

Location of Proposal: The proposed project is located just east and south of the Redmond Central Business District in King County, between the junctions of SR 520 and SR 901 and SR 202.

Lead Agency: Washington State Department of Transportation.

EIS Required: The lead agency has determined that this proposal is likely to have a significant adverse impact on the environment. An EIS is required under RCW 43.21C.030(2) and will be prepared. An environmental checklist indicating the likely environmental impacts may be reviewed at WSDOT Region 1 and Olympia Service Center offices.

The lead agency has identified the following areas for discussion in the EIS:

- Impacts to Bear Creek
- Impacts to flood plains
- Impacts King County's Marymoor Park and trail system
- Impacts caused by construction of a second bridge over the Sammamish River
- Impacts to the local street system

Scoping: Agencies, affected tribes, and members of the public are invited to comment on the scope of the EIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. Comments shall be in accordance with WAC 197-11-550, Specificity of Comments. Written comments will be received by the responsible official until November 30, 1987. Comments will also be accepted at a public scoping meeting to be held at the Redmond Chamber of Commerce, 16210 Northeast 80th Street, Redmond, Washington, from 4 p.m. to 8 p.m.

Responsible Official: R.A. Mattila, P.E.
Position/ Title: District Project Development Engineer
Phone: (206) 562-4090
Address: 15325 Southeast 30th Place, Bellevue, Washington 98007-6538
Date: October 10, 1987
Signature: Ronald A. Mattila

Sample Notice of Action Taken by WSDOT (SEPA)

Notice is given under SEPA, RCW 43.21C.080, that the Washington State Department of Transportation took the action described in (2) below on January 6, 1989, following a 21-day appeal period.

1. Any action to set aside, enjoin, review, or otherwise challenge such action on the grounds of noncompliance with the provisions of Chapter 43.21C RCW (State Environmental Policy Act) shall be commenced on or before July 5, 1989.

2. Description of Agency Action: Design Approval of the project entitled;

   SR 20 Brown Road to Jones Creek, by the Washington State Department of Transportation.

3. Description of Proposal:

   The project would widen and reduce the curvature of 6.8 miles of highway on essentially the same alignment.

4. Location of Proposal:

   In Washington County on SR 20 between MP 185.56 and MP 192.37.

5. Type of Environmental Review under SEPA: Final Environmental Impact Statement entitled:

   SR 20 Brown Road to Jones Creek. Approved by the WSDOT on December 16, 1988, and by FHWA on January 13, 1989. Issued by the WSDOT on February 8, 1989. Adopted for SEPA on February 23, 1989.

6. Documents may be examined during regular business hours at: Washington State Department of Transportation, Region 2, Environmental Office, 1551 N. Wenatchee Avenue, Wenatchee, WA 98801 (509) 663-9689.

7. Name of Agency Giving Notice:

   Washington State Department of Transportation.

8. This notice is filed by:

(Name)
Asst. Sec. for Program Development

Date

NEPA EIS Sample Cover Sheet

FHWA-WA-EIS-(1)-(2)-(3) *

Title of Proposed Action
State, City, and County of Action
(Draft) or (Final) or (Supplemental) Environmental Impact Statement
(and Section 4(f) Evaluation if applicable)
Submitted Pursuant to 42 U.S.C. 4332(2) (c)
(and where applicable 49 U.S.C. 303)
by the
U.S. Department of Transportation
Federal Highway Administration
and
(Local Agency as applicable)
Cooperating Agencies (list appropriate)

Date of Approval	(Signature Block for Local Agency, if applicable)
Date of Approval	Name Director, Environmental Services Washington State Department of Transportation
Date of Approval	Federal Highway Administration Official

The following persons may be contacted for additional information concerning this document:

Name Division Administrator Federal Highway Administration 711 South Capitol Way, Suite 501 Olympia, WA 98501 Telephone (360) 753-9413	Name of Transportation Official (Regional Administrator, usually) Department of Transportation Address of Named Official Telephone Number of Named Official

-A one-paragraph abstract of the EIS-

Comments on this draft EIS are due by *(date*) and should be sent to *(name and address).*

* (1) Year the draft EIS is circulated

(2) Number (assigned by Olympia Service Center)

(3) D *(designates draft statement)* or F *(designates final statement)* or S *(designates supplemental statement).*

SEPA EIS Sample Title Sheet

US 2 North Spokane — Division Street

Spokane County, Washington

(Draft) (Final) Environmental Impact Statement

Submitted Pursuant to: RCW 43.21C, WAC 197-11, WAC 468-12

Washington State Department of Transportation

_____	_____
Date	Dennis C. Jackson, P.E. State Design Engineer Washington State Department of Transportation

Public Hearing (for Draft EIS)

Date

Final Action (for Draft EIS)

A Final Environmental Impact Statement is expected to be circulated on (date).

Construction is expected to begin in (year).

Statement of Availability

Additional copies of this document may be obtained from:

(Name, Address, and Phone)

Cost

The cost of this document is ($), which does not exceed the cost of printing and mailing.

Title

US 2 North Spokane

Description of Proposed Action

(A one paragraph abstract of the EIS. Include state, city, and county where the proposed project is located. Identify key environmental issues and options facing agency decision-makers. May include beneficial as well as adverse environmental impacts.)

Proponent and Lead Agency

Washington State Department of Transportation
Transportation Building
Olympia, WA 98504

Joint Lead Agencies

When applicable.

Proposed Implementation Date

(Date construction is to begin and end, if known.)

Responsible Official

Name of Transportation Official
Title
Washington Sate Department of Transportation
Address of Named Official
Telephone Number of Named Official

Contact Person

Name of Transportation Official (Regional Administrator, usually)
Title
Washington Sate Department of Transportation
Address of Named Official
Telephone Number of Named Official

Required Licenses and Permits

To be Filed by WSDOT:

To be Filed by Contractor:

Authors and Principal Contributors

Include nature of contribution.

Date of Issue

Date Comments Due (for Draft EIS)

Comments on this Draft EIS are due by *(date)* and should be sent to *(name and address).*

Cover Sheet

Not to exceed one page (40 CFR 1502.11). See **Exhibit 411-8.**

Table of Contents

Include section and subsection headings. Have separate contents lists for table and figures.

Summary

The Summary must clearly and convincingly summarize the entire project and document. It should include:

A. A brief description of the proposed action including route, termini, type of improvement, number of lanes, length, country, city, state, and other information as appropriate.

B. A description of any major actions proposed by governmental agencies in the same geographical areas as the proposed action.

C. A summary of all reasonable alternatives considered. Describe each alternative selected for detailed study (route, termini, type of improvement, number of lanes, length). Include the location, schedule, and cost of each alternative. The final EIS must identify the Preferred Alternative. Normally, a Preferred Alternative has not been selected at the Draft EIS stage: however, if one has been selected at this stage, it must be identified in the Draft EIS.

D. A summary of major environmental impacts, both beneficial and adverse.

E. Any areas of concern or controversy, including issues raised by agencies and by the public

F. Any major unresolved issues with other agencies.

G. A list of other actions required for the proposed action (e.g., permit approvals, land transfer, Section106 agreements).

H. An environmental matrix for comparing the environmental impacts of each alternative chosen for further study. (Use an environmental matrix if it adds clarity to the analyses contained in the text.)

I. A list of the environmental commitments made for the project; for example, wildlife undercrossings, vegetation buffers, pedestrian overcrossings, landscaping. See **Section 412.11** of this manual for guidance on the definition, preparation, timing, circulation, and tracking of environmental commitments.

Include graphics as appropriate for clarification.

Chapter 1- Purpose and Need for the Action

The Purpose and Need section is in many ways the most important part of an EIS. A clear, well-defined Purpose and Need justifies impacts by clearly demonstrating the need for the action. It should discuss in detail the problems the project is intended to correct, and demonstrate the problems that will result if the project is not implemented. This is where to address transportation issues, such as projected travel demand and how it converts to traffic and capacity needs, and other transportation mode needs. The regional plan and program can provide the basis for mode decision and for needed capacity. In support of the highway solution, discuss current design deficiencies, types and causes of accidents in the project area, current access problems, etc.

Following is a list of items that may assist in the explanation of the need for the proposed action. Not all of these items are applicable in every situation. All relevant elements should be developed as fully as possible and use specific data to compare the present, future no-build and future build conditions. Include graphics as appropriate for clarification.

A. Project Status — Project history including actions taken to date, other agencies and governmental units involved, actions pending, schedules, etc.

B. System Linkage — Is the proposed project necessary to complete a gap in the existing transportation system?

C. Capacity — Is the capacity of the present facility inadequate for present traffic? For projected traffic? What capacity is needed? What is the level of service for existing and proposed facilities?

   The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) required that if a project significantly increases highway capacity for single occupant vehicles (SOVs), and is located in Transportation Management Area classified as non-attainment (for ozone and carbon monoxide), it must be part of a "congestion management system." If a congestion management system is not yet developed, existing procedures must be enhanced to enable the project to meet this requirement.

   The EIS Purpose and Need must demonstrate that after considering travel demand reduction and nonstructural options, additional SOV capacity is warranted. All reasonable strategies to manage the facility effectively (surveillance, advanced traffic control, etc.) must be incorporated into the proposed facility.

D. Transportation Demand — Include traffic forecast and relationship to any statewide or regional plan or adopted urban transportation plan.

E. Legislation — Is there a federal, state, or local governmental mandate for the action?

F. Social Demand or Economic Development — Discuss any new employment centers, schools, land use plans, recreation, etc. What projected economic development/ land use changes support the need for the project?

G. Modal Interrelationships — How will the proposed facility correlate with and complement airports, rail and port facilities, mass transit services, etc.?

H. Safety — Is the proposed project necessary to correct an existing or potential safety hazard? Is the existing accident rate excessively high? Why? How will the proposed project improve it?

I. Roadway Deficiencies — Is the proposed project necessary to correct existing roadway deficiencies (e.g., substandard geometric load limits on structures, inadequate cross-section, or high maintenance costs)? How will the project improve the deficiencies?

Chapter 2- Alternatives

A. Project Termini and Why They are Logical

1. The highway section or study limits included in the EIS should be of sufficient length to ensure meaningful consideration of alternatives (23 CFR 771.111 (f)(2)). Logical termini may be major crossroads, population centers, major traffic generators, or simple major highway control elements.
2. The facility should be usable even if no additional transportation improvements are accomplished (23 CFR 771.111 (f)(2)).

B. Alternatives Considered

This section of the EIS must discuss a range of alternatives, including all "reasonable alternatives" under consideration and those "other" alternatives that were eliminated from further study (23 CFR 771.123(c)). Summarize the method used to choose alternatives for further study. Describe the screening and evaluation process.

Consider the following in determining "reasonable alternatives" (see FHWA Technical Advisory T 6640.8A):

No-build

This normally includes short-term minor safety and maintenance activities that maintain continued operation of the existing roadway.

Transportation System Management (TSM)

The TSM alternative includes activities that maximize the efficiency of the present system. If a project significantly increases highway capacity for single-occupant vehicles, and is located in the Transportation Management Area classified as non-attainment (for ozone and carbon monoxide), it must be part of a "congestion management system." The discussion of alternatives must include a thorough analysis of all reasonable travel demand reduction measures (ridesharing, trip reduction, transit, etc.) and operation management strategies (such as current timing plans and interconnecting signals along parallel arterials, and ramp metering on freeways) for the corridor in which the facility is proposed. The analysis should demonstrate how far such strategies can go in eliminating or reducing the need for additional capacity in the corridor. It should also include regional strategies adopted during the regional planning process and the result of subsequent corridor analysis by the Metropolitan Planning Organization (MPO).

The state and the MPO must commit to other travel demand reduction and operational management strategies appropriate for the corridor but not for incorporation into the facility itself. For example, if the area does not already have a carpool/vanpool program, it must be one of the commitments.

Mass Transit

This includes bus and rail systems, where reasonable, even though not within existing FHWA funding authority. This alternative should always be considered for major highway projects in urbanized areas with a population over 200,000.

Build

Build alternatives would include both improvements of existing highway(s) and alternatives on new location. A representative number of reasonable alternatives must be presented and evaluated in detail in the draft EIS. Where there are a large number of alternatives, only a representative number of the most reasonable examples, covering the full range of alternatives, need to be presented.

C. Alternatives Considered but Rejected (40 CFR 1502.14(a))

Provide reasons for eliminating each of the rejected alternatives from further study (include a matrix to summarize the analysis of alternatives rejected for further study only if the Interdisciplinary Team used such a matrix to reach decisions).

1. Environmental unsuitability, if applicable.
2. Negative input from public and agencies with jurisdiction, not prudent or feasible, etc.
3. Failure to meet the purpose and need for the project.

D. Alternatives Selected for Further Study

Describe each alternative chosen for further study. Each alternative should be developed to a comparable level of detail in the Draft EIS (40 CFR 1502.14(b) and (d)). Alternatives should be identified with an alphabetical or numerical designation used consistently throughout the document. The number of alternatives should be reasonable given the facts and circumstances of the particular project area, plus the no-build, TSM, and mass transit alternatives.

Include sufficient design data to allow an accurate assessment of impacts without committing to specific details that are subject to refinement or change. Some aspects (e.g., 4(f), 404, noise) may warrant development of additional design data. Lane and shoulder widths, median widths, etc., may be expressed as a variable if not definitely known. For example: "*The proposed project would provide two lanes in each direction with a continuous center, two-way left-turn lane. Including shoulders, the total roadway width would be 76 feet,"* or: *"The proposed project would widen the existing roadway to two 12-foot lanes with 8-*

to 10-foot paved shoulders." Do **not** assume that proposed design deviations will be approved at a future date.

For each alternative, discuss:

1. Location, corridor alignment, and length. Include maps
2. Major transportation design features (brief description, not a complete design report)

a. Facility design
   - Number of lanes, tracks, or runways.
   - Median type/function,
   - Pavement or construction type.
   - Typical sections.
   - Provisions for mass transit.
   - Provisions for high occupancy vehicles.

b. Access control to, from, and across the facility

c. Frontage roads or access facilities (location and design).

d. Interchange and/or structure location. Identify:
   - Interchanges.
   - Grade separations.
   - At-grade intersections.
   - Railroad crossings.
   - River crossings.
   - Pedestrian, bicycle, or equestrian crossings.

e. Right of way acquisition requirements (including lands previously acquired but not incorporated into existing road right of way).

f. Illumination, if applicable.

g. Bicycle and pedestrian facilities.

h. Traffic analysis for the particular alternative.
   - Effect of volume on the alternative.
   - Demand/capacity relationships.

i. Scheduling (construction phasing, construction start and end dates) and cost of construction.

E. Preferred Alternative

Normally, the Draft EIS indicates that all alternatives are under consideration and a preferred alternative will be selected only after evaluation of comments on the Draft EIS and in the hearing transcript. If there is a preferred alternative at the time of the Draft EIS, use the following language:

The preferred alternative description in this Environmental Impact Statement is the course of action that the Department of Transportation has preliminarily determined to be most desirable in terms of balancing functional efficiency and environmental, social, and economic effects. This selection of a preferred alternative is preliminary and subject to revision. The final evaluation and selection of a preferred alternative will be based on project public hearings, comments on the Draft EIS, and any other pertinent information that may become available. Comments and information that would assist in such an evaluation are specifically invited.

In the Final EIS, identify the preferred alternative and explain why it is preferred (23 CFR 77.125(a)(1)). Provide the information and rationale identified in FHWA Technical Advisory T 6640.8A (Record of Decision) as described in ***Section 411.06(8)*** *of this manual. State specifically that final adoption of an alternative and design for the action has not yet occurred. Explain when and by whom this decision will be made.*

Chapter 3- Affected Environment

This section should provide a concise description of the existing social, economic, and environmental setting of the area affected by every alternative presented in the EIS. Where possible, there should be a single description for the general project area rather than a separate description for each alternative. The general population served and/or affected by the proposed action should be identified by race, color, national origin, disabilities, and age. All socially, economically, and environmentally sensitive locations or features in the proposed project impact area (e.g., neighborhoods, elderly/minority/ethnic groups, parks, hazardous material sites, cultural resources, wetlands, etc.) should be identified on exhibits and described briefly in the text. (It may be desirable to exclude the specific location of archaeological sites to prevent vandalism.)

This discussion should be limited to information, issues, and values that have a bearing on possible impact, migration, and selection of an alternative. Data and analyses should be commensurate with the importance of the impact; less important material should be summarized or referenced. Photographs, illustrations, and other graphics should be used with the text. (If a great deal of information is necessary, it should be included as a technical appendix or referred to as a separate technical study.)

This section should include a brief description of the scope and status of planning processes for the local jurisdictions, including conformance with local comprehensive plans as required by the Growth Management Act. Maps of any adopted land use and transportation plans for these jurisdictions and the project area could be helpful.

Chapter 4- Environmental Consequences

This section of the EIS is the heart of the document. It describes the environmental effects of each alternative and the measure to mitigate adverse impacts. The discussion of impacts should not use the term "significant" in describing the level of impact. Words such as "substantial," "major," "high level," etc., should be used instead. If it must be used, the word "significant"

should correspond to its Council on Environmental Quality (CEQ) definition, or its use in Section 4(f), Section 106, etc.

It is important to be concise. Do not repeat discussion of impacts under an outline heading if the same impacts are addressed under another heading, and do not include headings for which there are no impacts (unless an explanation for their absence is needed). If relevant information is unobtainable, include a "reasonably foreseeable" or "worst case" analysis (40 CFR1502.22).

Affected elements are analyzed in depth by an expert in each field. See the specific guidelines in Discipline Report checklists and FHWA Technical Advisory T6640.8A for details. The analyses are summarized and submitted for inclusion in the document. The EIS should contain only the summaries, unless more detail is needed to substantiate an especially important analysis. Detailed supporting data should be referenced or included in an appendix to the document.

General guidelines for impact analysis are presented below. **Specific guidelines for analyzing each area of impact are outlined in Sections 420-480 of this manual.** Note that presentations may be combined to avoid duplication. (See FHWA Technical Advisory T6640.8A for further guidance on writing the Environmental Consequences chapter of an EIS.)

For each of the applicable affected elements, address the following items:

A. Studies and Coordination

Include any major assumptions made and supporting information on the validity of the methodology (where it is not generally accepted as state-of-the-art).

B. Affected Environment

If details besides those included in the **Affected Environment** section earlier in the EIS are necessary to clarify impacts, they may be address here. **Do not** repeat any of the information already covered in the earlier **Affected Environment** section.

C. Impacts

Analyze each alternative separately. Include a brief discussion of probable unavoidable adverse impacts, and the potential benefits of various alternatives.

D. Mitigation

Describe all mitigating measures that will be implemented for each alternative, as well as any commitments and monitoring procedures.

Describe mitigating measures considered or available but not included, with reasons for not including them.

Impacts classified as secondary and cumulative (see **Section 480**) are to be addressed in a "Secondary and Cumulative Impacts" section of the EIS, rather than in individual impact area reports.

Public and Agency Coordination

This section concisely summarizes the results of coordination with federal, state, and local agencies, their level of involvement, and any unresolved issues or areas of conflict. Special emphasis should be given to the results of coordination and input from cooperating agencies. Also, address the results of the scoping process and public involvement (include a listing of when and where public meetings were held and when newspapers notices were published). Where they are numerous, comments should be summarized. Otherwise, copies of pertinent correspondence received should be included. An appropriate response should be provided to each substantive comment, or an explanation of why a response is not warranted. Comments and the results of coordination should be reflected as appropriate in each impact discussion. Include lists of all permits and licenses required for the project. (See FHWA Technical Advisory T6640.8A.) Discuss issues related to the likelihood of obtaining these permits and licenses.

Section 4(F) Evaluation (When Required)

See **Section 411.09** and **Section 455.05** of this manual for guidance on Section 4(f) evaluations.

List of Preparers

List all state and local agency personnel and consultants who were primarily responsible for preparing the EIS or performing environmental studies. Include name, professional discipline, education, experience, and area(s) of EIS responsibility.

List of Agencies, Organizations, and Persons to Whom Copies of EIS are Sent

In the Draft EIS, list all agencies, organizations, and officials to whom copies of the Draft EIS are sent. In the Final EIS, include a list of all individuals, agencies, or organizations that responded to the Draft EIS, and those to whom copies of the Final EIS are sent.

Appendices

See FHWA Technical Advisory T6640.8A. ("Responses to Comments" in the Final EIS would be included here.)

Index

Include important subjects and impacts.

SEPA EIS Outline

A joint NEPA/SEPA EIS follows the same outline as a NEPA EIS (see **Exhibit 411-10**). A SEPA-only EIS has a Title Sheet, a Cover Letter, and a Fact Sheet. Also, a SEPA EIS does not include Section 4(f) Evaluation.

Title Sheet

See **Exhibit 411-9** for a sample title sheet.

Cover Letter

The cover letter is not actually part of the EIS, but it acts as a transmittal letter. It is to be no longer that two pages, and should highlight the key environmental issues. It may mention beneficial as well as adverse impacts. For a supplemental EIS, the cover letter identifies the EIS that is being supplemented.

Fact Sheet

See **Exhibit 411-9** for a sample fact sheet.

Environmental Reevaluation/Consultation Form (NEPA)

23 CFR §771.129
Washington State Department of Transportation/Federal Highway Administration

REGION	SR	PROJECT PROGRAM NO.	FEDERAL AID NO.	PROJECT NO.

PROJECT TITLE, ENVIRONMENTAL DOCUMENT TYPE & DATE APPROVED:

REASON FOR CONSULTATION:

DESCRIPTION OF CHANGED CONDITIONS:

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECTS THIS PROJECT? YES [ ] NO [ ] (If yes explain, use additional sheets if necessary)

WILL THE CHANGED CONDITIONS AFFECT THE FOLLOWING DIFFERENTLY THAN DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT (If yes explain in the comment section the impacts and mitigation, if any; and note any additional consultation conducted with resource and regulatory agencies regarding the change.)

1) THREATENED or ENDANGERED SPECIES Comment:	YES [ ] NO [ ]
2) PRIME & UNIQUE FARMLAND Comment:	YES [ ] NO [ ]
3) WETLANDS Comment:	YES [ ] NO [ ]
4) FLOODPLAINS Comment:	YES [ ] NO [ ]
5) HAZARDOUS WASTE SITES Comment:	YES [ ] NO [ ]

REGION	SR	PROJECT PROGRAM NO.	FEDERAL AID NO.	PROJECT NO.

6) HISTORIC or ARCHAEOLOGICAL SITES Comment:	YES [ ] NO [ ]
7) 4(f) LANDS Comment:	YES [ ] NO [ ]
8) 6(f) LANDS Comment:	YES [ ] NO [ ]
9) WILD & SCENIC RIVERS Comment:	YES [ ] NO [ ]
10) COASTAL BARRIERS Comment:	YES [ ] NO [ ]
11) COASTAL ZONE Comment:	YES [ ] NO [ ]

WILL THESE CHANGES RESULT IN ANY CONTROVERSY? YES [ ] NO [ ] (If yes explain)

WILL THE CHANGES CAUSE ADVERSE IMPACTS IN THE FOLLOWING:
(If yes, explain in comment section)

1) AIR QUALITY Comment:	YES [ ] NO [ ]
2) NOISE Comment:	YES [ ] NO [ ]
3) LAND USE Comment:	YES [ ] NO [ ]
4) TRAFFIC or TRANSPORTATION Comment:	YES [ ] NO [ ]
5) DISPLACEMENT (Business & Residential) Comment:	YES [ ] NO [ ]
6) ECONOMIC GROWTH & DEVELOPMENT Comment:	YES [ ] NO [ ]
7) WATER QUALITY Comment:	YES [ ] NO [ ]
8) VISUAL QUALITY Comment:	YES [ ] NO [ ]
9) NATURAL RESOURCES & ENERGY Comment:	YES [ ] NO [ ]
10) PUBLIC SERVICES & UTILITIES Comment:	YES [ ] NO [ ]
11) VEGETATION & WILDLIFE Comment:	YES [ ] NO [ ]
12) RECREATION Comment:	YES [ ] NO [ ]
13) SOCIAL IMPACTS Comment:	YES [ ] NO [ ]

REGION	SR	PROJECT PROGRAM NO.	FEDERAL AID NO.	PROJECT NO.

CONCLUSIONS and/or RECOMMENDATIONS (SEIS NOT REQUIRED)

There have been no significant changes in the proposed action. Conclusions reached with regard to the anticipated impacts of the selected alternative were not changed by the additional analyses concluded since the publication of the document.

Additional mitigation is not required as a result of changed conditions.

-OR-

Additional mitigation measures have been incorporated into the project to address the changed conditions, and are required to reach the conclusion.

As a result of the foregoing, it is the conclusion of this reevaluation and consultation that the document continues to be valid. It is not deemed necessary to supplement the document prior to proceeding with major authorizations.

I concur with the conclusions and recommendations above.

WSDOT Regional Official	WSDOT Service Center Official	FHWA Division Official
Date:	Date:	Date:

CONCLUSIONS and/or RECOMMENDATIONS (SEIS REQUIRED)

There have been significant changes in the proposed action. As a result of the foregoing, it is the conclusion of this reevaluation and consultation that the document does not continue to be valid. It is deemed necessary to supplement the document prior to proceeding with major authorizations.

I concur with the conclusions and recommendations above.

WSDOT Regional Official	WSDOT Service Center Official	FHWA Division Official
Date:	Date:	Date:

cc: FHWA Regional Office

Sample Environmental Reevaluation/Consultation Form

23 CFR §771.129
Washington State Department of Transportation/Federal Highway Administration

REGION/DIVISION	SR	PROJECT PROGRAM#	FEDERAL AID #	PROJECT#
1	90	15312UA	I-90-1( )	1-8058

PROJECT TITLE, ENVIRONMENTAL DOCUMENT TYPE & DATE APPROVED
Mercer Island Park and Ride Lot. Environmental Assessment Approved 08/30/85

REASON FOR CONSULTATION
The scope of the work has been modified to include a traffic signal at N. Mercer and 80th Ave.

DESCRIPTION OF CHANGED CONDITIONS
A traffic signal is to be installed at the intersection of N. Mercer and 80th Ave. This signal is required to accommodate the increased traffic during stage II construction for the eastbound lanes of the I-90 project. As per the I-90 EIS (p.154) construction will require reconstruction of city streets and construction of detours. This construction will require N. Mercer Ave. to be used as an I-90 access route. This signal has been included in the Mercer Island Park and Ride Lot project to aid in its construction and to assure smooth operation of the facility during the stage construction traffic transition. This signal is warranted as a temporary installation due to stage II construction. The city of Mercer Island, based on an independent traffic study however, has requested that the signal become a permanent installation.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECTS THIS PROJECTS? YES ( ) NO (x) (If yes explain, use additional sheets if necessary)

WILL THE CHANGED CONDITIONS AFFECT THE FOLLOWING DIFFERENTLY THAT DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT. (If yes, attach a detailed summary addressing the impacts and mitigation)

		YES	NO		YES	NO
1)	THREATENED or ENDANGERED SPECIES	( )	(x)	5) HAZARDOUS WASTE SITES	( )	(x)
2)	PRIME and UNIIQUE FARMLAND	( )	(x)	6) HISTORIC or ARCHAEOLOGICAL SITES	( )	(x)
3)	WETLANDS	( )	(x)	7) 4 (f) LANDS	( )	(x)
4)	FLOODPLAINS	( )	(x)	8) 6 (f) LANDS	( )	(x)

WILL THESE CHANGES RESULT IN ANY CONTROVERSY? YES ( ) NO (x) (If yes explain)

WILL THESE CHANGES CAUSE ADVERSE IMPACTS IN THE FOLLOWING AREAS:
(If yes address comments below)

	YES	NO		YES	NO
1) AIR QUALITY	(x)	( )	7) WATER QUALITY	( )	(x)
2) NOISE	(x)	( )	8) VISUAL QUALITY	( )	(x)
3) LAND USE	( )	(x)	9) NATURAL RESOURCES and ENERGY	( )	(x)
4) TRAFFIC or TRANSPORTATION	(x)	( )	10) PUBLIC SERVICES and UTILITIES	( )	(x)
5) DISPLACEMENT (business or residence)	( )	(x)	11) VEGETATION and WILDLIFE	( )	(x)
6) ECONOMIC GROWTH and DEVELOPMENT	( )	(x)	12) RECREATION	( )	(x)
			13) SOCIAL IMPACTS	( )	(x)

COMMENTS

1) There may be some minor and temporary adverse impacts to Air Quality during construction. No permanent impacts are anticipated.
2) Some increase in noise levels is anticipated during construction. No permanent increase in noise levels is expected.
3) There may be some minor and temporary impacts on local traffic during construction. No permanent adverse impacts are expected.

CONCLUSIONS and/ or RECOMMENDATIONS

There have been no significant changes in the proposed action. Conclusions reached with regard to the anticipated impacts of the selected alternative were not changed by the additional work.

As a result of the foregoing, it is the conclusion of this consultation that the Document continues to be valid. It is not deemed necessary to supplement it prior to proceeding with major approvals or authorizations.

I concur with the conclusions and recommendations above

District/ Division Official	WSDOT HQ Official	FHWA Official
(signed)	(signed)	(signed)
Date 4/25/88	Date 5/03/88	Date 5/5/88

412.01 Overview
412.02 Partner Confirmation Meeting
412.03 Interdisciplinary Team (IDT)
412.04 WSDOT Study Plan
412.05 Cooperating Agencies
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412.07 Scoping
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412.11 Impact Mitigation and Commitment Tracking System
412.12 Administrative Record
412.13 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

412.01 Overview

- This section focuses on internal WSDOT processes during the project development stage of the environmental review:
- Organizing the work within WSDOT – the Partner Confirmation Meeting, Interdisciplinary Team (IDT), Study Plan and Public Involvement Plan.
- Scoping issues and alternatives through consultation with community and agency stakeholders.
- Identifying alternatives, analyzing environmental impacts, and preparing Discipline Reports and recommendations summarizing this work.
- Tracking the process of permitting and implementing impact mitigations, and keeping an administrative record.

(1) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed in **Section 410.01**. Others are found in the general list in the appendix.

(2) Glossary

For a glossary of terms used in this section, see **Section 410.01**.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

412.02 Partner Confirmation Meeting

This meeting occurs early in the project environmental process for both EA and EIS documents. It provides a road map for the environmental process. Advance consultation with the lead federal agency or agencies provides direction on which agencies might be invited as attendees to assist in setting direction for the project environmental documentation.

- Identify lead and co-lead agencies.
- Identify cooperating agencies.
- Confirm the level of environmental documentation noted in the WSDOT Environmental Classification/ Review Summary (ECS/ERS).
- Show graphically the approximate study area that is under consideration.
- Determine the applicability of the Section 106 tribal consultation process or if the Section 106 FHWA Programmatic Agreement (PA) makes the proposal exempt. If not exempt under the PA, present for discussion a suggested list of tribes and a map of tribal "Usual and Accustomed Areas."
- Present an early version of the project purpose and need (from ERS) for review and comment.
- For transportation, air, and noise studies, establish the "existing year," "year of opening," and "design year" (sometimes referred to as horizon year).
- Present a preliminary project schedule based on the proposed level of environmental documentation.

412.03 Interdisciplinary Team (IDT)

NEPA requires an interdisciplinary approach in the preparation of EISs (23 CFR 105(c)). WSDOT practice is to use an interdisciplinary team (IDT) to guide and direct the preparation of the EIS. An IDT is an advisory group composed of people with training or skills in the natural and social sciences, engineering, and environmental design. IDT members may come from agencies other than WSDOT. The team normally consists of a nucleus of people, supported by other experts. The interdisciplinary approach is used in the planning and design of transportation facilities involving an EIS. The team is established in the early stages of the environmental process when the Regional Office begins scoping and public involvement and when a Notice of Intent is submitted to FHWA.

The team should consist of a project manager (who in most cases is the interdisciplinary team chairperson), a project engineer, and experts from any of the following areas: acoustics, air quality, archaeology, architecture, biology, botany, communications, economics, geology, hydrology, landscape architecture, meteorology, Real Estate Services, R/W Plans, sanitary engineering, sociology, structural engineering, transportation planning, urban planning, and water quality. The number of experts selected for the interdisciplinary team depends on the nature and magnitude of the project. Each IDT member represents an expertise which applies to the EIS development. As such, they represent themselves and not the agency for which they work; however, they should keep their own agency apprised during project development.

412.04 WSDOT Study Plan

The Study Plan is an outline, or "road map," of the environmental process to be followed during the development of a project that requires an EIS. It describes the scope of the proposed project, alternatives that would satisfy the goals of the proposed action, environmental issues to be studied, and the public involvement plan.

Preparation of the Study Plan occurs in two phases. Immediately after the IDT has identified the project alternatives and environmental issues, the project manager prepares a Draft Study

Plan. This Draft Study Plan is used during presentation of the proposed project to affected or interested resource agencies and environmental discipline experts. The project manager then revises the Draft Study Plan to include agency and/or discipline expert concerns, develops personnel requirements, and prepares the Final Study Plan for approval. A sample Study Plan is attached as **Exhibit 412-1**.

(1) Draft Study Plan

The Draft Study Plan should be prepared as soon as possible after the IDT has identified the project alternatives and environmental issues to be studied in the DEIS. The Draft Study Plan should include the following information:

1. Title sheet
   a. Project title
   b. Date
   c. Approval date and signature of:
      - Team chairperson
      - Agency administrator
2. Vicinity map
3. Need and purpose
   a. Need (known deficiencies)
   b. History (if applicable)
   c. Purpose of project
   d. How proposed project will satisfy the need
4. Scope of work
   a. Interdisciplinary approach (brief description of how the team will use interdisciplinary information to reach decisions)
   b. Alternatives
   c. Public involvement summary (to date)
   d. Brief description of areas of primary importance and significant controversy
5. List of co-lead and cooperating agencies
6. Dates and locations
   a. List of studies to be prepared and disciplines involved
   b. IDT members, project manager, and IDT chairperson
   c. Education and experience of all expertise in format required for EIS
7. Project schedule milestones
8. Date and location of scoping meetings
9. Appendix: Public involvement plan

As with any draft document, the Draft Study Plan is subject to revision. The Draft Study Plan is a statement of the best available information at this stage of project development.

(2) Final Study Plan

The Final Study Plan incorporates feedback from resource agencies and discipline experts. It defines the scope of the project, alternatives to be studied in the DEIS, the scope and level of analysis to be conducted for each discipline study, and the public involvement plan. The submittal of the Final Study Plan occurs just after the IDT gives its Preliminary Recommendation on which alternatives to study in the EIS and usually prior preparing discipline studies. The IDT and the Regional Administrator must approve the Final Study Plan. These approvals should be obtained before the discipline reports are finalized.

412.05 Cooperating Agencies

A cooperating agency is an organization that has a vested interest in a proposed project for which an EIS will be prepared. The agency might own required property, issue needed permits, or have special expertise in an affected environment. For regulatory guidance, see CEQ 40 CFR 1508.6, FHWA 23 CFR 771.109 and 771.111, WAC 197-11-174 and WAC 197-11-920.

(1) Who Should be a Cooperating Agency?

Under NEPA regulations, any federal agency with permitting authority must be asked to become a cooperating agency (23 CFR 771.109).

State resource agencies, tribes, and local agencies may be asked to be cooperating agencies if the lead agency decides they have special expertise or legal jurisdiction.

An agency with permitting authority can stop a project if it does not agree that environmental impacts have been adequately addressed. An actively participating cooperating agency can identify environmental factors it considers most critical, and work with FHWA and WSDOT to ensure that the NEPA document addresses these concerns. The agency can then adopt the FHWA/WSDOT EIS to satisfy the NEPA requirements for its particular jurisdictional responsibility.

Table 412-3 lists examples of agencies with jurisdiction or expertise that may be asked to be cooperating agencies.

Table 412-3:
Potential Cooperating Agencies

Agency	Jurisdiction
U.S. Army Corps of Engineers	Sections 10 and 404 Permits.
U.S. Coast Guard	Bridge Permits.
Environmental Protection Agency (USEPA)	Sole Source Aquifers, Hazardous Waste Site.
National Park Service	Areas funded under Land and Water Conservation Fund Act 6(f).
U.S. Fish & Wildlife Service (USFWS)	Areas funded under various fish and wildlife related grant programs or projects affecting endangered species.
Federal Transit Administration (FTA)	Transit and rail funding.
Rural Electrification Administration (REA)	Relocation of utilities constructed or assisted with REA loans.
Federal Agency Land Manager: National Park Service USFWS Bureau of Land Management U.S. Forest Service Department of Defense General Services Administration	Land transfer from: National Park System National Wildlife Refuge Public Lands National Forest System Military Facilities Federal Buildings
U.S. Fish & Wildlife Service Marine Fisheries Service Washington Dept. of Natural Resources Washington Dept. of Ecology Washington Dept. of Fish and Wildlife	Fish and wildlife natural habitat, wetlands, stream relocations, estuaries.
Office of Archaeology & Historic Preservation	Historic, cultural, and archaeological sites.
Environmental Protection Agency	Water supply, air quality.
Federal Emergency Management Agency	Regulatory floodway.
City/County Planning and/or Public Works Depts.	Shorelines, Floodplains, Critical Area Ordinances, Growth Management Act (GMA Issues

(2) *When to Request Participation*

WSDOT should request the participation of each cooperating agency as early as possible, typically before the beginning of formal scoping.

According to CEQ regulations, federal agencies with jurisdiction must accept cooperating agency status. FHWA can accept an agency's declining to be a cooperating agency if the agency's written response to the request states that its NEPA regulations do not require a separate EIS in conjunction with the proposed FHWA action.

If a federal agency that has legal jurisdiction refuses to be a cooperating agency, notify the FHWA regional and WSDOT OSC offices.

(3) *How to Request Participation*

FHWA sends a written request to federal agencies, asking them to become a cooperating agency. WSDOT invites state, regional and local agencies. The agency responds in writing, either accepting or declining the opportunity. Both letters should be retained in the project file; copies should be sent to the Environmental Services Office.

WSDOT and the Corps of Engineers (COE) have developed an operating agreement to address COE involvement in projects affected by both Section 404 and NEPA requirements. See **Section 431.04(3)** for details.

(4) *Levels of Involvement*

The level of involvement by the cooperating agency varies. For some projects, it is merely a review function. In others, the cooperating agency may perform some of the specialty studies or help prepare documents. Normally, the lead agency pays for studies carried out by the cooperating agency.

FHWA, WSDOT, and the cooperating agency should define and agree on roles and expectations at the beginning of the project, for example specific schedules for coordinating the review of preliminary documents.

FHWA and WSDOT should make every reasonable effort to assist agencies in meeting deadlines. Nevertheless, cooperating agencies should be made aware that failure to reasonably adhere to project schedules could result in their agency concerns and comments not being incorporated in the documents.

(5) *When WSDOT Could Become a Cooperating Agency*

Other agencies may ask WSDOT to become a cooperating agency. This could occur on projects when a landholding agency, such as the U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, or a tribal government, proposes a project that could impact WSDOT facilities. County and municipal transportation projects could also involve WSDOT as a cooperating agency.

412.06 Public Involvement

Public involvement is a NEPA and SEPA requirement for all EISs and to a lesser degree in EAs and SEPA DNSs. It is an important part of project development, ensuring that public input is considered in the decision process. For regulatory guidance, see 23 CFR 771.111 and WAC 197-11 Part 5.

Public notice procedures are an important part of the NEPA/SEPA process. Often the only way the public, interested organizations, and agencies find out about a project is through the public notice. Lack of public notice can be justification for appealing the procedural aspects of SEPA. If public notice is required for a government action such as a permit or license, the NEPA/SEPA notice and permit notice should be combined if possible (see **Exhibit 411-5**).

This section describes the key points at which public involvement is required or recommended for each project class (CE, EA, or EIS). For details on public notice requirements for CEs, EAs, EISs and Section 4(f) Evaluations, see **Sections 411.03** through **Section 411.09**.

FHWA guidance is online at:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Public Involvement.

Or by direct link:

http://www.fhwa.dot.gov/environment/pubinv2.htm

Public Involvement in Transportation Decision-Making (September 1996), prepared for FTA and FHWA, Publication No. FHWA-PD-96-031, is online at:

http://www.fhwa.dot.gov/reports/pittd/cover.htm

For other references in FHWA's Environmental Guidebook, see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Public Involvement.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch13.htm

(1) Timing of Public Involvement

(a) Class II (CEs)

There are no public notice requirements for CEs. However, most projects classified as categorically excluded under NEPA will need to be examined to determine if they are also exempt under SEPA. If not exempt under SEPA, the project often requires the distribution of a threshold determination (DS or DNS) and Environmental Checklist, associated public comment period, and public notice published in an area newspaper. (See **Section 411.03** for details.) A typical impact associated with a routine excluded and/or exempt project could include a short-term delay or nuisance during construction. The main goal is to inform the public when the work will occur and how to avoid problems.

News releases and other public contact should begin shortly before construction. These communications should continue as needed during the construction period.

(b) Class III (EAs)

Non-routine projects have a potential for environmental impacts and/or controversy. These projects typically require some type of environmental analysis. Negative impacts can usually be mitigated reasonably easily.

Non-routine projects can often be classified as a documented NEPA-CE, NEPA-EA and mitigated SEPA-DNS. Examples include new truck-climbing lanes, turning lanes, or intersections.

Early public involvement allows interested agencies, the public, and WSDOT to resolve problems with a minimum of conflict. Mutual feedback fosters cooperation. Public concerns are addressed and WSDOT builds its project on schedule.

If public concerns are ignored, environmental documentation requirements usually increase. This can cause unnecessary hard feelings, project delays, and cost overruns.

See **Section 411.04** for detail on public notice requirements for EAs (NEPA) and DNSs (SEPA).

(c) Class I Projects (EISs)

For projects requiring an EIS, a public involvement plan should be prepared as part of the scoping process as soon as possible after a design concept is developed (see **Section 411.05(1)**, **Section 411.06(2)**, and **Section 411.07(2)**).

Depending on the project complexity, public involvement should continue throughout the project development phase. The public and agencies should be given feedback regarding WSDOT's response to their suggestions. For projects requiring an EIS, minimum public involvement should occur as follows:

1. When a scoping meeting or open house is held.
2. Before DEIS studies begin.
3. Before the DEIS if formalized.
4. Notice of Availability of EA or Draft EIS and Notice of Hearing.
5. After the review of comments on the DEIS and preparation of draft responses and project revisions.
6. If any major project change is proposed.
7. Notice of Availability of FONSI or Final EIS.
8. Notification of the Record of Decision (ROD) or any change to the ROD.

(2) Benefits of Effective Public Involvement

Both NEPA and SEPA cite agency and public involvement as essential parts of the development process for proposed actions. The *SEPA Handbook* notes that "…public involvement has been found to be the key to preventing public suspicion of the process." Effective public involvement can minimize opposition to a project. If the first public contact does not occur until all the design details are formalized, significant opposition may appear at the public hearing. This approach can result in costly project modification and delays and even cancellation of a project.

Public involvement is best viewed as an opportunity. Proper communication of the need for a project can often turn public apathy or opposition into support. Sometimes suggestions submitted by the public stimulate innovative problem solving. Public involvement can result in a better project when comments are viewed with an open mind. In many cases commentors offer local knowledge that would otherwise not be considered.

The public involvement process outlined below focuses on the specific requirements of various environmental laws and regulations in conjunction with WSDOT's policies. For more general information and ideas about public involvement methods and strategies, see WSDOT's *Design Manual* (M 22-01), Section 210.

📖 Public Involvement Seminar 1987 – 1988, WSDOT (a training course and instruction book).

(3) Public Involvement Plan

The Public Involvement Plan is the basic element of the public involvement process. The plan must identify all proposed public involvement methods. For ideas, see WSDOT's in the *Design Manual,* Section 210. A sample Public Involvement Plan is attached as **Exhibit 412-2**.

Regional Offices and Divisions develop the public involvement plan for WSDOT projects. For projects requiring an EIS, a public involvement plan is required as part of the preparation of the study plan. (For all other projects, the Region may consult the Access and Hearings Unit for assistance or concurrence.)

The plan should include the following major elements:

- Need for public education and the best way(s) to accomplish this.
- Special issues and areas of concern.
- Legal requirements and constraints.
- Project stakeholders and general input to be requested.
- List of proposed involvement activities.
- Special approaches to solicit input of those traditionally under-served by or suffering disproportionate adverse effects of transportation projects (ADA, Environmental Justice and Title VI populations); see **Section 457** and **Section 458**.
- Methods to be used in considering comments in the decision-making process, including follow-up procedures.
- Major project decision milestones and schedule for each task, keyed to the environmental process schedule, if applicable.
- Program for monitoring, evaluating, and restructuring the plan when necessary.
- Personnel, time, and funds needed to carry out the plan.

The two approaches typically used to solicit input from agencies and local citizens during the design and environmental process are:

- Exchange of information to and from the general public, businesses, citizen groups, public agencies, public officials, and tribes.
- Community meetings, open houses, and EIS (EA)/design hearings.

The public to be involved can include any or all of the following who could be directly or indirectly affected by the project:

- Staff and elected officials of local governments.
- Other state and federal agencies and officials.
- Tribal government representatives.
- Adjacent property owners and tenants.
- Adjacent billboard owners and clients.
- Community groups (clubs, civic groups, churches).
- Special interest groups.
- Environmental justice stakeholders (low-income and minority groups).

- Service providers (emergency, utility).
- Others expressing interest.
- Others known to be affected.
- General public.

WSDOT recognizes the role of local, state, and federal staff and elected officials as active sponsors of proposed projects who may effectively assist in developing and implementing the public involvement plan. Early and continued contact with these resources is a key to the success of the project.

(4) Circulation of Documents

NEPA and SEPA processes require public notification and circulation of documents as a method for consulting with other agencies, tribes, and the public to ensure that all potential impacts of a proposed project are identified, and that everyone understands the proposal and has a chance to express concerns. See **Section 411.04(2)**, **Section 411.06(6)**, and **Section 411.07(6)** for details on distribution of EAs and EISs.

412.07 Scoping

Scoping is a method of identifying the range of alternatives and potentially significant impacts to be addressed in the EIS. Scoping allows the agency to identify potential environmental concerns or controversy early in project development. NEPA and SEPA rules require scoping during preparation of the draft EIS (40 CFR 1501.7, 40 CFR 1508.25, 23 CFR 771.105 (a-d), 23 CFR 771.123, WAC 197-11-408). NEPA requires scoping for a supplemental EIS; however, the co-lead agencies can decide to hold an open house early in the supplemental EIS process that serves the same purpose. See also **Section 411.06** and **Section 411.07.**

Scoping is generally the first step in the public involvement process. It includes communication with regulatory agencies, people directly affected by the proposed project, and the general public.

Scoping does not create problems that did not already exist. It ensures that problems and concerns that would have been raised anyway are identified early in the process. A thorough scoping offers some protection against subsequent lawsuits. During scoping, all interested parties should have an opportunity to raise issues or concerns they feel need to be considered in development of the project.

(1) Purposes of Scoping

The purposes of scoping are:

- To present the project purpose and need and alternatives considered so far.
- To consider unquantified environmental amenities and values in decision making, along with economic and technical issues.
- To make a diligent effort to invite and solicit comments from affected and interested citizens, businesses, and agencies.
- To identify potential environmental impacts of proposed actions and begin documenting the rationale for subsequent decisions.

(2) Scoping Guidelines

The beginning of the scoping process usually consists of informal meetings or open houses. Either prior to or during these sessions, the Regional Office or Division gives information about the proposed project to affected agencies, tribes, and any other groups, organizations or individuals known to have interest. This information may include a brief

description, proposed alternatives, probable environmental impacts and issues, maps, drawings, and a brief explanation of the scoping procedure.

For more information see:

📖 Scoping Guidance, Memorandum for General Counsel, NEPA Liaisons and Participants in Scoping, Executive office of the President, Council of Environmental Quality. April 30, 1981.

This and other CEQ guidance is online at:

http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm

(a) Design the Scoping Process

Contact known local citizens groups and civic leaders to get a feel for public interest. Then decide whether to scope by public meeting(s), letter, telephone, or a combination of methods.

Generally, several small meetings work better than one large meeting. Large meetings often become "events" where grandstanding substitutes for substantive comments. Normally, public scoping and agency scoping meetings are held separately because of differing areas of concern.

(b) Issue the Public Notice

Section 411.04, **Section 411.06**, and **Section 411.07** contain detailed guidelines on the public notice requirements for NEPA EAs, NEPA/SEPA EISs, and SEPA-only EISs.

NEPA CEQ regulations (40 CFR 1501.7) require that a Notice of Intent (NOI) to prepare an EIS be published in the *Federal Register* prior to initiating scoping. The scoping notice can be included in the notice of intent if desired. A Determination of Significance and Scoping Notice form can be found in WAC 197-11-980 of the SEPA rules (see **Exhibit 411-6** for a sample). A scoping notice should also be published in local newspapers in all areas affected by the project. All adjacent property owners, agencies, tribes, and others who have expressed interest in the project should be sent an individual letter. If there is potential for disproportionately high adverse impacts to low-income or minority populations, give special attention to early notification.

News releases are another appropriate way to announce scoping. However, they do not constitute legal notice. Also, news media may not use them unless the project is considered newsworthy.

(c) Prepare an Information Packet

The packet should include a brief explanation of what scoping is and what procedure will be used. There should be a brief general description and map showing each proposed alternative. Known impacts and benefits of each alternative should be described.

The information should include specific issues on which comments are requested. Encourage recommendations for improvements to the proposed alternatives and point out that there is no preferred alternative.

(d) Evaluate Comments and Respond to Participants

All scoping comments received from the public and/or other agencies must be evaluated to determine the relevance of each comment. All relevant issues must be addressed in the environmental document.

To assure credibility during the environmental process, all scoping comments – whether relevant or not – need to be carefully evaluated and responded to in one or more follow-up documents:

- ***Handouts at public meetings*** – Comments received early in the scoping process may be listed or summarized and included in handouts at succeeding public meetings.
- ***Newsletters*** – Newsletters can be used to give an early response to comments.
- ***Environmental documents*** – EISs and EAs both include sections that describe comments from and coordination with the public and other agencies. (See **Exhibit 411-10** and **Exhibit 411-11** for sample NEPA and SEPA EIS outlines, and **Exhibit 411-2** for an EA outline.)

Scoping comments may be listed individually, or grouped and summarized under general headings, depending on the number of comments received and the similarity of the comments.

Responses to comments may be as simple as stating that the issue will be addressed in detail in the environmental document. Comments regarding issues that will not be addressed in detail in the document should be responded to early in the process – by way of a newsletter for instance – rather than waiting for the issue to be raised again during the document circulation period.

The actual method of responding to scoping comments is not critical. What is important is that each comment is fairly evaluated and responded to. Citizens and other governmental agencies that take the time to express their interest in a project – whether their concerns, support, or opposition – need to be assured that their voices have been heard. Consider comments received by e-mail the same as those made in person or by letter.

412.08 Selection of Alternatives

The alternatives to be studied are identified by the project manager and IDT, and through the scoping process. The IDT studies all proposed alternatives and identifies social, economic, and environmental effects. Generally, each alternative is developed to the same level of detail so effects can be compared in the EIS. Alternatives should be openly discussed with all affected groups. See **Section 411.08(2)** for details.

412.09 Discipline Reports

Discipline reports are prepared by Regional Offices and Divisions to document environmental studies and investigations. The reports form the basis for environmental documents such as EAs, EISs, and Section 4(f) evaluations. The reports describe the affected environment and detail the probable environmental impacts of project alternatives. They are used to help identify the least environmentally damaging alternative and provide information to others interested in the subject area. All viable alternatives identified by the project manager and IDT need to be studied in the same level of detail.

The technical portion of the report provides evidence that all major potential impacts have been considered, presents information to support findings of significant impacts, and demonstrates clearly that the study is in compliance with the requirements of environmental law. Reports should only present factual data or expert opinion that is defensible in court.

Once the report is written, the expert develops a summary that incorporates all the key areas pertinent to the discipline study. These summaries become the basic components of the environmental document.

Where a discipline report serves as the basis for a section of the EIS, it should be incorporated by reference in that section, in addition to being referenced in the bibliography. As required by WAC 197-11-635, the reports are individually identified by author, date, and subject matter; their location is identified; they are summarized in the EIS; and they are made available for public review along with the EIS. Include the statement, "This report is incorporated herein by reference."

WSDOT has prepared discipline report checklists for most elements of the environment. See exhibits in **Section 420** through **Section 459**. For elements where there is no discipline report, general guidance is given in those sections.

(1) Data Collection, Inventory, and Evaluation

The IDT develops an inventory of social, economic, environmental, and engineering data. The information is used to define the affected environment, predict and analyze impacts, help select the least environmentally damaging alternative, serve as a database for future environmental documents, and provide information to other agencies, interest groups, and individuals. **Section 420** through **Section 480** and FHWA Technical Advisory T6640.8A give detailed guidance on the type of information, depth of study, and procedures used in collection, inventory, and evaluation of data required for environmental documents. The FHWA Technical Advisory is online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

Relevant information can come from any source inside or outside WSDOT. It can be published data, project inventories, or data from field observations. In some cases, new data must be obtained by on-site monitoring, sampling, or measuring ambient conditions. Data gathering from local agencies should be coordinated with the project manager so the Region can consolidate requests.

Other data sources include WSDOT's Environmental GIS Workbench and previously published EISs, which can be accessed as described below.

(a) WSDOT Environmental GIS Workbench

This is a valuable resource, providing statewide environmental databases online for WSDOT employees. See **Section 320.04** for details.

(b) SEPA Register

The SEPA Register, which is posted on the Internet and updated daily by Ecology, is a valuable source of information about other environmental documents in the area of a proposed WSDOT project. These documents may be used as a source of data and/or incorporated in WSDOT's documentation.

The register includes:

- List of all documents required to be sent to Ecology, such as: DNSs with a comment period, scoping notices, DEISs, FEISs, and Notices of Action Taken.
- List of other SEPA documents received by Ecology (DNSs without a comment period, addenda, and adoption notices).
- Documents issued by federal agencies under NEPA when received by Ecology.

The current SEPA Register, including SEPA documents received by Ecology during the last two weeks and older documents whose comment period has not yet closed, is online at Ecology's web site:

http://www.ecy.wa.gov/

Click Services, then Environmental Review (SEPA), then SEPA Register.

Or by direct link:

http://www.ecy.wa.gov/apps/sepa/

(2) *Report Outline*

After data has been collected, inventories compiled, and analyses completed, each discipline prepares a formal discipline report.

All discipline reports are developed in a similar format so they can be easily adapted to the needs of the environmental document. Generally, discipline reports contain the following:

- Summary of findings, impact conclusions, and mitigation recommendations.
- Background discussion on why the particular expertise area is critical to this project. What is the resource and it's location.
- Study methodology.
- Coordination with other groups or agencies.
- Affected environment (existing conditions) particular to the resource.
- Predicted impacts of each alternative.
- Mitigation recommended for construction and operational impacts.
- Indirect impacts (when appropriate).
- Bibliography.

Each of the above topics should be addressed, but when information is brief, they may be combined.

Before developing the report, the EIS or EA outline should also be reviewed, so significant details required for the environmental document are not overlooked.

(3) *Report Summary*

The report summary presents significant findings and recommendations in non-technical terms. The summary should be suitable for incorporation into the environmental document and for presentation at public hearings or use by management and policy groups in decision making.

The information contained in the environmental document is the responsibility of the expert who developed the report and not the environmental document writer. Therefore, good summaries that can be taken directly from discipline reports to the environmental document are important.

(4) Draft Report

Prepare the draft report in accordance with the time schedule and scope of detail identified by the project manager. Submit the draft report to the project manager requesting his/her review to confirm that engineering detail in the report is correct and the Region accepts any proposed mitigation. This submittal may be informal but should be documented.

(5) Final Report

Prepare the final report, incorporating the project manager or Region's comments. The report summary should be reevaluated against the needs of the environmental document outline so adequate and correct information is included in the document. The completed report is formally sent to the project manager. Copies should also be sent to the environmental document writer in the Region or OSC.

(6) Public Record

Most discipline reports become public record and part of an Administrative Record if one is prepared. Reports prepared for areas of high controversy or significant impact may be incorporated into an environmental document in their entirety as an appendix. All reports are kept in the project record for backup detail and future reference.

Certain reports, or aspects of reports, may not be subject to public record or disclosure. Pursuant to Section 304 of the National Historic Preservation Act, implemented through CFR 800.11(c), a "…public official receiving grant assistance pursuant to the Act, after consultation with the Secretary, shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy; risk harm to the historic property; or impede the use of a traditional religious site by practitioners." (See **Section 456**.)

412.10 Preliminary and Final Recommendations

Preliminary and final recommendations are formal statements from the project manager and IDT to the Regional Administrator and State Project Development Engineer. They form the basis for the DEIS and FEIS.

(1) Preliminary Recommendation

The project manager and IDT review all discipline reports and develop a preliminary recommendation after discussing the alternative tradeoffs. The preliminary recommendation is a concise description of significant impacts and alternatives to be evaluated in the DEIS.

The preliminary recommendation offers regional and OSC management the opportunity to review the recommendation and make revisions before the DEIS is prepared. Proposals or concepts that may appear logical to the IDT or individual experts may not fit well from a larger perspective. Once approved, the preliminary recommendation forms the basis for preparation of the DEIS. (See **Exhibit 412-3.)**

The preliminary recommendation should be prepared as soon as project impacts are known. Normally, this occurs after the preliminary discipline reports have been received and evaluated, and before preparing the preliminary DEIS. The IDT considers all environmental and design information and coordinates with the appropriate engineering sections in selecting alternatives to be studied in the DEIS.

A late preliminary recommendation can result in wasted time, effort, and money if a DEIS needs to be revised; or in unwise or costly commitments that could have been avoided.

The preliminary recommendation includes:

- Description of alternatives to be considered in the DEIS.
- Preferred alternative if one exists, and why it was chosen.
- Significant impacts and possible mitigation.
- Controversial areas and coordination proposed to resolve them.
- Any changes in the proposal as originally defined in the study plan, and why changes were made.

(2) Final Recommendation

The project manager and IDT review all comments received on the DEIS and develop a final recommendation, which is a concise description of the preferred alternative, significant impacts, and mitigations to be covered in the FEIS.

The final recommendation offers regional and OSC management the opportunity to review the recommendation after all comments have been considered and to make revisions before the FEIS is prepared. Once approved, the final recommendation forms the basis for preparation of the FEIS. (See **Exhibit 412-4**.)

The Regional Office reviews comments received at the public hearing(s) and on the DEIS. The Interdisciplinary Team and the project manager prepare a final recommendation after evaluating these comments.

The final recommendation includes:

- Description of the preferred alternative and why it was selected.
- Significant adverse impacts and proposed mitigation.
- Monitoring or enforcement programs required to ensure implementation of mitigation measures.

(3) General Guidelines

(a) Appropriate Length

Normally, two to four pages are sufficient for a final recommendation. Additional pages may be required for complex or controversial projects.

(b) Who Does It

The project manager prepares the preliminary and final recommendations after discussion with the IDT. If the IDT cannot agree on certain items, this should be documented in the preliminary and final recommendation. A minority report may be prepared.

(c) How to Submit

The preliminary and final recommendations are submitted to the Regional Administrator for concurrence. The Regional Administrator then submits the recommendation to the HQ Environmental Services Office for review and approval. The HQ Environmental Services Office coordinates its review with the FHWA as appropriate. Once final approval is given by the HQ Environmental Services Office, preparation of the DEIS/FEIS may proceed.

412.11 Impact Mitigation and Commitment Tracking System

NEPA/SEPA legislation and implementing regulations require implementation and monitoring of mitigation measures to reduce or eliminate adverse environmental impacts associated with a planned action. For statutory guidance, see: 42 USC 4371 et seq., Presidential Order 11514, 23 CFR 771.109(6), 40 CFR 1505.2(C) and 1505.3, RCW 43.21C, and WAC 197-11-660.

For WSDOT projects, the commitment file consists of proposed mitigating measures, commitments made to resource agencies or other agencies with permitting authority, and any other environmental or design commitments made on behalf of the project. The commitments generated by the environmental process are merged with other project commitments made through other processes including R/W acquisition (such as preserving a tree), design, and maintenance (not spraying roadside slopes with herbicides). When project documents reach OSC, the Project Development Office reviews the design file and PS&E for inclusion of appropriate commitments. See also WSDOT's *Design Manual,* Section 220.08(3). The Region is responsible for establishing and maintaining this project commitment file.

See **Exhibit 412-5** for a sample preliminary commitment list and record of commitment, and **Exhibit 412-6** for a sample operational review of commitment.

412.12 Administrative Record

The administrative record is a formal statement of the basis for a project decision. Its primary use is to document the reason for the project decision. It reflects the project history, environmental evaluation, and prior decision making on the project. The administrative record should also include criticism and responses to agency and public comments to document that opposing views were considered. See **Exhibit 412-7** for a sample administrative record.

(1) When to Prepare

All projects must be documented to support key decisions. A formal administrative record must be prepared for projects requiring an EIS where substantial controversy exists, and may be prepared for other projects. Project files on all projects should be kept in an orderly manner throughout the life of the project, whether or not an administrative record is prepared. Also, as decisions are made on the project, they should be recorded and filed.

(2) Administrative Record Contents

An administrative record should contain all federal, state, regional, or local actions. These include corridor approval, corridor adoption, design approval, other Transportation Commission actions, and Region-approved transportation master plans or programs. It may also contain other related material.

The administrative record should contain the following elements, as applicable, in chronological order:

- Table of contents
- Project prospectus
- Environmental Classification (ECS)
- Regional transportation plans or studies
- Route studies
- Study plan
- Notice of intent

- Minutes of scoping meeting(s)
- Each Interdisciplinary Team meeting minutes and recommendations
- Draft and final recommendation
- Agency meeting minutes and phone call summaries
- Comments from public open houses
- Public hearing transcript
- Letters from agencies or the public and responses to them
- Interoffice communications relating to project development
- Discipline reports
- Draft and final EIS
- Copy of all references cited in the DEIS and FEIS
- Official notices
- Record of decision
- Corridor, design, and access plan approvals
- Affidavit of publication of notice of action
- Other relevant evidence such as local zoning or planning reports, government studies, questionnaires, or university studies.

The administrative record need not include every item in the project file. Generally, items that do not relate to a major project decision, it should not be included. The Attorney General's office should be consulted during the preparation process.

412.13 Exhibits

Exhibit 412-1 – Sample Draft or Final Study Plan.

Exhibit 412-2 – Sample Public Involvement Plan.

Exhibit 412-3 – Sample Preliminary Recommendation.

Exhibit 412-4 – Sample Final Recommendation.

Exhibit 412-5 – Sample Preliminary Commitment List and Record of Commitment

Exhibit 412-6 – Sample Operational Review of Commitment.

Exhibit 412-7 – Sample Administrative Record.

Purpose of and Need for the Project

Purpose The purpose of the proposed project is to reduce travel delays and traffic hazards on SR 10 between Hawks Ridge and the Glacier Road vicinity. In addition, construction of this project would provide continuity with the roadway recently constructed immediately west of this project.

History In the late 1950s, the Department of Highways undertook the study of possible routes over the northern Olympics between Cascade and the North Falls. Construction of this section of SR 10 was completed in 1969. In 1970, reconnaissance studies for a route from North Falls to Glacier Road were initiated. A public corridor hearing was held in Falls City in June of 1971 to consider possible routes. The corridor that was subsequently selected was basically and upgrade of the existing SR 10 alignment. This corridor was adopted on April 18, 1972.

In 1983, construction began on the Johnson Creek Bridge and Approaches project, a 1.5-mile project located immediately west of the proposed project. Reconstruction of the section between North Falls an the Johnson Creek Bridge was completed in 1987.

Need SR 10 west of Glacier Road serves the mostly rural area of the Maple Valley. In recent years, the valley has been experiencing considerable development pressure. A major resort is being considered at Mt. Olympus, just east of this project. As part of the North Olympics Highway, this section of SR 10 also provides access to the Olympic National Forest, the Lake Quinault Recreational Area, and the Olympic National Park.

Between the Johnson Creek Bridge and Glacier Road, SR 10 is a two-lane highway with 9-foot lanes and variable 2- to 4-foot gravel shoulders. The entire roadway section is in poor condition.

There have been 17 accidents within the past three years, resulting in 12 personal injuries and one fatality. The average fatality rate during the history period for this section of SR 10 is 7.9 fatalities per million vehicle miles. The statewide average for similar highways with no access control is 5.3. The economic loss has been estimated at $291,026, an average of almost $81,220 per year.

Effects of the Proposed Project

Construction of this project would maintain the structural integrity of the subgrade and surfacing as well as correct unsafe conditions—narrow lanes, vertically and horizontally undulating alignment, roadside hazards—which pose delays and safety issues to the traveling public. The proposed project would be constructed to current design standards, resulting in wider lanes and paved shoulders.

Scope of the Work

Alternatives Three alternatives are currently under consideration for this project, to “build” alternatives and the “no-action” alternative.

The first alternative would construct a new highway from MP 185.47 to MP 192.04 on existing alignment. Minor curve revisions would be made where feasible to attain minimum standards.

The second alternative would include the work described above, plus construct a separate pedestrian trail.

The third alternative is the no-action alternative. Only minor, short-term reconstruction activities necessary for the continued operation of the existing roadway would be accomplished. No major construction work would occur under this alternative.

If additional alternatives are identified through the public involvement process, they will be evaluated by the Interdisciplinary Team. Any additional alternatives found to be reasonable will be added to and included in the study.

Areas of Primary Importance

Primary areas of concern identified by WSDOT personnel, local public officials, and citizens include:

- The safety of people and animals due to a higher-speed highway.
- Encroachment into Glacier River.
- Preserving wetlands.
- Maintaining the visual quality of the valley.
- Studying the possibility of including an equestrian, pedestrian, and/or bicycle path along the highway.

Areas of Potential Significant Controversy

Some members of the public are against the project because of the higher design speed. They feel that the proposed 55 mph speed limit would be continually exceeded, resulting in increased hazards to small children, livestock, wildlife, and pets.

Environmentally, the area of most concern is the potential impact this project could have on the Glacier River.

Local citizens have expressed interest in incorporating a pedestrian/equestrian trail into the project. Addition of a trail was considered by the Interdisciplinary Team and subsequently dropped for the following reasons:

- Widened shoulders would allow pedestrian and equestrian use without requiring a separate trail.
- Local support for such trail needs to be demonstrated by inclusion in a comprehensive plan.
- Current pedestrian and equestrian travel patterns do not support a need.
- Termini for such a trail lacking.
- Additional environmental impacts.

Section 4(f)/Section 6(f) Involvement

Hatchery Park, an undeveloped 55 acre park site owned by Jefferson County, would be affected by either of the "build" alternatives. Acquisition of the park land was aided by a grant provided through the Interagency Committee on Outdoor Recreation.

Effects to Hatchery Park will be evaluated in accordance with both Section 4(f) of the Department of Transportation Act and Section 6(f) of the Land and Water Conservation Fund Act.

Summary of Public Involvement

Community Coordination

A public informational meeting was held on January 17, 1985, in Fall City. Approximately 25 persons attended.

Future public involvement plans are detailed in Appendix A, Public Involvement Plan.

Interagency Coordination

WSDOT has contacted the following agencies and organized groups during development of this proposal. Coordination will continue throughout the course of project development.

- Washington State Department of Wildlife
- Washington State Department of Fisheries
- Washington State Department of Natural Resources
- North Falls Land Use Advisory Committee
- Town of Fall City
- Jefferson County
- Jefferson Electric Cooperative
- National Oceanic and Atmospheric Administration Fisheries
- U.S. Fish and Wildlife Service
- U.S. Department of Agriculture
  - Soil Conservation Service
  - U.S. Forest Service

Include in Final Study Plan:

An agency scoping meeting was held on April 16, 1986. The meeting was attended by representatives of the U.S. Fish and Wildlife Service, U.S. Forest Service, North Falls Land Use Advisory Committee, and the Jefferson Electric Cooperative.

Major concerns raised at the meeting were:

- Protection of wetlands.
- Deer kill and deer habit.
- Timing of utilities relocation.
- Archaeological sites.
- Obliteration of abandoned highway segments.

Cooperating Agencies

The U.S. Army Corps of Engineers will be asked to be a cooperating agency in accordance with federal regulations and guidelines.

Areas of Responsibility and Studies to be Prepared

Interdisciplinary Approach

This project has been identified as one that can be expected to have significant social, economic, or environmental impacts. In accordance with the *Design Manual*, an Interdisciplinary Team (IDT) has been appointed.

The IDT will function as an advisory board to the Region Administrator. The duties and responsibilities of the IDT will include:

- Review and approval of this Study Plan and the appended Public Involvement Plan.
- Evaluation of alternative coursed of action.
- Preparation of reports (data and conclusions of technical studies, views of citizens, officials, and groups).
- Submission of recommendations to the Project Manager.

IDT Chairman, IDT Members, and Project Manager

The IDT for this project is made up of the following members from the disciplines indicated:

Craig James, Chairman……..Civil Engineering

Pete Brownell…… Traffic

Doug Wieland…… Right of Way

Art Lemke…….. Environmental

The Project Manager is Boyd Powers.

Discipline Studies to be Prepared

Based on preliminary engineering data to be furnished by the Project Manager, a discipline study will be conducted for each area of environmental impact. The results of each study will be documented in a report prepared in accordance with **Sections 420-470** of this manual.

Discipline reports will be prepared for the following areas. The person proposed by the IDT to be responsible for preparing the report is noted.

Include in Draft Study Plan Only:

- Geology, Soils, and Topography
- Waterways, Hydrological Systems, and Floodplains
- Water Quality
- Wetlands
- Vegetation
- Fish, Wildlife, and Habitat
- Air Quality
- Noise
- Energy
- Prime and Unique Farmlands
- Hazardous Materials
- Asbestos
- Transportation
- Visual Quality
- Land Use and Socioeconomic Impacts
- Recreation
- Displacements and Relocation Assistance
- Services
- Cultural, Historic, and Archaeological Resources

Include in Final Study Plan Only:

Geology, Soils, and Topography. *(Name of Preparer)* A general baseline description of existing geological structure, soils, and topography for the project corridor will be prepared. The presence of geologic faults will be identified as they relate to the project.

The focus of the impact analysis will be on construction activities that could affect slope stability and/or the potential for erosion. Each alternative will be analyzed individually.

Waterways, Hydrological Systems, and Floodplains. *(Name of Preparer)* The analysis of baseline surface water resources in relation to the proposed project will include a summary description of stream locations and floodplain boundaries.

Each alternative will be compared to existing Federal Flood Insurance Maps to determine the extent of any flood plain encroachment. Local, state, and federal water resource flood plain management agencies will be identified and contacted to determine if any of the alternatives conflict with established plans, policies, or goals.

It is assumed that none of the alternatives will impact the 100-year flood plain; therefore, a quantitative assessment is not needed.

If necessary, a Floodplain Finding will be prepared in accordance with FHPM 6-7-3-2.

- **Water Quality.** *(Name of Preparer)* Existing surface water resources will be identified, including:
- Stream locations,
- Stream classifications,
- Water withdrawals,
- Water discharges, and
- Existing storm water management programs.

A discussion of water quality baseline conditions with a comparison to applicable standards will be prepared.

The impacts of construction and operation of each alternative will be assessed and discussed. Each alternative's impact discussion will include a regional and site-specific perspective. The site-specific discussions will identify significant impact areas along each alternative alignment and give detailed impact analyses for those areas.

Mitigation measures will be proposed for all significant adverse impacts.

Wetlands. *(Name of Preparer)* The scope of this study will be coordinated with local, state, and federal agencies and applicable wetlands regulations.

Wetlands in the alignment corridor will be mapped to determine general species composition, a measure of productivity, and sensitivity.

The impacts of construction and operation of each alternative will be assessed. A regional and site-specific discussion of potential wetlands impacts will be prepared for each alternative. The site-specific discussions will identify areas of potentially significant impacts on wetlands along each alternative alignment. The analyses will include discussions of cumulative, primary, secondary, and both short- and long-term impacts. It is anticipated that the major study emphasis will be the destruction or modification of wetlands due to new construction. Secondary impacts to wetlands will be analyzed in detail in site-specific cases where regulatory agencies feel this is necessary.

The impact discussion will be followed by mitigation measures recommended at each impact location which will minimize or avoid impacts on wetlands.

A separate Wetlands Finding document will be prepared as required by federal regulations.

Vegetation. *(Name of Preparer)* All vegetation types within the project corridor will be mapped along with the locations of any threatened or endangered plant species. Additional field studies to inventory vegetation will be conducted on a limited basis when necessary to augment existing data.

The potential impacts of construction and operation of each alternative will be assessed. Site-specific discussions will identify significant impact areas along each alternative alignment.

Available mitigation measures will be identified for all identified significant impacts.

Fish, Wildlife, and Habitat. *(Name of Preparer)* The scope of this study will be coordinated with local, state, and federal resource agencies.

Fish and wildlife species within the project will be identified along with the identification of any threatened or endangered species. Additional field studies to inventory fish and wildlife will be conducted on a limited basis when necessary to augment existing data.

The potential impacts of construction and operation of each alternative will be assessed. Possible mitigation measures will be identified for significant impacts.

Air Quality. *(Name of Preparer)* Because the proposed project will be located in either undeveloped areas of or within the existing SR 10 corridor, it is assumed that there will be minimal air quality impacts. In order to document this, a simplified analysis will be performed for each alternative based on nomographic estimates of CO microscale air quality impacts. One "worst case" calculation is assumed for each alternative. A discussion will be included of the status of the project in the State Implementation Plan (SIP) as it relates to the air quality nonattainment areas in the project corridor.

A brief report documenting that there will be no significant impacts and compliance with the SIP should be all that is required.

Noise. *(Name of Preparer)* Sensitive receptors will be identified on appropriate base maps for each alternative.

Three **"**worst case" locations per alternative will be selected for analysis. Field monitoring will be accomplished for each of the nine "worst case" impact areas. It is assumed that one monitoring point will be needed per impact area to adequately describe ambient conditions.

Future noise levels will be predicted for each alternative, based on use of FHWA Highway Traffic Noise Prediction Model. Where significant noise impacts are identified, mitigation alternatives will be discussed.

Energy. *(Name of Preparer)* It is assumed that energy impacts will be insignificant. A brief report documenting that no significant impacts are anticipated, and that construction and operation of the project will not affect local fuel availability nor require the development of new energy sources, should be all that is required.

Prime and Unique Farmlands. *(Name of Preparer)* The soil Conservation Service will be requested to make a determination regarding prime and unique farmlands. This determination will serve as documentation.

If lands affected by the project are determined to be prime or unique farmlands, an evaluation of the impacts of each alternative on such lands will be made. A separate Farmlands Finding would be required in this case.

Hazardous Materials. *(Name of Preparer)* The probability of encountering hazardous sites during construction is considered to be low. Therefore, this report will focus on describing the measures that would be taken if hazardous materials are discovered during construction.

Asbestos. *(Name of Preparer)* There should be no structure demolition associated with this project. Consequently, the probability of encountering asbestos or asbestos-related materials is low. This report will focus on the measures that would be taken should any asbestos be encountered during construction (such as for the relocation of utility lines).

Transportation. *(Name of Preparer)* This report will document existing traffic conditions within the project corridor, including major bottlenecks and points of congestion. Peak-hour volumes will be compared with roadway capacity, and the resultant "level of service" calculations will identify areas of capacity need. Traffic will be calculated on a seasonal basis as well as on yearly basis. Local traffic studies will be prepared as needed.

Future travel demand will be predicted on the same basis.

A discussion of the impacts of each alternative on traffic flow and circulation will be included in the report to allow comparisons.

Visual Quality. *(Name of Preparer)* A visual analysis will be prepared illustrating the "view of" and the "view from" the road. This analysis will consider the aesthetic characteristics associated with each alignment alternative, such as:

- Typical landscaping, and
- The potential visual integration of each alternative into the existing environmental setting.

The aesthetic evaluation will be aimed at assisting interested individuals and groups to visualize and compare the alternatives.

Land Use and Socioeconomic Impacts. *(Name of Preparer)* This report will cover the areas of Overall Economic Activity, Regional and Community Growth, Land Use, Disruptions and Changes in Community Character, Employment, Property Values, and Taxes.

An overall framework of socioeconomic data will be assembled in order to establish baseline conditions and to describe likely future land use and socioeconomic conditions. The work will be based on established land use planning assumptions available from the affected counties. Proposed land use plans and programs which have a bearing on the project will be analyzed. The consistency or inconsistency of the alternatives with these plans or programs will be evaluated. Indirect impacts of potential induced development as a result of the project will be explored.

The effects of the alternatives will be evaluated in terms of social and economic factors and changes in the quality of life in the study area. An important concern will be potential impacts of changes in local activity patterns and access to community facilities. Probable impacts on institutions and public facilities, such as schools, churches, and other facilities, will be discussed. Local economic impacts will be evaluated, including changes in property values, tax revenues, potential induced growth, retail sales, and employment opportunities, to the extent possible. The various socioeconomic impacts will be assessed by first describing the magnitude and incidence of such impacts.

Recreation. *(Name of Preparer)* This report will evaluate the probable effects of the project on public recreational areas. Direct and indirect impacts to Hatchery Park will be covered in detail to form the basis for the Section 4(f) evaluation.

Mitigation measures, including those required by either Section 4(f) or Section 6(f), will be identified and discussed.

Displacements and Relocations Assistance. *(Name of Preparer)* This report will address any displacements that would be caused by construction of each alternative. If displacements are likely to be caused by an alternative, the report will include the data specified in the NEPA Environmental Impact Statement Outline, including a description of the relocation services available to qualified displacees. If it appears that there will be no displacement of either residences or businesses, the report will briefly document this finding.

Services. *(Name of Preparer)* The impacts of the project on emergency services (fire, police, ambulance), public services and utilities, cemeteries, and government installations will be included in this report. The study will focus on changes in emergency response times and utility relocations.

Cultural, Historic, and Archaeological Resources. *(Name of Preparer)* A complete cultural, historic, and archaeological survey will be conducted within the project area. The report will document the results of this survey.

Education and Experience of Discipline Study Preparers (Include in Final Study Plan Only)

Barney Harvey	PhD	17 yrs WSDOT Consultant	Archaeology
Fred Brown Air Quality	B.S.	11 yrs WSDOT	Meteorologist
Etc.			

Manpower and Budget Requirements (Include in Final Study Plan Only)

7 experts (OSC) x 100 person-hours each	700 person-hours
2 experts (OSC) x 160 person-hours each	320 person-hours
4 experts (district) x 100 person hours each	400 person-hours
District Environmental Unit	500 person-hours
Headquarters Environmental Unit	1,500 person-hours
Interdisciplinary Team (4 members)	300 person-hours
Public Involvement	80 person-hours
Traffic	240 person-hours
Project Manager's Office (1 person, full-time, for 1 year)	2,000 person-hours
Survey Crew	200 person-hours
	6,240 person-hours
Total Manpower Cost	
6,240 person-hours @ $25/hour	$156,000
Additional Costs	
Aerial Photos	$3,000
Computer Cost (3 documents)	5,000
Computer Cost (Traffic Data)	500
Per Diem (OSC)	2000
Per Diem (District)	500
Reproduction	4,500
Newsletters & Mailings	6,000
Aerial Mosiac	1,500
Archaeological Survey an Report	10,000
Total Estimated Cost	$189,000

Project Schedule (For a Draft Study Plan)

Activity	Estimated Date
1. Form Interdisciplinary Team	10-20-84
2. Draft Study Plan Due	11-01-84
3. Public Involvement Plan Due	11-01-84
4. Flyer No. 1	11-15-84
5. Begin Scoping Process	12-01-84
6. Public Open House No. 1	01-17-85
7. Notice of Intent	03-20-85
8. Preliminary Traffic Complete	05-01-85
9. Select Study Alternatives	05-10-85
10. Agency Scoping Meeting	05-18-85
11. Expertise Orientation Meeting	05-19-85
12. Final Study Plan Approved (Region)	05/85
13. Final Study Plan Approved (OSC)	05/85
14. Traffic Data Complete	06/85
15. Environmental Studies Complete	08/85
16. Public Open House No.2	08/85
17. Preliminary DEIS Complete	11/85
18. Preliminary DEIS to OSC	11/85
19. PDEIS Review Comments due	12/85
20. Camera-Ready DEIS to OSC	01/86
21. OSC/FHWA approve Camera-Ready DEIS	02/86
22. Circulate DEIS	03/86
23. Public Design/Environmental Hearing	04/86
24. End Review/Comment period	04/86
25. Select Preferred Alternative	05/86
26. Public Open House No. 3	05/86
27. Newsletter	06/86
28. Preliminary FEIS Complete	07/86
29. Preliminary FEIS to OSC	07/86
30. PFEIS Review Comments due	08/86
31. Camera Ready FEIS to OSC	09/86
32. OSC/FHWA approve Camera-Ready FEIS	09/86
33. Circulate FEIS	10/86

Project Schedule (For a Final Study Plan)

Activity	Estimated Date
1. Form Interdisciplinary Team	10-20-84
2. Draft Study Plan Due	11-01-84
3. Public Involvement Plan due	11-01-84
4. Flyer No. 1	11-15-84
5. Begin Scoping Process	12-01-84
6. Public Open House No. 1	01-17-85
7. Notice of Intent	03-20-85
8. Preliminary Traffic Complete	05-01-85
9. Select Study Alternatives	05-10-85
10. Agency Scoping Meeting	05-18-85
11. Expertise Orientation Meeting	05-18-85
12. Final Study Plan Approved (Dist)	05-25-85
13. Final Study Plane approved (OSC)	05-30-85
14. Traffic Data Complete	06-01-85
15. Environmental Studies Complete	08-01-85
16. Public Open House No. 2	08-10-85
17. Preliminary DEIS Complete	11-01-85
18. Preliminary DEIS to OSC	11-15-85
19. PDEIS Review Comments due	12-15-85
20. Camera-Ready DEIS to OSC	01-10-86
21. OSC/FHWA approve Camera-Ready DEIS	02-10-86
22. Circulate DEIS	03-01-86
23. Public Design/EN Hearing	04-01-86
24. End Review/Comment period	04-22-86
25. Select Preferred Alternative	05-10-86
26. Public Open House No. 3	05-18-86
27. Newsletter	06-10-86
28. Preliminary FEIS Complete	07-01-86
29. Preliminary FEIS to OSC	07-15-86
30. PFEIS Review Comments due	08-10-86
31. Camera Ready FEIS to OSC	09-01-86
32. OSC/FHWA approve Camera-Ready FEIS	09-20-86
33. Circulate FEIS	10-31-86

Agency Scoping/Discipline Orientation Meetings
(Include in Draft Study Plan Only)

An agency scoping meeting is scheduled for May 18, 1985, at 9:00 a.m. The meeting will be held in the Region conference room. Interested agencies will be notified a minimum of two weeks in advance of this date. A copy of this draft study plan will be furnished to the agencies at the time of notification.

A discipline orientation meeting will be held on May 19, 1985, beginning at 8:30 a.m. The meeting will be held in the Region conference room. A tour of the proposed project is scheduled for the afternoon of the same day. Individual meetings will be held with the experts either following the tour or the next day.

Sample Public Involvement Plan

Public Involvement Plan

The public involvement plan for the SR 10, Johnson Creek Bridge to Glacier Road, project will use three basic approaches to include agencies and local citizens in the design process:

1) dissemination of information to the general public, businesses, citizen groups, and to public agencies and officials;
2) several community meetings and workshops; and
3) a formal design/environmental hearing.

Informational Program

The basic purpose of the informational element of the public involvement plan is to publicize the planning and decision-making process, to inform the public of upcoming public meetings and workshops, to present major issues and events, to report on input from past public meetings, to inform the public of the purpose of the study, and to publicize the process used to evaluate project alternatives. The Informational Program will take four primary forms:

- Newsletters will be distributed to those people who have expressed interest in being advised of the project's progress. A mailing list will be maintained with addresses of all potentially affected residents, businesses, public officials, and all agencies with a potential interest in the project.
- Flyers will be distributed to businesses and displayed publicly within the project corridor.
- News releases will be distributed to newspapers, community groups, and public agencies.
- Agencies and questionnaires will be distributed during public meetings.

The flyers and newspaper notices will give basic information; such as meeting dates, times, and places. The major portion of the data to be publicized will occur in the newsletters, handouts, and press releases. Theses will contain information explaining the purpose of the project, the public input process, major issues, proposed alternatives, alternative evaluation criteria, and project schedules.

Another phase of the information process will be incorporated in community meetings being held during the design process. Informational packages combining questionnaires, meeting format information, and handouts will be distributed to citizens attending public meetings.

Community Meetings

Community meetings, the second element of the public involvement program, will be held to inform the public during the design process and, equally important, to obtain public views, opinions, and attitudes regarding the proposed project. Three informal open houses have been scheduled to coincide with points during the process when there is a need to inform the public of the project status and to solicit meaningful public input.

Open House No. 1 the public scoping meeting, was held on January 17, 1985. The purpose of the meeting was to introduce the project to the public, identify issues to be considered in preparation of the EIS, and receive public input relative to possible construction alternatives.

Open House No. 2 has tentatively been scheduled for August 10, 1985. The primary purpose of the meeting will be to describe the screening criteria used to select alternatives of be studied in the Draft EIS, identify potential significant impacts that may be associated with each alternative, and receive input regarding the project as a whole.

Open House No. 3 has tentatively been scheduled for May 18, 1986. The purpose of the meeting will be to present the preferred alternative, discuss evaluation criteria, and solicit public comment.

All of the community meetings will use an informal format suitable to the information being presented. Guests will be asked to sign in. Handouts containing project information and a questionnaire will be given out at this time.

Graphic display materials for each open house will include:

- A color aerial mosaic.
- Proposed alternatives.
- Alternative evaluation criteria.
- Schedule information.

Other displays appropriate to the particular meeting and any other information considered relevant by the IDT will also be presented or available.

Notification

Flyers will be distributed to affected areas. These flyers will be posted in conspicuous locations along the proposed route and in suitable businesses. Time frame: two weeks prior to each open house.

Appropriate legal notices and advertisements will be placed in selected newspapers announcing the time, location, and purpose for each open house or meeting. This same information will be included on the flyer. If appropriate,

maps or other small graphics may be included in these publications. Time frame: two weeks prior to each open house or meeting.

Press releases will be distributed to local newspapers concerning upcoming open houses or meetings. The following information will be included:

- Time and location.
- A review of the purpose of the study.
- A list of study participants.
- A simplified project schedule indicating the current project status.
- A review of major issues.
- A report of input received at the previous open house or meeting.
- A discussion of project alternatives
- A review of the process used to evaluate alternatives.

Letters, including a copy of the press release, will be sent to state legislators, the mayor of Fall City, and the Jefferson County Commission, inviting them to attend. Time frame: 17 days prior to each meeting.

A newsletter will follow each open house. The newsletter will summarize what was presented, comments received, and the direction being taken concerning the project. This newsletter will be distributed to all interested citizens and local officials. Time frame: Approximately two to four weeks following each open house or meeting.

Project Hearing

The final element of the public involvement plan, a formal design/environmental hearing, will be held not less than 30 days following circulation of the Draft EIS. The purpose of the hearing will be to formally present design alternatives and their associated environmental impacts to the public for comments. The hearing process will follow procedures outlined in Section 208 of the *Design Manual*. Included will be preparation of a prehearing packet, hearing notice, and legislative/news media capsule project descriptions for OSC review.

The project hearing will consist of an open house followed be a transcribed formal hearing. The format and agenda will be finalized prior to submittal of the prehearing packet, 60 days before the scheduled hearing date.

The project schedule includes key public involvement dates.

Sample Preliminary Recommendation

WSDOT Intra-Departmental Communication

Date: April 5, 1987
From: Interdisciplinary Team / Project Manager
Subject: SR 10 L-9999
Hawks Ridge to Glacier Road Vicinity
Preliminary Recommendation

To: Region Administrator

The Interdisciplinary Team (IDT) met on March 23 and again March 28 to analyze the eight alternatives currently under consideration. Based on this evaluation, the IDT recommends that a Draft Environmental Impact Statement be prepared to study four alternatives in addition to the no-build option.

Each of the four "build" alternatives begin near Johnson Creek and proceed to the south, where they eventually merge with SR 10 between MP 29.00 and MP 30.70.

Route 1

Beginning on SR 10 near Johnson Creek, this route heads south on new alignment along the east bank of the Glacier River and terminates at SR 10 near MP 29.50. This alternative is approximately 8.6 miles in length and would include the construction of a new bridge across the Glacier River. Pedestrian access to the river would be provided with this alternative, as well as a separate bicycle path.

Route 2

From Johnson Creek, this alternative would upgrade the existing alignment for approximately 4.7 miles to MP 29.00. SR 10 between 37th and Ninth Street would be widened to four lanes. This would include widening the existing Glacier River Bridge No. 10/6.

Route 3

From the northern terminus just south of Johnson Creek, this alternative utilizes an upgrade existing alignment for approximately 1.3 miles. The route then forms a one-way couplet with two southbound lanes following Cascade Avenue to 19th Street. From 19th Street, the southbound lanes utilize a portion of the riverfront corridor and gradually merge with SR 10 near Ninth Street. The two northbound lanes of the couplet would utilize existing SR 10 from near Ninth Street to past 37th Street, where the route returns to a two-way, two-lane facility at SR 10, MP 30.10.

Route 4

From SR 10 near Johnson Creek, this route heads south on existing alignment for approximately 3.8 miles. It then turns southwesterly on new alignment along the east bank of the Glacier River to SR 10, MP 29.50. This alternative is 8.5 miles in length and would include the construction of a new bridge across the Glacier River. Pedestrian access to the river and a separate bicycle trail would be provided.

No-Action Alternative

The no-action alternative would include short-term minor reconstruction activities (safety improvement, etc.) that are a part of an ongoing plan for continuing operation of the existing roadway. No major construction work would occur under this alternative.

The major impacts associated with Route 1 include:

- Directly impacts 2.3 acres of riparian wetlands.
- Impacts two bald eagle perch areas.
- Requires the use of approximately 30 acres of land classified as Prime and Unique Farmland.
- Requires long-term use of riverfront lands for transportation, bicycle, and public use.
- Requires the use of 120 acres of wildlife habitat.
- Requires fill into the Glacier River at two locations.

Mitigation for the adverse impacts would include creating wetlands and creating artificial raptor perches.

The major impacts associated with improving the existing highway (Route 2) include:

- Displacement of 82 dwellings and 11 commercial establishments.
- Extensive utility relocation.
- Requires the acquisition of 116 acres right of way.
- Requires approximately 25 acres of prime farmland.
- Noise levels would increase on SR 10 where mitigation is not feasible.

The major impacts associated with Route 3, the couplet alternative, include:

- Displacement of 68 dwellings and 8 businesses.
- Requires extensive utility relocation.
- Directly impacts two acres of riparian wetlands.
- A bald eagle perch area will be impacted.
- Requires the acquisition of approximately 115 acres of right of way.
- Requires approximately 30 acres of Prime and Unique Farmland.

Mitigation for the adverse impacts of this route would include replacing wetlands, replanting riparian areas, and creating artificial raptor perch sites.

The major impacts associated with Route 4 include:

- Directly impacts 4.74 acres of riparian wetlands.
- Requires the use of 95 acres of wildlife habitat.
- A bald eagle perch area will be impacted.
- Requires fill into the Glacier River at two locations.
- Requires the acquisition of approximately 40 acres of right of way.
- Requires approximately 35 acres of Prime and Unique Farmlands.
- Requires the long-term use of riverfront land for transportation, bicycle, and public use.
- Displacement of eight residences and five businesses.

Mitigation for this route would be similar to Route 1.

Although analysis indicates that Route 1 may have the least social, environmental, and economic impacts, certainly Route 4 and the no-build alternative are not far behind. Therefore, it is a team recommendation that we prepare the draft Environmental Impact Statement with no preferred alternative.

The department has owned the right of way for a new transportation corridor along the Glacier River since 1957. Form 1957 to 1983 little controversy surrounded this project, although it was delayed on numerous occasions by funding limitations. During this period, planning and design were concentrated primarily on the riverbank route (Route 1).

On January 28, 1986, a public meeting was held to bring the public up to date on the proposed project. At this meeting, vocal opposition was expressed. Members of the group called "Citizens for Safer Highways" expressed a desire to find an alternative location for the proposed highway and preserve the riverfront for natural uses. The group filed suit in Cascade County Superior Court against the State of Washington, which included a demand that the Department of Transportation prepare an Environmental Impact Statement for this project. Although the department had written an Environmental Assessment, which was signed by the Washington State Department of Transportation and the Federal Highway Administration, a decision was made to prepare a full Environmental Impact Statement.

The project has broad-based support form other groups in surrounding communities, particularly those in the Glacier Valley. This support, as well as the opposition, is frequently aired through letter to the editor and news reports in the local news media.

Respectfully submitted:

Project Manager

Interdisciplinary Team

Team Chairman

Team Member

Team Member

Team Member

11:90 / 218
DOT Form 700-008 (x)
Revised 8/85 oxA-219

Sample Final Recommendation

WSDOT Intra-Departmental Communication

Date: February 28, 1988
From: Interdisciplinary Team (IDT)/Project Manager
Subject: SR 10 L-9999
Hawks Ridge to Glacier Road Vicinity
Final Recommendation

To: Region Administrator

The undersigned members of the Interdisciplinary Team met on February 15th, and again on February 22nd, to form a recommendation concerning the selection of a corridor for the above referenced project. We recommend Route 1 as the preferred alternative.

After considering all alternatives, we have rejected the no build alternative because it does not satisfy one of the primary needs for this project, namely the relief of congestion on SR 10. Routes 2 and 3 cause considerable disruption of businesses and dwellings and have significant social impacts in changing the character of the neighborhoods, particularly on Cascade Avenue. The team felt that both Routes 1 and 4 would be responsive to the needs identified in the Draft Environmental Impact Statement. Route 1 is preferred because of the following:

- Better horizontal and vertical alignment and fewer road approaches contribute to enhanced safety.
- Shorter completion time.
- Better recreation potential adjacent to the river
- No displacement of residences or businesses.
- Citizen support seems strongest for Route 1.

Beginning on SR 10 near Johnson Creek, Route 1 heads south on new alignment along the east bank of the Glacier River and terminates at SR 10 near Milepost 29.50. This alternative is approximately 8.6 miles in length and would include the construction of a new bridge across the Glacier River. Pedestrian access to the river would be provided with this alternative, as well as a separate bicycle path.

The major impacts associated with Route 1 include:

- Directly impacts 1.95 acres of wetlands.
- Impacts three bald eagle perch areas including one that is also used as a night roost area.
- Requires the use of 31 acres of land classified as prime and unique farmland.
- Requires long-term use of riverfront lands for transportation, bicycle, and public use.
- Requires the use of 120 acres of wildlife habitat.
- Requires fill into the Glacier River in one location.

Mitigation proposed for the adverse impacts includes creating wetlands and creating artificial raptor perches. Deciduous trees will be planted to provide future perches. Monitoring of new wetlands tree plantings will be required to ensure success. Clearing and grubbing will be kept to an absolute minimum. In the vicinity of Johnson Creek the alignment has been shifted easterly to avoid, to the extent possible, filling in shallow water areas.

We recommend that the Department commit to measures which will further minimize encroachment into the shallow water at 19th Street. Retaining walls and/ or alignment revisions can be constructed above ordinary High Water at a cost approximately $250,000. These changes would reduce the area of shallows covered by construction from 1/3 acres to 0 acres.

Respectfully submitted:

_____

Project Manager

Interdisciplinary Team

_____

Team Chairman

_____

Team Member

_____

Team Member

_____

Team Member

DOT Form 700-008 (x)
Revised 8/85 oxA - 219

Sample Preliminary Commitment List and Record of Commitment

SR 10, Hawks Ridge to Glacier Road Vicinity

Alternative A − No Build

1. No commitments required.

Alternative B − Westerly Alignment

1. No fill material will be allowed in the Glacier River.
2. Replace 7.3 acres of wetland.
3. Wildlife warning reflectors will be installed in areas jointly identified by the Washington State Department of Wildlife and Transportation to reduce wildlife/ vehicular accidents.
4. Open bottom culverts will be constructed at the Smokey Creek and Johnson Creek crossings.

Alternative C − Easterly Alignment

1. No fill material will be allowed in the Glacier River.
2. Replace 4.2 acres of wetland.
3. Wildlife warning reflectors will be installed in areas jointly identified by the Washington State Department of Transportation and Wildlife to reduce wildlife/ vehicular accidents.
4. A wildlife undercrossing will be constructed between MP 27.00 and MP 28.00 at a site jointly identified by the Washington State Department of Transportation and Wildlife.
5. Open bottom culvert will be constructed at the Smokey Creek and Johnson Creek crossing.

Alternative D − Improve Existing SR 10

1. Replace 1.2 acres of wetland.
2. Remove and relocate a minimum of 50 linear feet of existing bridge approach rail from the Johnson Creek Bridge to the Mark Cross County Park. Interpretive signing will be provided.
3. Construct noise barriers along the west side of SR10 between Johnson and Hall Roads, subject to comments on the Draft EIS and detailed input from affected residents.
4. Vegetative control spraying will not be allowed within 100 feet of a private water well located at MP 30.02 left. This commitment will remain in effect as long as the well is in use.

Washington State Department of Transportation

RECORD OF COMMITMENT

☐ NEW	COMMITMENT NO.
☒ REVISED	DATE OF ENTRY

DISTRICT	SR NO.	PROJECT NAME
4	101	Skinville Cutoff to Vicinity of Greenhead Slough

BEGINNING MILPOST	TO ENDING MILEPOST	STATION FROM	TO STATION	WORK ORDER NO.	PROJECT NO.
15.75	20.32	385 + 30	400 + 84	L-9999	410148A

COMMITMENT TYPE ('X' appropriate box(es), leave others blank)

☒ WETLAND ☐ NOISE ☐ AIR ☐ WATER QUALITY ☒ FISH AND WILDLIFE ☐ OTHER

LOCATION

Within R/W on upstream side of highway along ephemeral streams.

DESCRIPTION OF COMMITMENT (Construction, schedule operation, maintenance, duration)

Create impound sites within the right-of-way that will function as small wetlands. Impound areas to total at least 0.4 acres. Exact locations will be coordinated with WSDOT biologist & resource agencies. Impound areas will be created by widening & deepening ditches to collect hwy & upslope runoff. To be completed by 8-30-86. Ownership to be retained by WSDOT in perpetuity. See typical sketches attached.

COMMITMENT MADE TO WHOM:

U.S. Fish and Wildlife Service

DIVISION RESPONSIBLE FOR IMPLEMENTATION ('X' appropriate box(es), leave others blank)

☐ ENVIRONMENTAL ☒ DESIGN ☒ CONSTRUCTION ☐ MAINTENANCE ☐ OTHER

ESTIMATED COST OF COMMITMENT	COMMITMENT DEVELOPED BY (Name and Title)
$2000	Sue Wamp, WSDOT Biologist

COMMENTS (XXXXXXXXXXXXXXXXXX)

This commitment revises one approved 10-11-85. The project design was changed to allow a bridge to be replaced with a culvert. Wetland impacts were thus increased by 0.1 acre. The environmental benefit of this commitment is to mitigate wetland loss; protect stream quality; and provide "pocket" wetlands for wildlife use. Regulatory References: Fish and Wildlife Service Coordination Act; Clean Water Act, Section 404 (b)(1)

REVIEWED BY	DATE OF REVISION
(Signature) , Dist. Environmental Engr.	4-15-86

CONCURRENCE BY IMPLEMENTING DIVISION(S)

EN _____ DES SED CONSTR HWS MAINT _____ OTHER _____.

APPROVED BY	APPROVAL DATE:
(Signature), Dist. Proj. Development Engr.	4-16-86

DOT FORM xxx-xxx
REVISED xx/xx

* Attach additional pages if necessary.

Sample Operational Review of Commitment

Operational Review of Commitment					COMMITMENT NO. D-1
DISTRICT 2	DR NO. 2	PROJECT NAME Deception Creek to Burlington Northern Overcrossing			
BEGINNING MILEPOST	TO ENDING MILEPOST	STARTING FROM	TO STATION	CONTRACT NO.	DATE COMPLETED

COMMITMENT TYPE ('x' appropriate box(es), leave others blank)

❒ WETLAND ❒ NOISE ❒ AIR ❒ WATER QUALITY ❒ FISH AND WILDLIFE ❒ OTHER

LOCATION

Between the existing road and the Tye River

DESCRIPTION OF COMMITMENT (CONSTRUCTION, SCHEDULE OPERATION, MAINTENANCE, DURATION) *

Leave snags, trees, and shrubs adjacent to the Tye River for wildlife habitat.

COMMENTS (BENEFITS, DEFICIENCY , RECOMMENDATIONS FOR FUTURE REVIEWS, ETC.)*

This has been done well. Photo 2-1 shows the area before construction began. It was a difficult area to work in with heavy machinery. Photo 2-2 shows the site immediately after clearing and grubbing. A new type of gabion wall was used here to enhance visual quality.

DATE OF COMMITMENT CONSTRUCTION	COMMITMENT DEVELOPED BY HQ Environmental/ Biology	
REVIEWERS Lemke/ Jacobson		DATE 10/06/89
APPROVED BY		APPROVAL DATE

* Attach additional pages if necessary.

Photo 2-1

Example 3b

Project area before construction

Photo 2-2

Example 3c

Project area shortly after clearing and grubbing

SR 515, SE 235th St. to SE 196th St.
Additional Lanes
Administrative Record

1a.		Graphic, Alternative 2 Mod.
1b.		Aerial, existing Kentwood Apts. vic.
1c.		Aerial, vicinity Alt. 2 Mod.
1d.		Photographs, Kentwood Apts.
2a.		Graphic, Alt. 1
2b.		Graphic, Alt. 2
3a.		Vicinity map blue and red
3b.		Project units
4a-c.		Segments, aerial, whole project
5.	November 1967	Soils reconnaissance; SR 515, Jct. SR 516 to So. 196th St.
6.	May 1968	Soils Design Report I; SR 515, So. 196th St. to Grady Way in Renton
7.	1977	Determination of Air Pollution Background Concentrations in Suburban and Rural Areas; Josephson, Robert A.
8.	August 1978	Soils Report; SR 515, SE 252nd St. to SE 236th St.
9.	May 1979	King Co. Storm Drainage Control, Requirements and Guidelines
10.	November 1979	Soos Creek Plateau Communities Plan
11.		Deleted
12.		Deleted
13.		Deleted
14.	March 1980	King Co. Sensitive Areas Map Folio (wetlands updated April 1982)
15.	June 1981	King Subregional Transportation Plan
16.		Deleted
17.	December 1981	Streambed Assessments, Habitat Evaluations, Beneficial Uses, and Recommendations Toward Enhancement of Stream Ecosystems Within the City of Kent; Bortz, Bruce M.
18.	April 1982	Inventory of Mobile Source Emissions, prepared for the 1982 State Implementation Plan on Air Quality

19.	1982	Kent Parks and Recreation Plan
20.	1983	King Co. Historical Traffic Counts 1973 to 1982
21.	1984	1983 Annual Traffic Report
22.	No Date	Water Well Logs, Section 5, 8, 17, Township 22 North, Range 5 East
23.	March 1984	King Co. Zoning, Title 21
24.	May 1984	City of Kent Transportation Study
25.	September 1984	PSCOG Population and Housing Estimates: April 1, 1983
26.	November 1984	Transportation Technical Appendix for SE 208th St. Improvement Project EIS
27.	January 1984	State Transportation Plan 1985-2000
28.	1984	1984 Air Quality Data Summary (PSAPCA)
29.	October 1984	District 1 Hydraulic Report Guide
30.	January 1985	Subsurface exploration and geotechnical reports, Spring Brook Terrace Development, Vantage Glen Mobile Home Park, Todd and Kirk's Additions, Meadow Grove Subdivision, Homestead Apartments, Kent Estates Condominiums; Rittenhouse-Zeman and Associates
31.	February 1985	City of Kent Surface Drainage Utility, Drainage Master Plan
32.	March 1985	DEIS, SE 208th St. Road Improvement Project
33.	March 1985	Public meeting, notice and list of attendees
34.	No Date	Appendix to SE 208th St. EIS
35.	April 1985	Summary of Scoping Comments
36.	April 1985	King County Comprehensive Plan
37.	April 1985	SR 515, SE 235th St. to SE 196th St., Study Plan
38.	May 1985	Public meeting, notice and list of attendees
39.	May 1985	FEIS, SE 208th St. Road Improvement Project
40.		Miscellaneous interagency correspondence
41.	June 1985	Archaeological and Historical Report
42.	June 1985	Air Quality Report
43.	June 1985	Soils Report
44.	July 1985	Preliminary Recommendation for Study Alternatives
45.	August 1985	Biology Report

46.	September 1985	Public meeting, notice and list of attendees
47.	September 1985	Visual Assessment Report
48.	September 1985	Sociology Report
49.	September 1985	Urban Planning Report
50.	October 1985	Noise Analysis Report
51.	November 1985	Priority Study for Noise Abatement on Existing State Highways- District 1
52.	January 1986	Transportation Analysis Report
53.	January 1986	Vehicle and Pedestrian Traffic Report
54.	January 1986	Public Services and Utility Report
55.	January 1986	Hydraulic Report
56.	January 1986	Draft Environmental Impact Statement
57.	February 1986	Design/EIS Public Hearing (notice, sign-in sheet)
58.	Jan. 1985-March 1986	Interdisciplinary Team meetings (minutes)
59.	June 1986	Design Report
60.	July 1986	Final Project Recommendation
61.	November 1986	Newsletter
62.	November 1986	Notices of Final EIS availability
63.	November 1986	Final Environmental Impact Statement
64.	December 1986	Summary of Design Hearing comments
65.	January 1987	Design Report Approval
66.	February 1987	Notice of Action
67.	April 1987	Design Report Supplement
68.	June 1987	Design Report Approval

420.01 Introduction
420.02 Applicable Statutes and Regulations
420.03 Policy Guidance
420.04 MOUs, MOAs, and IAs
420.05 Technical Guidance
420.06 Permits and Approvals
420.07 Non-Road Project Requirements
420.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

420.01 Introduction

Many of WSDOT's projects involve the movement or alteration of earth. Understanding the geology and soils is critical in safely designing the project. Likewise, it is important to recognize and understand a project's relationship to subsurface water conditions that might affect soil moisture, water supplies, wetlands, water movement, and project construction activities. Groundwater topics are addressed in **Section 433**.

This section describes the types of studies required. Elements for discussion include geology, soils, topography, unique physical features or landforms, and erosion potential. The consideration and analysis of earth-related issues is primarily related to impacts expected during construction.

(1) Summary of Requirements

The *Design Manual* (M 22-01) and applicable engineering standards require geotechnical explorations and soil investigations prior to developing the preliminary designs. These reports are also necessary to provide information for NEPA/ SEPA documents.

Preliminary route/design studies (when there is a need for selecting new routes and for evaluating design alternatives) include determining controlling factors within the project area such as terrain and geological structures. Terrain classifications are used in developing geometric design (see the *Design Manual* (M 22-01), Sections 310.03 and 440.05). Projects involving water-oriented construction or operation activities may require analysis of erosion of shorelines and nearshore features induced by water and/or vessel wake.

Investigation of soils and surfacing materials is addressed in Chapter 510 of the *Design Manual* and is discussed in more detail below.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) Acronyms and Abbreviations

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

SSP Stormwater Site Plan

TESC Temporary erosion and sedimentation control

(3) Glossary

None.

420.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts to the earth are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) Local Regulations

Local sensitive or critical areas ordinances may identify areas with high potential for erosion, subsidence, or instability. Local building codes typically require that construction practices are consistent with protection measures appropriate to the seismic risk designation for the project area. Local approval for development and operation of borrow pits may also be required.

420.03 Policy Guidance

The Transportation Commission's Policy Catalog includes no policies specifically referring to geology and soils. For other environmental policies, see WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

It is WSDOT's responsibility to understand the characteristics of subgrade material to ensure that the highway when designed will be adequate to safely carry the estimated traffic. It is also the responsibility of WSDOT to ensure the quality and quantity of all borrow materials used in the construction of highways or highway facilities See *Design Manual,* (M 22-01) Chapter 510.

420.04 MOUs, MOAs, and IAs

No interagency agreements specifically related to geology and soils were identified.

420.05 Technical Guidance

(1) *WSDOT Discipline Report*

WSDOT's Geology and Soils Discipline Reports provide the information required for EAs, EISs and other environmental documents. A checklist to guide preparation of these reports is given as **Exhibit 420-1**. Lengthy technical reports used to prepare the Discipline Report or other geology and soils investigations performed during preliminary design should be placed in an appendix to the EA or EIS.

Major sections of the Discipline Report are: Studies and Coordination; Affected Environment; and Impacts, Mitigation, and Construction Activity Impacts.

(a) *Affected Environment*

Consider project geology, geological hazards, topographic setting, unique physical features, and existing sundry sites.

Data for this section may be obtained from a variety of sources including WSDOT's GIS Workbench. This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. WSDOT users can access the State Soil Geographic (STATSGO) data set and others at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(b) *Impacts*

This section should include potential for landslides, erosion/accretion, and settlement, as well as indirect impacts of the project, such as increased growth.

(c) *Mitigation*

Describe mitigation measures, commitments, and monitoring procedures. Also discuss mitigation measures considered or available but not included, with reasons why.

(d) *Construction Activity Impacts*

All impacts associated with construction of the project are to be addressed in the "Construction Activity Impacts" section of the EIS. Potential impacts may include erosion or accretion, and may include impacts related to haul routes and requirements for sundry sites.

Mitigation measures considered and proposed should also be described.

(2) *Temporary Erosion and Sedimentation Control Plan*

For guidance in preparing the Temporary Erosion and Sedimentation Control (TESC) Plan, refer to WSDOT's Temporary Erosion and Sediment Control Plan Checklist in **Exhibit 431-7**.

(3) Soils Surveys

The *Design Manual* (M 22-01), Chapter 510: Investigation of Soils and Surfacing Materials, contains detailed criteria for soil surveys to determine soil suitability and construction requirements, and material source investigations to ensure the quality and quantity of all borrow materials. The Materials Branch evaluates the information to prepare a report giving the required surfacing depths for the various subgrade soils. The report also includes recommendations for slope construction; maximum slope gradients in cuts and fills; treatment of slide areas, soft foundations, unsuitable soils, detrimental groundwater, and other unusual conditions; hiring a consultant to monitor the driving of piles in vibration and/or noise sensitive areas; and suggestions for the best use of available materials.

Design requirements for retaining walls and steep reinforced slopes are addressed in Chapter 1130 of the *Design Manual*. Soil investigations are required, and the structural elements of the wall or slope and the soil below, behind, and/or within the structure must be designed together as a system. Guidelines for wall/slope selection including cut and fill considerations, and settlement and deep foundation support considerations are provided in Chapter 1130.05.

(4) Erosion Control

Erosion is the major environmental issue related to soils. The movement of soil is usually detrimental to facilities as well as the environment, and is often the focus of water quality concerns, including prevention of sedimentation in streams and other water bodies.

WSDOT's *Highway Runoff Manual* (M 31-16) contains approved methods of managing stormwater runoff from WSDOT facilities. For erosion control and sedimentation requirements, see Chapter 2 and Chapter 6. Erosion prevention and sediment control are also addressed in WSDOT's *Roadside Manual* (M 25-30), Chapter 710.

Please refer to **Section 431.05** and **Section 431.06** for technical guidance and permits related to erosion and sedimentation.

(5) WSDOT Training

A training course on Erosion Control (Course Code: BPW) is available for WSDOT employees as part of WSDOT's Automated Training Management System (ATMS). WSDOT also offers two-day workshops to help staff prepare and implement effective TESC plans. This course also fulfills requirements for the Certification in Construction Site Erosion and Sediment Control and Erosion Control Lead General Special Provision (GSP) to the Standard Specifications for Road, Bridge, and Municipal Construction. For details, see the ESO web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Hazardous Materials, then Training.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_training.htm

420.06 Permits and Approvals

Permit requirements relating to erosion or sedimentation are addressed under **Section 431.06**. In addition, the permits described below may be required.

(1) Grading

Whenever WSDOT construction entails a change in street grades in an incorporated city or town, the state is obligated by law to present the plans for new grades to the municipality for adoption by ordinance. On limited access facilities, no grade approval is usually required for the highway itself. However, plans must be submitted to any incorporated city or town for grade approval for connecting streets, frontage roads, streets outside the limited access, and streets or connections within interchange areas, including any road passing over or under the facility but having no connection to it. See *Design Manual* (M 22-01), 240.13(2).

(2) Critical Areas Ordinance

If a local jurisdiction's designated "critical area," such as a geologic hazard area, would be affected by a WSDOT project, the local jurisdiction may have authority under the Growth Management Act to require WSDOT to obtain a grading permit or other approval.

(3) Borrow Pits

Borrow pits may require permits or easements from the land-managing agency. On federal land, an easement or permit may be required from the U.S. Forest Service or Bureau of Land Management. The Washington State Department of Natural Resources has responsibility for Pit Site Reclamation Plans and Surface Mining Permits.

420.07 Non-Road Project Requirements

For ferry-related projects, the Geology and Soils Discipline Report should also address potential for shoreline erosion/accretion during construction and operations, underwater marine sediments, and geology. Geotechnical reports prepared for ferry projects should include a complete description of the top two feet of sediments, including grain size, composition, and percent composition.

For other non-road projects, the requirements would be the same as for road projects.

420.08 Exhibits

Exhibit 420-1 – Geology and Soils Discipline Report Checklist.

Washington State Department of Transportation

Discipline Report Checklist
Geology and Soils

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Studies and Coordination

(Refer to *Design Manual,* Chapter 510.)

Included the sources of information used, such as:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	U.S. Geological Survey maps; Department of Natural Resources Division Geology and Natural Resource Geologic Maps.
❒	❒	❒	❒	B.	National Resource Conservation Service County Soil Survey.
❒	❒	❒	❒	C.	Department of Ecology's Coastal Zone Atlas of Washington
❒	❒	❒	❒	D.	County Geologic Hazard and Sensitive Areas maps; Department of Natural Resources Division Geology and Natural Resource Geologic Maps.
❒	❒	❒	❒	E.	Published reports, studies and boring logs from past projects and adjacent development.
❒	❒	❒	❒	F.	Field review of site.
❒	❒	❒	❒	G.	Included the appropriate federal, state, and local agencies and tribes coordinated with.

II. Affected Environment

Discuss as appropriate:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	General topographic setting and unique physical land features.
❒	❒	❒	❒	B.	Project geology including engineering geology characteristics of soils and rock, and the locations of soft and firm soil areas, and rock.
❒	❒	❒		C.	Geologic hazards identified such as regional faulting and potential seismic events, and possible earthquake secondary effects (e.g., liquefaction, ground motion amplification, tsunamis and seiches), existing or ancient landslides, areas prone to flooding, potential rock fall conditions, potential eruptive volcanos and their debris flow paths.
❒	❒	❒	❒	D.	Existing sundry sites (e.g., stockpile sites, waste sites, equipment staging areas).

III. Impacts

Consider impacts caused by indirect effects of the project, such as increased growth. Also consider:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Cut, fill, and landslide slope stability.
❒	❒	❒	❒	B.	Structure foundation construction.
❒	❒	❒	❒	C.	Relationship between topography and alignment design.
❒	❒	❒	❒	D.	Potential for settlements.

IV. Mitigation

Included:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Mitigation measures, commitments, and monitoring procedures.
❒	❒	❒	❒	B.	Mitigation measures considered or available but not included, with reasons why.
❒	❒	❒	❒	C.	Statement that current standard seismic designs would be used.

V. Construction Activity Impacts

All impacts associated with construction of the project are to be addressed in a "Construction Activity Impacts" section of the EIS. Provide the following information, as appropriate, for inclusion in that section:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Under **Impacts**, consider temporary construction impacts such as:
❒	❒	❒	❒		1. Erosion and/or ground build-up (accretion).
❒	❒	❒	❒		2. Haul routes.
❒	❒	❒	❒		3. Requirements for sundry sites. When sundry sites (pit, waste, etc.) are anticipated, evaluate existing sites within the vicinity of the project, and any proposed new sites, and assess the impact of using these sites. For existing sites, refer to any previous environmental documentation. Base the site analysis, at least in part, on the following.
❒	❒	❒	❒		a. Aesthetic value of the site before and after construction.
❒	❒	❒	❒		b. Available sources (private, commercial, other agencies).
❒	❒	❒	❒		c. Use of waste (construct berms, flatten fill slopes, widen shoulders, sell to other agencies).
❒	❒	❒	❒		d. Sources of material (daylight cuts, flatten cut slopes, profile adjustments).
❒	❒	❒	❒		e. Presence of wetlands, flood plains, farmlands, historical or archaeological sites, or other environmentally sensitive areas.
❒	❒	❒	❒		f. Steps to be taken to minimize impacts and restore the site.
❒	❒	❒	❒		g. Size and space available for stockpile sites.
❒	❒	❒	❒		h. Impacts of on-site operation (noise, dust, and odors).
❒	❒	❒	❒		i. Cost.
❒	❒	❒	❒	B.	Under **Mitigation**, describe:
❒	❒	❒	❒		1. Mitigation measures, commitments, and monitoring procedures during construction.
❒	❒	❒	❒		2. Mitigation measures considered or available but not included.

VI. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.

The summary should include:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	The objectives of the project.
❒	❒	❒		B.	Geologic summary of project area.
❒	❒	❒		C.	Impacts of all alternatives including the no-build alternative.
❒	❒	❒		D.	Recommended mitigation.
❒	❒	❒		E.	Comparison of alternatives based on impacts and cost effectiveness of mitigation.

General Comments: _____

_____

_____

_____

425.01 Introduction
425.02 Applicable Statutes and Regulations
425.03 Policy Guidance
425.04 MOUs, MOAs, and IAs
425.05 Technical Guidance
425.06 Permits
425.07 Non-Road Requirements
425.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

425.01 Introduction

Air quality impacts can result from various WSDOT activities and projects including transportation-related projects (vehicle emissions) and maintenance, construction, or demolition of facilities (particulates and other emissions). Handling and disposal of asbestos (as a result of construction and maintenance activities) is discussed in **Section 447.05(7b)**.

(1) Summary of Requirements

Federal, state, and local regulations require that all projects be reviewed for potential impacts to air quality. All transportation projects requesting federal funding and all regionally significant projects must be analyzed for regional air quality emissions. This regional analysis is usually conducted by the local metropolitan planning organization (MPO) or regional transportation planning organization (RTPO) when assembling the regional transportation improvement program (RTIP). Additional regional analysis would only be needed for very large, regionally significant projects. Air quality is generally assessed in terms of whether or not concentrations of air pollutants are higher or lower than National Ambient Air Quality Standards (NAAQS) set to protect human health and welfare.

Agencies with jurisdiction over ambient air quality in Washington include the U.S. Environmental Protection Agency (EPA), the Washington Department of Ecology (Ecology), and local clean air authorities. These agencies establish regulations governing the concentrations of pollutants in the ambient air, visible emissions, and contaminant emissions from air pollution sources. Although their regulations are similar, each agency has established its own standards. Unless the state or local jurisdiction has adopted more stringent standards, the EPA standards apply.

Based on monitoring information collected over a period of years, the state (Ecology) and federal (EPA) agencies designate regions as “attainment” or “nonattainment” areas for particular air pollutants called “criteria” pollutants. Attainment status is therefore a

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

measure of whether or not air quality in an area complies with the relevant NAAQS for six criteria air pollutants: carbon monoxide, sulfur dioxide, particulate matter, ground level ozone, lead, and nitrogen dioxide. Once a nonattainment area achieves compliance with the NAAQS, the area is considered an air quality "maintenance" area until the standard has been maintained for 10 years.

Under federal and state clean air rules there are special requirements in nonattainment and maintenance areas to ensure that proposed transportation projects do not cause or contribute to existing air quality problems. These so-called "conformity rules" require analysis to demonstrate compliance with existing air quality control plans and programs. Guidelines referenced in this section will assist in determining air quality analysis requirements.

Fugitive dust is particulate matter that is suspended in the air by wind or human activities. Projects that require earthwork or otherwise have the potential to create fugitive dust are required to utilize best management practices (BMPs) to control dust at WSDOT project sites.

Global warming and output of greenhouse gases (carbon dioxide) from transportation is currently unregulated but is an area of interest. See **Section 440** for additional information.

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this chapter are listed below. Others are found in the general list in the appendix.

BMP	Best Management Practices
CAA	Clean Air Act (Federal)
CAAA	Clean Air Act Amendments
CAWA	Clean Air Washington Act
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon Monoxide
HC	Hydrocarbons
ISTEA	Intermodal Surface Transportation Efficiency Act
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen Oxides
O_3	Ozone
PM_{10}	Respirable or fine particulate matter, smaller than 10 micrometers in diameter
$PM_{2.5}$	Respirable or fine particulate matter, smaller than 2.5 micrometers in diameter
PPM	Parts per million
PSD	Prevention of Significant Deterioration
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
TSP	Total Suspended Particulates

(3) Glossary

Carbon Monoxide (CO) – A by-product of the burning of fuels in motor vehicle engines. Though this gas has no color or odor, it can be dangerous to human health. Motor vehicles are the main source of carbon monoxide, which is generally a wintertime problem during still, cold conditions.

Conformity – Projects are in conformity when they do not (1) cause or contribute to any new violation of any standards in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area (EPA's Conformity Rule).

Criteria Pollutants – Carbon monoxide, sulfur dioxide, particulate matter, ground level ozone, lead, and nitrogen dioxide.

Exempt Projects

Listed in federal and state regulations (40 CFR 93.126 and WAC 173-420-110), these are mostly projects that maintain existing transportation facilities or are considered to have a neutral impact on air quality. See also WAC 173-420-120 for projects exempt from regional analysis.

Fugitive Dust – Particulate matter that is suspended in the air by wind or human activities and does not come out of a stack.

Hot-spot Analysis – An estimate of likely future localized CO and PM_{10} pollutant concentrations and a comparison of those concentrations to the National Ambient Air Quality Standards. Hot-spot analysis assesses impacts on a scale smaller than the entire nonattainment or maintenance area (for example, congested roadway intersections and highways or transit terminals), and uses an air quality dispersion model to determine the effects of emissions on air quality (40 CFR 93.101). See 40 CFR 93.116 for analysis procedure.

Maintenance Area – An area which previously was considered a "Nonattainment Area" but has achieved compliance with the NAAQS.

Nonattainment Area – Area that exceeds health-based NAAQS for certain air pollutants designated by the EPA. Current nonattainment areas are shown in WSDOT's GIS Workbench (see **Section 425.05 (1c)**).

Ozone (O_3) – A highly reactive form of oxygen that occurs naturally in the earth's upper atmosphere (stratosphere). Stratospheric ozone is a desirable gas that filters the sun's ultraviolet (UV) radiation. Ozone at ground level is not emitted directly into the air; instead it forms in the atmosphere as a result of a series of complex sunlight-activated chemical transformations between oxides of nitrogen (NO_x) and hydrocarbons which together are precursors of ozone.

Particulate Matter (PM_{10} and $PM_{2.5}$) – Includes both naturally occurring and man-made particles with a diameter of less than 10 microns or 2.5 microns respectively. Sources of particulate matter include sea salt, pollen, smoke from forest fires and wood stoves, road dust, industrial emissions, and agricultural dust. Particles of this size are small enough to be drawn deep into the respiratory system where they can contribute to infection and reduced resistance to disease.

Regionally Significant Project – A transportation project (other than an exempt project) that serves regional transportation needs (such as access to and from the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, or transportation terminals as well as most terminals themselves). Such projects would normally be included in the modeling of a metropolitan area's

transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel (40 CFR 93.101).

State Implementation Plan (SIP) – Framework for complying with federal law (40 CFR Part 51) requiring that the state take action to quickly reduce air pollution to healthful levels in a non-attainment area, and to provide enough controls to keep the area clean for 20 years. States have to develop a SIP that explains how it will do its job under the CAA. A SIP is a collection of the regulations a state will use to clean up polluted areas. EPA must approve the SIP, and if a SIP is not acceptable, EPA can take over, enforcing the CAA in that state. WSDOT projects must conform to the SIP before the FHWA and the EPA can approve construction.

Transportation Improvement Program (TIP) – A staged, multiyear intermodal program of transportation projects covering a metropolitan planning area which is consistent with the state and metropolitan transportation plan, and developed pursuant to 23 CFR Part 450. The entire program must conform with the NAAQS in order for any federal funding to be granted for individual projects.

425.02 Applicable Statutes and Regulations

Federal and state air quality legislation and regulations related to transportation are online via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then Operations, then Guidance and Other Sources of Information (under Environmental), then Air Quality. Or by direct link:

http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironLeg.htm

Click on Air Quality.

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts on air quality are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412**.

(2) Federal

(a) Clean Air Act (CAA)

The Clean Air Act (CAA) of 1970, 42 USC 7401 et seq., was enacted to protect and enhance air quality and to assist state and local governments with air pollution prevention programs. The statute and A Plain English Guide to the Clean Air Act are online via EPA's home page.

http://www.epa.gov/

Click on Programs, then Offices, then Office of Air and Radiation, then Clean Air Act (under Tools and Technical Information).

Or by direct link:

http://www.epa.gov/oar/caa/contents.html

(b) *Clean Air Act Amendments (CAAA)*

The Clean Air Act Amendments of 1990 are intended to significantly affect transportation decision-making, not only to achieve air quality goals but also to affect broader environmental goals related to land use, travel mode choice, and reduction in vehicle miles traveled. A key section of the CAAA relating to conformity is Title I, Provisions for the Attainment and Maintenance of National Ambient Air Quality Standards (NAAQS). See EPA home page referenced above.

(c) *Intermodal Surface Transportation Efficiency Act (ISTEA)*

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and subsequent legislation including the Transportation Efficiency Act for the 21st Century (TEA 21), adopted in 1998 (Public Law 105-178) offer tools to help transportation and air quality decision makers carry out the CAAA mandates. For statutes and implementing regulations, see the FHWA home page below.

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then Transportation Efficiency Act for the 21st Century.

Or by direct link:

http://www.fhwa.dot.gov/tea21/index.htm

(d) *Federal Implementing Regulations*

Under the CAAA, the federal Department of Transportation (USDOT) cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to Clean Air Act requirements. With USDOT concurrence, the USEPA has issued regulations pertaining to the criteria and procedures for transportation conformity 40 CFR 93. Exempt projects are listed in 40 CFR 93.126.

FHWA regulations for statewide and regional transportation improvement programs and plans are defined in 23 CFR 450, Planning Assistance and Standards. Federal regulations can be accessed from the following web site:

http://www.access.gpo.gov/nara/cfr/

Click on Code of Federal Regulations, and search for “40CFR93” or “23CFR450”.

Or:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then Title 23 CFR, then 450.

(3) *State of Washington*

(a) *Clean Air Washington Act*

The Clean Air Washington Act (CAWA) of 1991 (RCW 70.94) requires transportation plans, programs, and projects to be consistent with the SIP to improve air quality in areas where federal air quality standards are not met. The act

gives responsibility for determining conformity to the state, local government, or metropolitan planning organization that is developing the transportation plan, program, or project.

It also authorized establishment of a local air pollution control authority for each area of the state.

For details, see Ecology's home page:

http://www.ecy.wa.gov/

For the Clean Air Act and implementing regulations, click on Laws and Rules, then Index of Laws, then Title 70.94. For jurisdiction of local air pollution control agencies, click on Programs, then Air Quality, then Local Clean Air Agencies.

Or by direct link for RCW 70.94:

http://search.leg.wa.gov/wslrcw/RCW 70\TITLE/ RCW70.94CHAPTER/ RCW 70.94chapter.htm

Or by direct link for local air pollution control agencies:

http://www.ecy.wa.gov/programs/air/local.html

(b) State Implementing Regulations

WAC 173-420, Conformity of Transportation Activities to Air Quality Implementation Plans, contains regulations to ensure conformity of transportation activities to SIPs. These regulations were developed jointly by Ecology and WSDOT to meet federal and state statutory requirements. They set forth minimum requirements for evaluating transportation plans, programs, and projects for conformity with the purpose and intent of SIPs for air quality. This chapter of the WAC clarifies state policy and procedures to achieve the NAAQS, foster long range planning for attainment and maintenance of those standards, provide a basis for evaluating conformity determinations, and guide state, regional, and local agencies in making conformity determinations. Exempt projects are listed in WAC 173-420-110. Projects exempt from regional analysis are listed in WAC173-420-120.

These regulations are online via Ecology's home page:

http://www.ecy.wa.gov/

Click on Programs, then Air Quality, then Regulations.

Or by direct link:

http://www.ecy.wa.gov/laws-rules/ecywac.html#air

425.03 Policy Guidance

The Transportation Commission's Policy Catalog contains a specific policy statement on meeting environmental responsibilities related to air quality: "Minimize, and avoid when practical, air, water, and noise pollution, energy usage; use of hazardous materials; flood impacts; and impacts on wetlands and heritage resources from transportation activities."

A specific objective is to reduce vehicle exhaust emissions statewide as a means of attaining federal air quality standards through a balanced approach, which provides and promotes alternatives to the single occupant vehicle; promotes the use of cleaner fuels; promotes optimum maintenance of individual vehicles; and improves the operating efficiency of the transportation system. The policy and action strategies are available via the WSDOT home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.
Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

425.04 MOUs, MOAs, and IAs

(1) Fugitive Dust from Construction Projects

The Memorandum of Agreement between WSDOT and the Puget Sound Clean Air Agency (December 1999), establishes a cooperative process to minimize fugitive dust emissions from WSDOT project sites. See **Exhibit 425-1.**

✐ Memorandum of Agreement between the Washington State Department of Transportation and the Puget Sound Clean Air Agency Regarding the Control of Fugitive Dust from Construction Projects

425.05 Technical Guidance

(1) General Guidance

Guidelines referenced in this section will assist in determining air quality analysis requirements. An air quality conformity determination is required for all nonexempt projects within or affecting a nonattainment or maintenance area for criteria pollutants as established in the NAAQS. When an Environmental Impact Statement (EIS) is required, an air quality study is required regardless of the project location.

For each WSDOT project involving earthwork, an evaluation of the construction plans and specifications should be completed to identify possible dust-producing activities. The appropriate use of Best Management Practices (BMPs) for fugitive dust control is required for all WSDOT projects (see **Section 425.05(7)**). For requirements on handling and disposing of asbestos, see **Section 447.05(7b).**

(a) Exempt Projects

Exempt projects, listed in federal and state regulations (40 CFR 93.126 and WAC 173-420-110), are mostly projects that maintain existing transportation facilities, or improve mass transit or air quality, and are considered to have a neutral impact on air quality. See also WAC 173-420-120 for projects exempt from regional analysis.

Projects listed in these regulations are exempt unless the MPO, in consultation with EPA and other applicable agencies, determine that the project has potentially adverse emissions impacts.

(b) *Air Quality Standards*

National Ambient Air Quality Standards (NAAQS) can be found via EPA's home page:

http://www.epa.gov/

Click on Browse EPA topics, then Air, then Air Quality Criteria, then National Ambient Air Quality Standards.

Or by direct link:

http://www.epa.gov/airs/criteria.html

Washington state and local air quality standards are online via Ecology's home page:

http://www.ecy.wa.gov/

Click on Programs, then Air Quality, then Regulations, or Local Clean Air Agencies.

Or by direct link for state standards:

http://www.ecy.wa.gov/laws-rules/ecywac.html#air

Or by direct link for local standards:

http://www.ecy.wa.gov/programs/air/local.html

(c) *WSDOT Environmental GIS*

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available data sets include nonattainment areas for carbon monoxide, ozone, and particulates. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(2) *Guidance on Conformity*

The essence of conformity is very simple: transportation activities should improve or preserve, not worsen, air quality. Transportation conformity is a mechanism for ensuring that transportation activities (plans, programs and projects) are reviewed and evaluated for their impacts on air quality prior to funding approval. **Exhibit 425-2** is a flow chart summarizing the conformity process from planning to project-level analysis. **Exhibit 425-3** shows details of the preliminary process for screening WSDOT projects for air quality conformity.

(a) *Conformity and NEPA Documentation*

FHWA and WSDOT approval of a final environmental document for a project in a nonattainment or maintenance area also constitutes a determination that the project conforms to the SIP. A statement to the effect that the project conforms to the SIP should always be included in the text of the document. The document should also include a statement to the effect that the project is included in a conforming TIP. The specific dates of the pertinent conformity determinations from the Metropolitan Planning Organization (MPO) and FHWA/FTA should also be included. Often, consultation with the MPO is necessary to determine if a particular project comes from the plan.

All non-exempt projects in a nonattainment or maintenance area must be included in a conforming program. If a project is not in a conforming program, it cannot be found to conform and a final environmental document cannot be approved.

If only some of the project's stages are including in the conforming TIP, the project may still be found to conform (after a hot-spot analysis) provided the total project is included in the regional emissions analysis done for the program. If the total project is not included in the regional analysis, the project cannot be found to conform and a final environmental document cannot be approved.

The project design and scope should not be significantly different from that in the currently conforming SIP and TIP. Otherwise a new regional analysis would be required. The document should include a statement about this. Project level conformity determination must be completed for all non-exempt projects.

Project level conformity determinations must use the latest planning assumptions. Key assumptions must be included in the draft documents and supporting material used during the interagency and public consultation process. Hot-spot analysis assumptions must be consistent with those in the regional emissions analysis for inputs that are required by both analyses.

(b) *Criteria for Conformity*

In general, under conformity rules, transportation plans, programs, and projects cannot:

- Cause or contribute to any new violation of federal air quality standards.
- Increase the frequency or severity of any existing violation of federal air quality standards.
- Delay timely attainment of federal air quality standards.

Before a final environmental document –including a Finding of No Significant Impact (FONSI) for Categorical Exclusions – for a project in a nonattainment or maintenance area can be approved by the FHWA, the project must be found to conform with the SIP. A project conforms if it is listed in a conforming TIP and also satisfies the following conditions for project level conformity:

- The project must not cause or contribute to any new localized carbon monoxide (CO) or particulate matter violations or increase the frequency or severity of any existing CO or particulate matter violations in the corresponding nonattainment or maintenance area. Concentrations can increase at locations where no violations exist, as long as the increase does not result in a violation.

- For all CO nonattainment and maintenance areas in Washington, the project should improve or preserve CO levels at modeled locations. Concentrations can increase as long as there are no violations.
- There are no project level conditions related to ozone (O_3) in nonattainment and maintenance areas; however, all projects must be in a conforming TIP.

(c) Three-Year Time Limit

Under federal regulations (40 CFR 93.104(d)), projects must be implemented within three years of the project-level conformity determination. If three years pass and significant steps to begin project implementation have not been initiated, a new conformity finding is required.

(3) Discipline Report

(a) Checklist

Air impact studies are conducted in compliance with federal air quality conformity rules (40 CFR 51 and 40 CFR 93). The Air Quality Discipline Report Checklist (**Exhibit 425-4**) serves as a general guide for preparing an air quality discipline report. The report should include: an introduction describing the analysis, conformity status, impacts and coordination; description of affected environment, studies performed, and impacts for each alternative; project conformity statement; and construction activity impacts. Details on methodology or lengthy technical discussions should be placed in an appendix to the EA or EIS.

(b) Data Requirements

Current data requirements are described on WSDOT's air and noise web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy.

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

(c) Models

The most up-to-date and accepted models should be used to complete project level assessments.

(d) Consultant Scope of Work

Exhibit 425-5 is a sample scope of work that can be used as a guide in contracting with consultants for air quality studies.

(e) Conformity

The *Guidebook for Conformity: Project-Level Air Quality Analysis Assistance for Nonattainment Areas*, published in September 1995, provides guidance to local, regional, and state agencies involved in determining conformity of proposed projects. It focuses on modeling of carbon monoxide (CO). The guidebook was developed jointly by WSDOT, Ecology, Puget Sound Regional Council (PRSC), Spokane Regional Transit Council, and Southwest Washington Regional Transportation Council. It covers definition of the analysis area and level of detail,

traffic impact analysis, air quality modeling, transportation control measures, mitigation strategies for nonconforming projects, and project-level analysis case studies. For a copy, see the PRSC home page:

http://www.psrc.org/

Click on Data and Publications, then Publications List, then Air Quality.

Or by direct link:

http://www.psrc.org/datapubs/pubs/publist_airquality.htm

(4) *FHWA Technical Advisory*

FHWA Technical Advisory T6640.8A (October 1987) provides guidelines for preparing environmental documents. For air quality, the draft EIS should contain a brief discussion of the transportation-related air quality concerns in the project area and a summary of the project-related carbon monoxide analysis if such analysis is performed. Note that regional air pollution control agencies usually evaluate air quality impacts to ensure that proposed projects are in conformity. For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(5) *Guidelines for NEPA Documentation*

WSDOT provides the following additional guidance for NEPA documents.

(a) *Conformity*

The environmental document should include a statement of the attainment status of the area in which the project is located. If the project is in an area that is in attainment for all pollutants of concern (ozone, CO, PM_{10}, and NO_2), the environmental document should say that the area is in attainment for transportation-related pollutants (list pollutants, if desired) and say that conformity does not apply.

If the area is nonattainment or maintenance for any of the four pollutants, the document should state which pollutants cause the area to be classified as such. Then it should address conformity, making a statement to the effect that the project is in the SIP and TIP found in accordance with the EPA final conformity regulations dated November 24, 1993. List specific dates of the pertinent conformity determinations by the MPO and FHWA/FTA.

The document should point out that the design concept and scope have not changed since the SIP and TIP were found to conform. “Design concept” means the type of facility identified by the project, e.g., freeway, expressway, arterial highway, reserved right-of-way rail transit, mixed traffic rail transit, or exclusive busway. “Design scope” means design aspects which will affect the proposed facility's impact on regional emissions, usually as they relate to vehicle or person carrying capacity and control, e.g., number of lanes or tracks to be constructed or added, length of project, signalization, access control (including approximate number and location of interchanges), or preferential treatment of high-occupancy vehicles.

If TCMs are identified in the SIP for the nonattainment area, the document should discuss the project's potential to affect implementation of the TCMs.

The document should include evidence of coordination/consultation with EPA and/or state and local air quality agencies.

(b) Air Quality Analysis

The document should include and discuss the results of quantitative local CO analysis (hot-spot) or explain why a quantitative analysis was not needed to assess the air quality impacts. The following steps should be taken:

- Determine if the project will not require quantitative (hot-spot) analysis or is exempt from a conformity determination (no regional or hot-spot analysis required). Determine if the project is one of the types that do not impact regional emissions (no regional analysis required; does not have to come from conforming SIP and TIP). If the project will not require quantitative analysis, say so and make reference to 40 CFR 93.123. If the project is exempt from either regional or local analysis, say so and make reference to 40 CFR 93.126 or 40 CFR 93.127, as applicable.
- For PM and CO nonattainment and maintenance areas after EPA approves the SIP revisions, provide documentation that the project does not cause or contribute to any new localized CO or PM violations or increase the frequency or severity of any existing violations in the respective area.

The document should discuss key assumptions made in performing the analysis. The assumptions must satisfy the following requirements:

- Planning assumptions must be derived from the estimates of current and future population, employment, travel, and congestion most recently developed or approved by the MPO.
- Hot-spot analysis assumptions must be consistent with those in the regional emissions analysis for inputs that are required by both analyses.

(6) Online Technical Guidance References

(a) EPA Guidance on Carbon Monoxide Modeling

The *Guideline for Modeling Carbon Monoxide from Roadway Intersections* (EPA-454/R-92-005), published in November 1992 by USEPA's Office of Air Quality Planning and Standards, includes guidance on receptor siting, intersection selection procedure, intersection analysis, and examples of a SIP attainment demonstration and project-level analysis.

The document and many others are online via EPA's home page:

http://www.epa.gov/

Click on Information Sources, then Publications, then Publications on the EPA site, then Air Quality Planning and Standards and search by publication number or title.

Or by direct link:

http://www.epa.gov/oar/oaqps/publicat.html

(b) *FHWA Background Information*

FHWA's online *Environmental Guidebook* contains numerous documents in PDF format on conformity, air quality analysis, and mitigation published since 1989. The Guidebook and other background information and data sources can be found on FHWA's webs site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Air Quality.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch1.htm

Topics include:

- Conformity.
- Microscale and Regional Modeling and Emission Models.
- Congestion Mitigation and Air Quality Improvement Program (CMAQ).
- FHWA Sanction Exemption Criteria (determines which projects can go forward and which grants may be awarded if EPA imposes highway sanctions under Section 179(b) or Section 110(m) of the Clean Air Act).
- Transportation Control Measures (TCMs) for purposes of conforming to state implementation plans and achieving the NAAQS.
- Public information initiative to support state and local government efforts to meet their congestion and air quality goals under ISTEA and CAA.

(c) *Other Useful Web Sites*

Ecology's home page, including access to information on SEPA, laws and standards, conditions and trends, and permit assistance. Click on "air quality" for air quality regulations, local air pollution control agencies, approved SIPs, and more.

EPA's home page gives access to a variety of other air quality information, including federal regulations and standards, modeling, and technology transfer.

http://www.epa.gov/

Click on Browse EPA Topics, then Air, then Office of Air and Radiation Homepage.

Or by direct link:

http://www.epa.gov/oar/

(7) *Best Management Practices for Control of Fugitive Dust*

Fugitive dust emissions can be prevented and reduced in four basic ways:

- Limiting the creation or presence of dust-sized particles
- Reducing wind speed at ground level
- Binding dust particles together
- Capturing and removing fugitive dust from its sources

Following is a list of BMPs for control of fugitive dust compiled by the Associated General Contractors (AGC) of Washington in the publication, *Guide to Handling Fugitive Dust From Construction Projects*. For this and other AGC publications, see:

http://www.agcwa.com

Click on Education Foundation, then Class Schedule, then Publications for Sale.

http://www.agcwa.com/public/education_foundation/coned/class_schedule.asp

Click on Publications for Sale.

Note that these control measures are not mutually exclusive. Most situations require the use of two or more of these methods for any particular situation, and several methods will be employed to handle the variety of situations that make up a particular job. BMPs have been developed for the following:

- Covering – Fabric/Other for Erosion Control
- Dust Suppressants – Chemical
- Erosion Controls
- Filter Fabric around catch basin
- Flocculating Agent
- Minimize Disrupted Surface Area
- Paving
- Quarry Spills
- Schedule Work: Reschedule work around especially windy days
- Speed Reduction
- Street Sweepers
- Vehicle Spillage Reduction
- Water Spray
- Wheel Wash
- Vehicle Scrape

425.06 Permits

(1) Temporary Air Pollution Permit

A Temporary Air Pollution permit from the local clean air authority or Ecology is required if a project would temporarily result in pollutants above allowed levels (RCW 70.94). The contractor may be responsible for submitting the permit application. Note that some local air quality agencies have higher standards than the state. For jurisdictions of the local air pollution control authority in each area of the state, see Ecology's home page:

http://www.ecy.wa.gov/

Click on Programs, Air Quality, then Local Clean Air Agencies.

Or by direct link:

http://www.ecy.wa.gov/programs/air/local.html

(2) New Source Construction Permit

A New Source Construction permit is required from Ecology or local clean air authorities for air pollution point sources such as asphalt plants, rock crushers, etc. (RCW 70.94.152). The contractor may be responsible for submitting the permit application.

(3) Brush Burning

Most local clean air authorities have regulations limiting the type, size, and/or timing of brush burning, and permits are often required. If brush burning is being considered for a project, contact the local air pollution control authority or Ecology as well as the local fire protection agency, county, or conservation district.

425.07 Non-Road Project Requirements

Air studies for rail projects require a different type of analysis to determine conformity. For information, contact WSDOT's Air and Noise Division. Requirements for addressing air quality impacts related to ferry and aviation projects are assumed to be the same as for road projects.

425.08 Exhibits

Exhibit 425-1 – Memorandum of Agreement between the Washington State Department of Transportation and the Puget Sound Clean Air Agency Regarding the Control Fugitive Dust from Construction Projects.

Exhibit 425-2 – Conformity Process from Planning to Project-Level Analysis.

Exhibit 425-3 – Air Quality Conformity Guidance – Project-Level Preliminary Screening.

Exhibit 425-4 – Air Quality Discipline Report Checklist.

Exhibit 425-5 – Sample Consultant Scope of Work for Air Quality Studies.

Memorandum of Agreement – Fugitive Dust

This Memorandum of Agreement (MOA) is entered into by and between the Puget Sound Clean Air Agency (The "Clean Air Agency") and the Washington State Department of Transportation (WSDOT). The Clean Air Agency and WSDOT recognize that fugitive dust from construction projects can become an air pollution problem. Both organizations share a common goal of controlling fugitive dust. Therefore, this MOA establishes a cooperative process to minimize fugitive dust emissions from WSDOT project sites.

1. ROLES AND RESPONSIBILITIES

The Clean Air Agency will:

1.1 Designate the "Clean Air Agency" primary and secondary staff persons to act as a liaison to WSDOT.

1.2 Upon request by WSDOT, participate in pre-construction meetings between WSDOT and the project contractors.

1.3 Coordinate and provide training, including the training materials, for WSDOT employees and WSDOT contractors on fugitive dust prevention.

1.4 Refer complaints and inspectors' site observations about a project to the WSDOT project engineer or other person in charge of the project site. WSDOT will respond in writing to the Clean Air Agency with the disposition of any complaint or inspector observation, including a description of any corrective action taken.

WSDOT will:

1.5 Designate WSDOT primary and secondary staff person to act as a liaison to The Clean Air Agency.

1.6 Include a description of Best Management Practices (BMP) for fugitive dust control in WSDOT's environmental procedures manual and require the appropriate use of BMP on all WSDOT projects. The BMP to be included are found in the Associated General Contractors of Washington (AGC) publication, Guide to Handling Fugitive Dust From Construction Projects.

1.7 Evaluate the construction plans and specifications for each WSDOT project to identify possible fugitive dust producing activities.

1.8 Ensure that the duties of WSDOT project engineers or other persons in charge of project sites include observing and reporting potential fugitive dust problems during the course of their work. They shall also insure implementation of BMPs in accordance with the contract.

2. DEADLINES FOR DELIVERABLES

2.1 Training provided by The Clean Air Agency regarding BMP for fugitive dust control will begin August 10, 1999, and will continue as needed.

2.2 On or before December 30, 1999, WSDOT will provide to The Clean Air Agency a copy of the environmental procedures manual containing the AGC BMP implementation description.

3. COMMITMENT OF RESOURCES

3.1 The Clean Air Agency staff person assigned as a liaison to WSDOT shall remain a Clean Air Agency employee at all times.

3.2 The WSDOT project engineers and staff person assigned as a liaison to The Clean Air Agency shall remain WSDOT employees at all times.

3.3 The Clean Air Agency will provide funding for the training courses and materials.

3.4 WSDOT is responsible for preparing, printing and distributing the WSDOT environmental procedures manual containing the BMP for fugitive dust control language.

4. TERMINATION OF MOA

Either party may terminate this MOA at any time with or without cause by giving thirty (30) days' written notice to the other party of the intent to terminate.

5. AMENDMENTS TO MOA

This MOA may be modified by mutual agreement of the parties. All modifications shall be in writing.

6. GOVERNING LAW

This MOA shall be governed by the laws of the State of Washington. The parties acknowledge the jurisdiction of the courts of the State of Washington in this matter.

7. SEVERABILITY

If any provision of this MOA or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provision of this MOA which can be given effect without the invalid provision, and to this end the provisions of this MOA are declared to be severable.

8. CONTENT AND UNDERSTANDING

This MOA is a complete and integrated agreement of the parties.

9. RESERVATION OF AUTHORITY

Nothing in this MOA affects or alters the legal authority of either party.

10. PREVIOUS AGREEMENTS SUPERCEDED

This MOA supercedes any and all previous agreements between the parties on this issue, including but not limited to the Agreed Stipulation RE: Order of Dismissal, dated January 24, 1991.

DATED this 14th day of October, 1999.

PUGET SOUND
CLEAN AIR AGENCY

By: (signed original on file)

Margaret Pageler, Chair
Board of Directors

Date: 10/14/99

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

By: (signed original on file)

Sid Morrison

Date: 12/27/99

Attest:

By: (signed original on file)

Dennis J. McLerran
Executive Director

Date: 10/14/99

Approved as to form:

By: (signed original on file)

Laurie S. Halvorson
General Counsel

Date: _____

Washington State Department of Transportation

Primary Liaison: Janelle Hitch
Air Quality Engineer
Northwest Region
15700 Dayton Avenue North, NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

206-440-4541/Fax 206-440-4805
hitchj@wsdot.wa.gov

Puget Sound Clean Air Agency

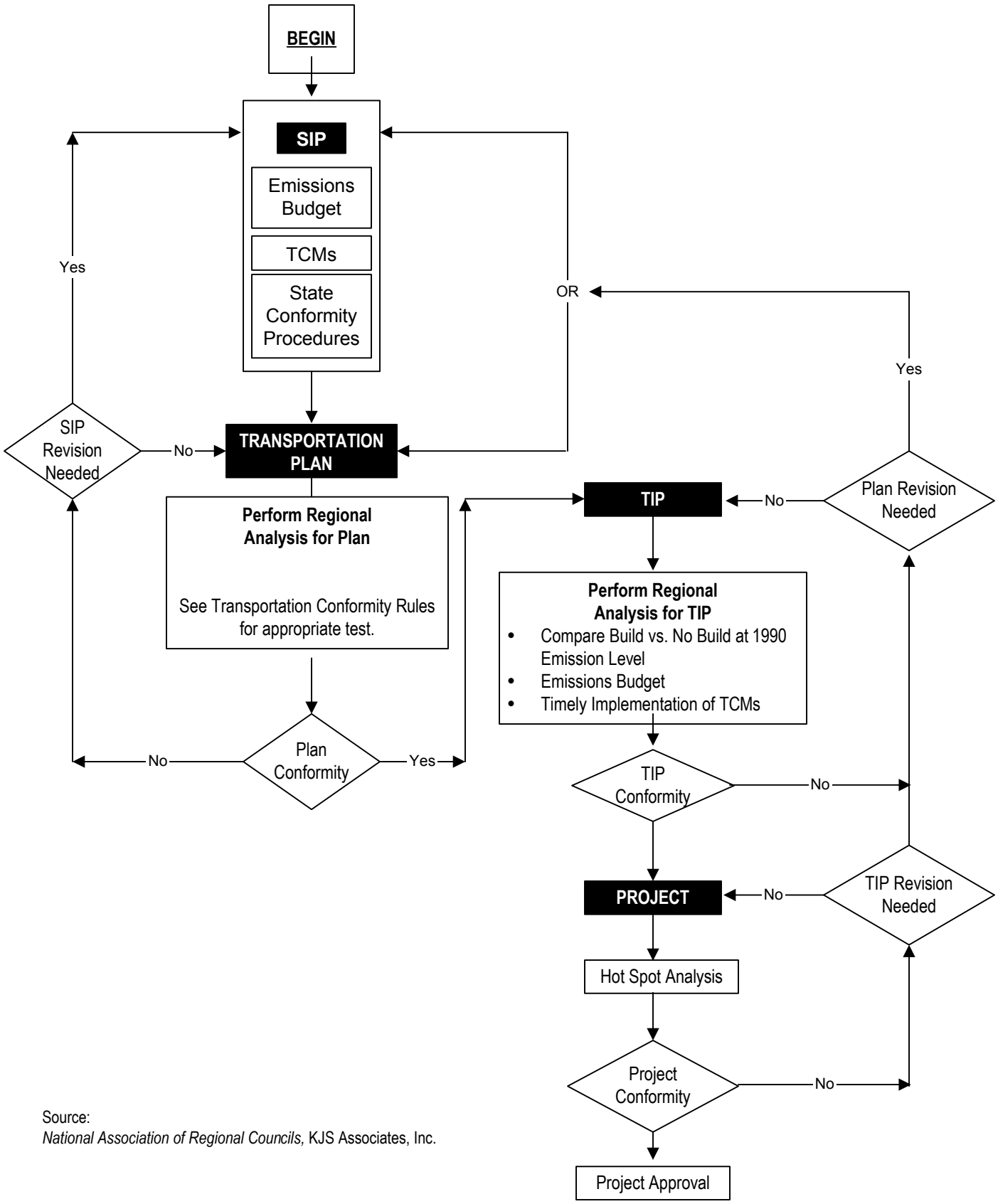
Primary Liaison: Mike Schultz
Communication and Education
110 Union Street, Suite 500
Seattle, WA 98101-2038

206-689-4060 or 1-800-552-3565
Fax 206-343-7522
commedu@psapca.org

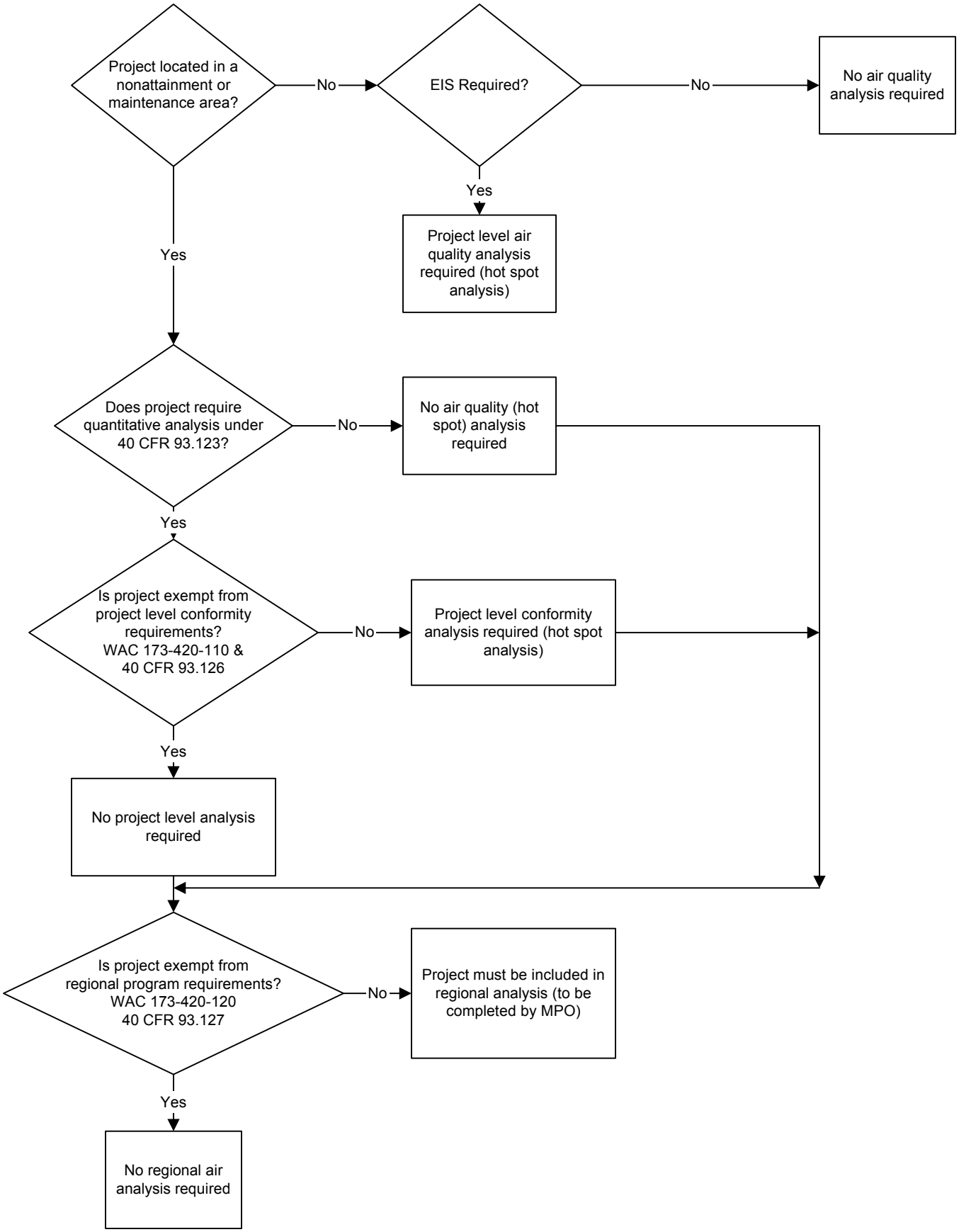
Secondary Liaison: Rick Hess
Senior Inspector
Northwest Region
110 Union Street, Suite 500
Seattle, WA 98101-2038

206-689-4029
Complaints 206-343-8800 or 1-800-552-3565
Pager 206-680-4509
Fax 206-343-7522
inspection@psapca.org

Conformity Process from Planning to Project-Level Analysis



Source:
National Association of Regional Councils, KJS Associates, Inc.


Project located in a nonattainment or maintenance area?
No
EIS Required?
No
No air quality analysis required
Yes
Project level air quality analysis required (hot spot analysis)
Yes
Does project require quantitative analysis under 40 CFR 93.123?
No
No air quality (hot spot) analysis required
Yes
Is project exempt from project level conformity requirements? WAC 173-420-110 & 40 CFR 93.126
No
Project level conformity analysis required (hot spot analysis)
Yes
No project level analysis required
Is project exempt from regional program requirements? WAC 173-420-120 40 CFR 93.127
No
Project must be included in regional analysis (to be completed by MPO)
Yes
No regional air analysis required

Washington State Department of Transportation

Discipline Report Checklist
Air Quality

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions that have no N/A box.

I. Introduction

Air impact studies are conducted in compliance with the Federal and State Air Quality Conformity Rules (40 CFR part 93 and WAC 173-420). The Air Quality Discipline Report is intended to serve as a general reference list for information used during the development of an air quality discipline report. These guidelines are not all-inclusive and should be modified as appropriate.

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Summary of project (including project location/mile post)
❒	❒	❒		B.	The objectives of the project.
❒	❒	❒	❒	C.	Narrative of analysis - EPA approved models used.
❒	❒	❒	❒	D.	Project conformity status.
❒	❒	❒		E.	Comparison and discussion of the impact status of all alternatives (includes No Build).
❒	❒	❒	❒	F.	Coordination with federal, state, and local agencies done.

II. Affected Environment

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	CADD and/or channelization plan.
❒	❒	❒	❒	B.	Ambient air quality standards.
❒	❒	❒	❒	C.	Existing air quality conditions
❒	❒	❒	❒	D.	Existing/proposed right-of-way / areas accessible to the public.*

SAT	INC	MIS	N/A		
❒	❒	❒	❒	E.	Compliance status with NAAQS and existing project area attainment status.
❒	❒	❒	❒	F.	Current ambient health effects on people (plants and animals when appropriate).
❒	❒	❒	❒	G.	Project area meteorology.
❒	❒	❒	❒	H.	Health affects of pollutants.
❒	❒	❒	❒	I.	Any major terrain features.
❒	❒	❒	❒	J.	Project description.

* These items are not required in the discipline report, but provide data needed to conduct modeling. **Modeling outputs must be shown in the discipline report.**

III. Studies and Coordination

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	National Ambient Air Quality Standards (NAAQS) for nonattainment or maintenance areas affected by project.
❒	❒	❒	❒	B.	Project's relation to regional transportation plan and regional TIP.
❒	❒	❒	❒	C.	Project's relation to State Implementation Plan (SIP) requirements, including Transportation Control Measures (TCMs) if applicable.
❒	❒	❒	❒	D.	Method of air quality analysis.
❒	❒	❒	❒	E.	Summary of conformity guidance. When conformity finding required, next three items must be included.
					1. ❒ City specific traffic, emissions, and concentration models used (mesoscale and microscale analysis).
					2. ❒ Assumptions used.
					3. ❒ Map showing modeled receptor locations.
❒	❒	❒	❒	F.	Nonattainment and maintenance areas: summary of reference to regional analysis of region transportation plan and TIP.
❒	❒	❒	❒	G.	Receptor sites placed per EPA guidance.
❒	❒	❒	❒	H.	Induced traffic growth.

SAT	INC	MIS	N/A		
❒	❒	❒	❒	I.	Indirect air quality effects.
❒	❒	❒	❒	J.	Modeling performed for existing and project related or project affected Level of Service (LOS) D (or greater) intersections and top 3 (minimum) project-affected or related intersections based on highest traffic volumes.
❒	❒	❒	❒	K.	Results of coordination with appropriate air quality agencies.

IV. Project Data & Assumptions

This information is needed for modeling and may be found in the modeling outputs included or as an attachment / appendix.

❒	❒	❒	❒	A.	Number and width of lanes.*
❒	❒	❒	❒	B.	Peak hour traffic volumes.*
❒	❒	❒	❒	C.	Signal timing and traveled speeds.*
❒	❒	❒	❒	D.	Level of service for intersections.*
❒	❒	❒	❒	E.	Homes, buildings shown on plan sheets, public access points.*
❒	❒	❒	❒	F.	Type of roadway (elevated, depressed, at grade).*

* These items are not required in the discipline report, but provide data needed to conduct modeling. **Modeling outputs must be shown in the discipline report.**

V. Impacts (for each alternative and no build)

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Qualitative and quantitative analysis of pollutants, per Conformity Guidance.
❒	❒	❒	❒	B.	Findings of regional TIP quantitative analysis of hydrocarbons (HCs) and CO with project included.
❒	❒	❒	❒	C.	Air quality impacts for year of opening.
❒	❒	❒	❒	D.	Air quality impacts for design year (minimum 10 years from year of opening but generally 20 or more).

DESIGN MODIFICATION COMMITMENTS (if applicable)

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Modification commitments during highway operation.
❒	❒	❒	❒	B.	Design modifications or measures considered or available but not included with reasons why.

VI. Project Conformity Statement

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Project's inclusion in conforming transportation plan and TIP / regional conformity per 40 CFR 93.110 –117.
❒	❒	❒	❒	B.	Emissions relationship between build and no build alternatives.
❒	❒	❒	❒	C.	Project's contribution to reduction of NAAQS violations (if any).
❒	❒	❒	❒	D.	Applicability of CO, ozone, and PM10 conformity.
❒	❒	❒	❒	E.	Hot spot conformity statement

VII. Construction Activity Impacts

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Impacts.
❒	❒	❒	❒	B.	Dust and particulates.
❒	❒	❒	❒	C.	Slash disposal.
❒	❒	❒	❒	D.	Burning.
❒	❒	❒	❒	E.	Odors.
❒	❒	❒	❒	F.	Emissions from construction equipment.
❒	❒	❒	❒	G.	Emissions from asphalt plants, gravel plants, and other temporary sources. Discuss permit requirements.

MITIGATION

❒	❒	❒	❒	A.	Mitigation measures and commitments during construction.
❒	❒	❒	❒	B.	Mitigation measures considered or available but not included.

VIII. Figures, Maps, and Tables

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Vicinity map.
❒	❒	❒	❒	B.	Ambient air quality standards.
❒	❒	❒	❒	C.	Designated nonattainment or maintenance areas for criteria pollutants.
❒	❒	❒	❒	D.	Receptor group locations.
❒	❒	❒	❒	E.	Ozone trends.
❒	❒	❒	❒	F.	Carbon Monoxide trends.
❒	❒	❒	❒	G.	List of Receptors with Existing, Build, and No Build CO levels.
❒	❒	❒	❒	H.	Receptor List of Existing, Build, and No Build CO exceedances (with values).

IX. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification. The summary should include:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Summary conformity statement.
❒	❒	❒		B.	Impacts of all alternatives including the no-build alternative.
❒	❒	❒		C.	Required mitigation.
❒	❒	❒		D.	Comparison of alternatives based on impacts and effectiveness of design alternatives and construction phase mitigation.

General Comments: _____

_____

_____

_____

Sample Consultant Scope of Work for Air Quality Studies

The air quality impact analysis will follow the WSDOT Environmental Procedures Manual (EPM) guidelines, except when directed otherwise by this contract.

Air quality impacts will be assessed, quantified, and described for:

1. The Existing Year
2. The Year of Opening -- No Build
3. The Year of Opening -- Build
4. The Design Year -- No Build
5. The Design Year -- Build

All build alternatives will be evaluated.

The existing air quality and pollution sources will be described.

Air quality impacts from construction activities and vehicles operating on the roadway will be evaluated qualitatively. Temporary air quality impacts during construction will be examined, and mitigation measures to control fugitive dust will be discussed referencing the Memorandum of Agreement with the Puget Sound Clean Air Agency regarding fugitive dust in Short Term Mitigation measures. This agreement requires evaluation and implementation of best management practices.

The long-term impacts from changes in vehicular traffic operating on the roadway will be discussed. Monitoring and modeling of air pollutants other than carbon monoxide (CO) is not proposed.

Studies and Coordination

The air quality analysis will meet the requirements of WAC 173-240 and follow EPA guidelines. The microscale analysis will be performed to determine carbon monoxide (CO) concentrations using the USEPA CAL3QHC Version 2 or other EPA approved computer models (the mesoscale analysis is done on transportation projects by the Puget Sound Regional Council as part of the TIP analysis). Vehicular emissions will be computed by using the EPA's latest emission factor algorithm - MOBILE5.0A or later version as required by the EPA. The intersections selected for modeling and the corresponding receptor siting will be based on traffic volume, and level of serve (LOS) in accordance with the Puget Sound Regional Council, *Guidebook for Conformity.* Potential air quality impacts would be evaluated at six (6) signalized intersections that would be affected by the proposed project. The six should include the three highest-volume intersections and the three intersections with the worst Level of Service. Maximum one-hour and eight-hour CO concentrations will be estimated at receptor sites for each alternative (including the no-build), for peak traffic periods, for existing, year of opening, and the Design year. The results will be compared to the State and National Ambient Air Quality Standards (NAAQS).

The CONSULTANT will include the following traffic (as collected by the STATE) and modeling information for all study years, as defined above, for the Air Quality Discipline Report:

- AM and PM peak hour traffic volumes and LOS for all new, modified, and impacted intersections for all alternatives at intersections with signals,
- Description of intersections selected,
- Description of figure showing receptor locations,
- Identification of models used,
- 1-hour and 8-hour maximum pollutant concentrations at each intersection for each modeling scenario.

The analysis will conclude with the project conformity statement. Include the project's inclusion in pertinent conforming transportation plan and conforming transportation improvements program, and relation to transportation control measures. Note the emissions relationship between build and no-build alternatives. Indicate whether the project contributes to the reduction of frequency and severity of violations of NAAQS (if any).

431.01 Introduction
431.02 Applicable Statutes and Regulations
431.03 Policy Guidance
431.04 MOUs, MOAs and IAs
431.05 Technical Guidance
431.06 Permits and Approvals
431.07 Non-Road Project Requirements
431.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

431.01 Introduction

This section includes information and requirements for water quality, surface water, stormwater runoff, fill material in wetlands, and construction erosion control and runoff. It focuses mainly on road projects. Policies, procedures, and permit requirements specific to ferries, airports, rail, and non-motorized transport are addressed in **Section 431.07**.

(1) Summary of Requirements

Water quality and other surface water issues that must be addressed during development of WSDOT projects include stormwater discharge, work on shorelines or in floodplains, interference with streamflows, use of herbicides, water rights, and construction in floodplains, designated shorelines, water, or other critical areas.

WSDOT's Water Quality Discipline Report checklists provide the basis for identifying these issues and available sources of information. Other references, documents, MOUs, IAs, permits, certificates, and approvals included in this section provide background relevant to the WSDOT discipline report checklists for water quality.

Water quality standards are implemented through Clean Water Act (CWA) Section 401 permits, water quality modifications, and compliance with the standards in RCW 90.48 and WAC 173-201A. Applications for water quality related permits include the Joint Aquatic Resource Permit Application (JARPA) process, and the National Pollutant Discharge Elimination System (NPDES) permits. Water-related permits, certificates, and approvals are described in **Section 431.06** and listed in **Exhibit 431-9.** See also **Sections 432.06, 433.06, 436.06,** and **437.06**.

The listing of salmonids under the Endangered Species Act (ESA) has triggered the development of new requirements for water quality issues. Planning processes under the ESA, CWA, and NEPA/SEPA are becoming increasingly integrated. The Environmental Protection Agency (USEPA), Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), U. S. Army Corps of Engineers (COE) and state Department of Ecology (Ecology) are working to ensure that Washington's water quality permits and procedures meet the goals and requirements of

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

the ESA. As a result, regulations related to threatened and endangered salmonids are in the process of being incorporated into permits related to the CWA. In turn, WSDOT is incorporating ESA-related issues into its water quality procedures and design standards.

(2) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

401 Certification	Clean Water Act Section 401 Water Quality Certification
AKART	All known, available, and reasonable methods of prevention, control, and treatment
BMP	Best Management Practice
COE	U.S. Army Corps of Engineers
CTED	Department of Community, Trade, and Economic Development
CWA	Clean Water Act
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
DNR	Washington State Department of Natural Resources
DOH	Washington State Department of Health
EAP	Environmental Assessment Program
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GHPA	General Hydraulic Project Approval
HPA	Hydraulic Project Approval
IA	Implementing Agreement or Interagency Agreement
JARPA	Joint Aquatic Resource Permit Application
LOP	Letter of Permission
MHHW	Mean Higher High Water
MS4	Separate storm sewer system
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service (formerly Soil Conservation Service)
NWP	Nationwide Permit
OHWM	Ordinary High Water Mark or line
PCHB	Pollution Control Hearing Board
SMA	Shoreline Management Act
SWD	State Waste Discharge
SWMP	Stormwater Management Plan

SSP	Stormwater Site Plan
STMs	Short-term Water Quality Modifications
TESC	Temporary Erosion Sediment Control
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
USEPA	U. S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WSF	Washington State Ferries
WRIA	Water Resource Inventory Area

(3) Glossary

Contaminant – Any physical, chemical, biological, or radiological substance or matter that has an adverse affect on air, water, or soil.

Herbicide – A chemical pesticide designed to control or destroy plants, weeds, or grasses.

Noxious weeds – Non-native plants that are highly destructive, competitive, and difficult to control or eliminate. Noxious weeds should be controlled wherever they occur and should not be introduced to new sites.

Pollutant – Any substance of such character and in such quantities that upon reaching the environment (soil, water, or air), is degrading in effect so as to impair the environment's usefulness or render it offensive.

Surface Runoff – Overland flow of water.

Stormwater – Rainwater that flows over land and into natural and artificial drainage systems. Stormwater runoff is a major transporter of nonpoint source pollutants.

Surface Water – All water naturally open to the atmosphere, such as rivers, lakes, reservoirs, ponds, streams, seas, and estuaries.

Suspended Sediment – Fine material or soil particles that remain suspended by the current until deposited in areas of weaker current. Can be measured in a laboratory as "Total Suspended Solids" (TSS).

Turbidity – A condition in water or wastewater caused by the presence of suspended material resulting in scattering and absorption of light rays.

Wastewater – Literally, water that has been used for some purpose and discarded, or wasted; typically liquid discharged from domestic residential, business, and industrial sources that contains a variety of wastes.

Watershed – The land area that drains into a stream; the watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point.

431.02 Applicable Statutes and Regulations

This section lists the primary federal and state statutes applicable to water quality issues. Permits, certifications, and authorizations required pursuant to these statutes are described in **Section 431.06**.

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that

environmental considerations such as impacts on water quality are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412**.

(2) Federal

(a) Clean Water Act

The Water Pollution Control Act, better known as the Clean Water Act (CWA), 33 USC 1251 et seq., provides for comprehensive federal regulation of all sources of water pollution. It prohibits the discharge of pollutants from non-permitted sources. The CWA authorizes the USEPA to administer or delegate water quality regulations covered under the act. In Washington, authority is delegated primarily to COE and Ecology. USEPA administers CWA implementation on tribal and federal land.

Implementation requirements for CWA **Sections 303(d), 305(b), 401, 402**, and **404** are described in **Section 431.06**. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 33, then Chapter 26.

Or by direct link:

http://www4.law.cornell.edu/uscode/33/ch26.html

(b) Rivers and Harbors Act

The Rivers and Harbors Act of 1899, 33 USC 403, prohibits the commencement of any work in traditional navigable waters of the U.S. without a permit from the U.S. Army Corps of Engineers (COE). Section 9 of the Rivers and Harbors Act requires Coast Guard approval for any bridge over navigable waters. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 33, Chapter 9, Section 403.

Or by direct link:

http://www4.law.cornell.edu/uscode/33/403.html

(c) Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972, 16 USC 1451 *et seq*., (regulations in 15 CFR 923-930), was enacted to encourage advancement of national coastal management objectives and help states develop and implement management programs. Washington's Coastal Zone Management Program has been approved by the National Oceanic and Atmospheric Administration and is administered by Ecology. Under the program, cities and counties can develop

local management plans that must be approved by Ecology. Ecology also provides general program overview and support. Implementation of the act is described in **Section 431.06**. For details see **Section 452.02.** The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, Chapter 33.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch33.html

(d) Endangered Species Act (ESA)

This act is administered by USFWS and NOAA Fisheries. Formal consultation under the act is triggered by a federal nexus including permits, funding or actions on federal land, and by the potential harm, harassment, or take of listed species or impacts to their habitat. Informal consultation under Section 10 of the act requires applicants to comply with the ESA even if a federal nexus does not occur. The ESA has relevance to the water quality section because of listed aquatic species. Please
see **Section 436.02** for more details. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, then Chapter 35.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch35.html

USFWS home page:

http://www.fws.gov/

NOAA Fisheries home page:

http://www.nmfs.noaa.gov/

(3) State of Washington

(a) State Water Quality Laws and Rules

Washington State laws (RCW) relevant to water quality issues and the rules (WAC) implementing the code are located at Ecology's web site:

http://www.ecy.wa.gov/

Click on Laws and Rules, then Index of Laws (RCW) or Index of Rules (WAC), and look under Water Quality.

The primary clean water law is RCW 90.48 and the regulations for water quality standards are in WAC 173-201A.

Or by direct link for RCW 90.48:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.48CHAPTER/RCW90.48chapter.htm

Or by direct link for WAC 173-201A:

http://www.ecy.wa.gov/biblio/wac173201a.html

(b) Clean Water Act State Implementation

Water quality regulations are mandated by the federal Clean Water Act (Water Pollution Control Act) described above. RCW 90.48 is the primary water pollution law for the state of Washington. Under state statute, discharge of pollutants into waters of the state, is prohibited unless authorized. WAC 173-201A mandates

water quality standards for surface waters. Ecology issues a Section 401 certificate of water quality compliance for each CWA Section 404 permit (see **Section 431.06**). Ecology also has the authority to issue administrative orders for projects not requiring 404 permits. Ecology administers requirements under CWA Section 402 through its National Pollutant Discharge Elimination System (NPDES) individual and general permits (see **Section 431.06**). The Water Pollution Control Act and state water quality standards are online at:

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.48, Water Pollution Control; and click on WAC, then Title 173, then Chapter 173-201A, Water Quality Standards for Surface Waters.

Or by direct link for RCW 90.48:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.48CHAPTER/RCW90.48 chapter.htm

Or by direct link for WAC 173-201A:

http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173 -201A CHAPTER/WAC 173 -201A cHAPTER.htm

(c) Shoreline Management Act (SMA)

The goal of Washington's Shoreline Management Act (RCW 90.58) is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The Act establishes a broad policy of shoreline protection, which includes water quality.

The SMA uses a combination of policies, comprehensive planning, and zoning to create a special zoning code overlay for shorelines. Under the SMA, each city and county can adopt a shoreline master program that is based on state guidelines but tailored to the specific geographic, economic, and environmental needs of the community. Master programs provide policies and regulations addressing shoreline use and protection as well as a permit system for administering the program.

Please refer to **Section 452** for more details about the SMA, local Shoreline Master Programs, and Shoreline Substantial Development Permits. The statute is online at:

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.58, Shoreline Management Act. The state guidelines for Shoreline Master Programs can be found at Chapter 173-26 WAC.

Or by direct link for RCW 90.58:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.58 CHAPTER/RCW90.58chapter.htm

Or by direct link for WAC 173-26:

http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173-26CHAPTER/WAC 173-26Chapter.htm

(d) ***Coastal Zone Management Act Certification (CZM)***

Ecology includes a CZM consistency response with the CWA 401 certification for any work in the 15 coastal counties. For more detail, please see **Section 431.06** and **Section 452.06.**

(e) ***Watershed Planning Law***

The watershed planning law (RCW 90.82) was established to develop more specific guidance on cooperative methods of determining the current water resource situation in each water resource inventory area of the state. It serves to provide local citizens with the maximum possible input concerning goals and objectives for water resource management and development. On-line at:

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.82, Watershed Planning.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.82CHAPTER/RCW90.82chapter.htm

431.03 Policy Guidance

(1) ***Washington State Transportation Commission***

The Transportation Commission's Policy Catalog contains specific policies and action strategies on water quality. Policy 6.3.2 is to "minimize the impact that construction, operation and maintenance of transportation facilities has on the state's surface and groundwater" and specifically "to minimize and control levels of harmful pollutants generated by transportation activities from entering surface and groundwater resources." The policy and action strategies are online at WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(2) ***WSDOT Stormwater Management Plan (SWMP)***

This document is WSDOT's plan to comply with the federal standard for non-point source wastewater discharges. The plan also has been developed to comply with the NPDES application requirements for large and medium municipal separate storm sewer discharges. Under 40 CFR 122.26(d)2.iv, the SWMP is implemented in municipal separate storm sewer system (MS4) permit areas as determined by Ecology.

The SWMP is online at:

http://www.wsdot.wa.gov/eesc/environmental/programs/

Click on hazwqec, then docs, then SWAMP1.

Or by direct link:

http://www.wsdot.wa.gov/environment/eao/wqec/docs/swmp1.pdf

(3) ***State Water Quality Policies***

Many publications relevant to state water quality policies are located at Ecology's web site:

http://www.ecy.wa.gov/

Click on Publications, then Publications Index, then Water Quality.

Or by direct link:

http://www.ecy.wa.gov/biblio/wq.html

(4) U.S. Army Corps of Engineers Water Protection Guidance

The Corps of Engineers (COE) regulatory program concerns not only the integrity of traditional navigable waters, but also the quality of waters of the United States, from wetlands to the territorial seas. For concise information on COE policies regarding wetlands, see **Section 437**. COE regulatory procedures are online at the COE Seattle District web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits. Also click on Environmental Resources Section.

Or by direct links:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page

Or

http://www.nws.usace.army.mil/ers/index.html

431.04 MOUs, MOAs, and IAs

(1) 1998 Water Quality Implementing Agreement

The 1998 Water Quality Implementing Agreement, which can be viewed at the web site below, is meant to replace the 1997 WSDOT General Short-Term Water Quality Modification and the 1988 MOA with Ecology. The agreement emphasizes BMPs. Implementation of this agreement results in compliance with the state's Water Quality Standards (WAC 173-201A) and, if applicable, with mixing zone authorization subject to WAC 173-201A-100(4) and (6), and Ecology's Water Quality Policy 1-19 (see **Section 431.05(4)**). Ecology is notified of projects through submittal of a JARPA application if applicable, or through telephone/e-mail contact for:

- All new construction projects requiring a CWA Section 401 Water Quality Certification.
- Projects that are large, contentious, or involve a significant amount of work in the water.
- Any project that does not comply with conditions listed in the agreement.

Water quality standards are implemented and maintained by the JARPA process, NPDES permits, WSDOT's *Highway Runoff Manual* (M 31-16), WSDOT's approved Stormwater Site Plan (SSP), and through the application of appropriate BMPs.

This 1998 implementing agreement does not allow for a modification of water quality standards. However, short-term water quality modifications might still occasionally be issued by Ecology's Federal Permits Unit for in-stream work where implementation of all available BMPs may not be enough to ensure conformance with state water quality standards. Monitoring and testing of water quality is required during construction.

When the agreement supersedes the need for a Hydraulic Project Approval (HPA) permit, it is courteous for WSDOT to inform WDFW of work performed in waterways (see the MOU on work in water courses, described below).

The 1998 Water Quality Implementing Agreement is online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Regulatory Compliance, then Water Quality Implementing Agreement (under Documents).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

Implementing Agreement between the Washington State Department of Ecology and the Washington State Department of Transportation Regarding Compliance with the State of Washington Surface Water Quality Standards, February 13, 1998.

(2) *Work in State Waters*

This June, 2002 interagency Memorandum of Agreement (MOA) addresses construction work in state waters (**Exhibit 431-1**). The MOA establishes procedures to prevent habitat loss through damage by flooding and future land development.

Participating agencies desire to participate in joint projects to restore fish and wildlife habitat loss due to past flooding, land development activities, or public transportation facilities. Implementation of the MOA is intended to facilitate cooperation and dialogue between the signatory agencies.

The MOA outlines permit requirements and WSDOT responsibilities to contact WDFW and Ecology during times of emergencies. The MOA also defines what constitutes an emergency, how the emergent situation must be declared, and how to obtain verbal notice and approval from WDFW to do work during emergencies.

MOA between Washington State Department of Fish and Wildlife, and Washington State Department of Transportation: Concerning Work in State Waters, June, 2002.

(3) *2002 Signatory Agency Committee Agreement*

This 1996 agreement, originally known as the "NEPA/Section 404 Merger," was revised in September 2002 and re-named the Signatory Agency Committee (SAC) Agreement to Integrate Aquatic Resource Permit Requirements into the National Environmental Policy Act and State Environmental Policy Act Processes in the State of Washington. The purpose of the revision was to make various process improvements requested by the WSDOT State Environmental Managers. The SAC Agreement currently applies to all transportation construction projects in the state of Washington requiring a COE 404 or Section 10 Individual Permit and FHWA action on a NEPA EIS. Please refer to **Section 410** through **Section 412** for more detail on NEPA/SEPA requirements.

Additional process improvement amendments to the SAC Agreement are ongoing. It is suggested project proponents access the web site referenced at the end of this section to ensure access to the most current version of the SAC Agreement.

Signatories to this agreement are FHWA, NOAA Fisheries, COE, USEPA, USFWS, Ecology, WDFW, and WSDOT. These agencies are committed to integrating the Section 10 and 404 permitting processes and other related aquatic permitting and certification procedures in the NEPA/SEPA processes. A high priority is placed on the avoidance of adverse impacts to waters of the U.S. and Washington including wetlands, other aquatic resources, and associated sensitive species. The agreement also recognizes the need to consider non-water related impacts and acknowledges that those impacts may affect the decision on the least environmentally damaging practicable alternative.

The SAC Agreement includes the following appendices:

Appendix A Statutory Authorities.

Appendix B SAC Process Steps.

Appendix C Purpose and Need.

Appendix D Alternatives Analysis and Aquatic Resource Avoidance Guidance for Transportation Projects.

Appendix E Compensatory Mitigation.

Appendix F Level of Data Needs/Threshold for Involvement.

Appendix G Signatory Agencies Statutory Authorities.

Appendix H Issue Resolution Process.

Appendix I Tenants of Participation.

Appendix J Responsibilities of Signatory Agencies.

Appendix K Responsibilities of the Lead Agencies

Appendix L Monitoring and Evaluation.

Appendix M Acronyms and Abbreviations.

Appendix N Definitions.

The SAC Agreement is online at:

By direct link:

http://www.wsdot.wa.gov/environment/eao/regcomp/SAC_committee.htm

Signatory Agency Committee Agreement to Integrate Aquatic Resource Permit Requirements into the National Environmental Policy Act and State Environmental Policy Act Processes in the Sate of Washington, September 17, 2002.

(4) COE Permit Process Working Agreement

The purpose of this 1993 working agreement between COE, FHWA, and WSDOT (**Exhibit 431-2**) is to clarify and streamline the COE permit process for WSDOT and the Washington Division of FHWA, and to facilitate earlier involvement of the COE in WSDOT project development. Permit applications are submitted and permit decisions made early in the WSDOT project development process, and the COE is a more integral part of WSDOT design decisions, thereby saving time and money for all three agencies. It is designed primarily to facilitate the processing of WSDOT/FHWA permit applications involving wetland fills and mitigation.

The agreement also assists in integrating the COE permit process and NEPA processes whenever possible to avoid unnecessary duplication of effort and paperwork for agencies and the public (see JARPA, **Section 431.06**).

The agreement contains guidance on descriptions of the various meetings and field visits that may be utilized early in the permitting process, and detailed procedures for coordination before and during the permit application process.

Working Agreement between the Seattle District, Corps of Engineers, the Washington Division, Federal Highway Administration, and the Washington State Department of Transportation, July 1993.

(5) *Alternative Mitigation Policy Interagency Agreement*

The purpose of this February 2000 interagency agreement between Ecology and WDFW is to describe consensus on mitigation policy among the agencies responsible for aquatic resource mitigation. See the description in **Section 437.04**. Several agencies participated in the development of this policy. They include WSDOT; tribal governments; and the state Department of Community, Trade, and Economic Development (CTED). Use of the guidance by local governments will facilitate consistency among local Critical Area Ordinances in the same watershed, and the state's approach to aquatic permitting.

The agreement recognizes the need to consider the watershed ecosystem as a whole when evaluating impacts. Ecology has approved the establishment of supplemental treatment as an appropriate off-site BMP in stormwater impact mitigation for discharges permitted under CWA Section 401. The agreement provides conditions for the application of stormwater off-site supplemental treatment BMPs. The agreement is online at:

http://www.wsdot.wa.gov/eesc/environmental/programs/

Click on biology, then docs, then Alternative Mitigation Policy.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/AlternativeMitigationPolicy2000.pdf

State of Washington Alternative Mitigation Policy Guidance for Aquatic Permitting Requirements from the Departments of Ecology and Fish and Wildlife. February 10, 2000.

(6) *Compliance with Hydraulic Code*

This MOU is currently in draft form and is out for comment. It is designed to provide a mutual understanding between the participating agencies for the application and acquisition of Hydraulic Project Approvals (HPA). When complete it may be inserted in this manual as **Exhibit 431-3** or referenced online.

Memorandum of Understanding between the Washington State Departments of Fisheries, Wild-life, and Transportation Concerning Compliance with the Hydraulic Code. (RCW 77.55.100 and WAC 220-11) (Draft, January 22, 2001).

431.05 Technical Guidance

(1) *Water Quality Discipline Report*

The intent of the Water Quality Discipline Report is to provide the information required for EAs, EISs, and a variety of water quality permits, certificates, and approvals. Unique aspects of individual permits are called out under the discussion of permits.

The report includes sections on:

- Studies, coordination, methods, and regulations
- Affected environment, based on current available data and incorporating existing resources such as permits.
- Impacts.
- Mitigation: Avoidance, minimization, and compensation.

Water quality is characterized in a watershed context that includes surface water, groundwater, wellhead protection areas, source water protection areas, soils and topographic features affecting basin hydrology, existing water quality conditions, and land use patterns affecting runoff conditions.

The water quality checklist may refer to features or factors described in other sections of this manual, such as wildlife habitat, spill data, and land use plans. Coordination with authors of related discipline reports is required to access relevant data.

The documents that comprise **Exhibit 431-4** (August 2003), are WSDOT's most complete guide to preparing the Water Quality Discipline Reports. The Surface Water Quality Discipline Study Guidance document (**Exhibit 431-4A)** provides detailed instructions on how to write Water Quality Discipline Studies. The Quantitative Procedures for Water Quality Impact Assessments (**Exhibit 431-4B)** describe acceptable methodologies for estimating water quality impacts. The Discipline Report Checklist (**Exhibit 431-4C)** is the basis for ensuring that all project-related water issues are adequately considered. At the end of the checklist is a flow chart showing the process for developing a discipline report. The Information Source Listing for WSDOT Water Quality Discipline Reports (August 1995), **Exhibit 431-5** is an additional resource to help report writers more quickly identify information sources.

(2) Other WSDOT Guidance

(a) WSDOT Highway Runoff Manual

The *Highway Runoff Manual* (M 31-16) contains approved methods of managing stormwater runoff from WSDOT facilities, known as Best Management Practices (BMPs). Selection criteria are established for the use of acceptable stormwater treatment BMPs during construction and long-term maintenance of highways. Instructional letters describing temporary changes until the manual is updated are included. For example, Instructional Letter #IL 4023.00 (March 15, 2000) addresses stormwater effects on fish species listed under the ESA. The manual is also described in **Section 433.05**.

The *Highway Runoff Manual* will be updated to reflect the latest stormwater management practices. WSDOT is required either to adopt Ecology's new Stormwater Management Manual (currently under development) or develop an Ecology-approved manual that is equivalent with Ecology's new Stormwater Management Manual.

WSDOT Checklists for Stormwater Site Plans (SSP) (**Exhibit 431-6**) and Temporary Erosion and Sediment Control (TESC) Plans (**Exhibit 431-7**), supplement the manual.

Chapter 1 of the *Highway Runoff Manual* describes stormwater problems, suggests solutions to stormwater problems, and provides a background of stormwater management.

Chapter 2 provides minimum requirements for erosion and sediment control, preservation of the natural drainage system, source control of pollutants, water quality treatment, water quantity treatment, wetlands, downstream analysis, sensitive areas and basin plans, and stormwater site plans.

Chapter 4 lists BMPs for stormwater source control, and stormwater quality and quantity.

Chapter 5 provides information on Stormwater Site Plans (SSP).

Chapter 6 gives further information on BMPs for controlling pollutants other than sediment on construction sites, erosion and sediment control, and water quality and quantity.

Statutory Authority – NPDES, 40 CFR 402; WAC 173-270.

The manual and associated updates can be accessed online at:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then, then On-Line Library, then Highway Runoff Manual.

Or by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/Highway.pdf

and

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/IL4020.pdf

(b) WSDOT Roadside Manual

This manual includes information on water quality and is a resource for coordination between all WSDOT partners responsible for roadside activities.

WSDOT Roadside Manual (M 25-30), May 1999.

(c) WSDOT Design Manual

Section 240 of the *Design Manual* lists a variety of environmental permits and approvals from government agencies, permit requirements, when to initiate the permits, and the applicable laws or rules. Updated information on permits and approvals listed in the *Design Manual* are described in the relevant sections of this EPM.

WSDOT Design Manual (M 22-01), Section 240, September 1990.

(d) WSDOT Environmental GIS Workbench

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available databases relevant to water quality include water resource inventory areas (WRIAs) and sub-basins, major shorelines, CWA Section 303(d) Impaired Waters, NPDES permit areas and sites, and stormwater outfalls on State Routes. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(e) WSDOT Standard Symbols and Conventions

WSDOT Standard Symbols and Conventions for Wetlands and Stormwater Treatment Areas are listed in the *Plans Preparation Manual* (M 22-31). Current standards are located on WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library, then search for Plans Preparation Manual.

Or download by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/manuals/Plnsprep.pdf

Click on Division 5, Contract Plan Standard Symbols, Conventions, and Details; then to Symbols and Conventions, and find page 5-46, Level31: Wetlands and Stormwater Treatment Areas.

(f) Integrated Streambank Protection Guidance and Aquatic Habitat Protection Guidelines

To encourage interagency consistency when conducting in-stream work, WSDOT worked with WDFW and Ecology to develop Integrated Streambank Protection Guidance (ISPG) and subsequent Aquatic Habitat Protection Guidelines. Please refer to **Section 436.09** for more information.

(3) FHWA Guidance

(a) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents. For water quality, an EIS should identify roadway runoff or other nonpoint source pollution that may have an adverse impact on sensitive water resources such as water supply reservoirs, groundwater recharge areas, and high quality streams. The Water Quality Discipline Report is structured to meet the requirements of the FHWA Technical Advisory. For details, see FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(b) FHWA Watersheds, Water Quality, and Stormwater Runoff

Abstracts of documents produced by or for the FHWA regarding water quality, stormwater runoff, and watersheds are available online. These include the *National Highway Runoff Water-Quality Data and Methodology Synthesis*, USEPA's site on the Clean Water Initiative, basic definition of watershed and watershed management, USEPA's Surf Your Watershed, and FHWA documents, brochures, and other products.

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Natural Environment, then Water Quality and Stormwater Runoff, or also Watersheds.

Or by direct link for Water Quality:

http://www.fhwa.dot.gov/environment/h2o.htm

Or by direct link for Watersheds:

http://www.fhwa.dot.gov/environment/h2o_shed.htm

(c) *FHWA Environmental Guidebook*

FHWA online Environmental Guidebook contains several guidance documents and federal MOAs on topics related to water quality, the Clean Water Act, and coastal zone management.

Available via FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Water Quality and the Clean Water Act, or Section 404 Permits, or Coastal Zone Management

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

(4) *Ecology Guidance*

(a) *Water Quality Program Policy and Procedures*

These water quality rules are pursuant to WAC 173-201A-110, which eliminates the need for short-term water quality modifications (STMs). The revisions require the use of BMPs to meet water quality standards.

Ecology Water Quality Program Policy 1-19 and Procedure 1-20, August 1998.

Exception 1 – The standards allow for a turbidity mixing zone in certain situations where BMPs may not be adequate to meet water quality standards. The following requirements must be met before a project qualifies for the turbidity mixing zone:

- The project is occurring in the water within the mean higher high water (MHHW) level for lake or marine waters, or along the adjacent shoreline as defined by the state Shoreline Management Act (SMA).
- All appropriate and available temporary BMPs have been implemented.
- All required local and state permits have been obtained.
- The turbidity source is existing in water or in shoreline sediments.
- The size of the mixing zone is an area 300 feet in diameter with the work zone as the center point (WAC 173-201A-100(6)).

Exception 2 – A permit is required for the application of aquatic herbicides for noxious weed control (see **Section 431.06** and **Exhibit 431-10**).

Statutory Authority – WAC 173-201A-110; WAC 173-201A-100(6).

Regulations are available from Ecology's web page:

http://www.ecy.wa.gov/

Click on Laws and Rules, then Index of Rules, then Water Quality, then Chapter 173-201A WAC.

Or by direct link:

http://www.ecy.wa.gov/biblio/wac173201a.html

(b) *Impaired and Threatened 303(d) Waterbodies*

Washington State is required to identify its polluted water bodies every two years and submit the 303(d) list to USEPA. The list is comprised of "water quality limited" estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years. USEPA requires the state to set priorities for cleaning up threatened waters and to establish a Total Maximum Daily Load (TMDL) for each. A TMDL, or water cleanup plan, entails an analysis of pollutant loadings to determine how much pollution a waterbody can take and still remain healthy for its intended beneficial uses. The cleanup plan also includes recommendations for controlling the pollution and a monitoring plan to verify compliance with established TMDLs. For certain waterbodies, TMDLs have been set; for others, TMDLs are being developed by Ecology.

Once developed, the TMDLs are tied to COE Section 404 and 401 water quality permit requirements.

Ecology's web site provides access to a list of approximately 650 waterbodies currently identified as impaired or threatened. The list identifies the locations of the waterbodies, the water quality standards each exceeds, and by how much the standards are exceeded.

Washington's Final 1998 Section 303(d) list of Impaired and Threatened Waterbodies is online via:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Impaired and Threatened Surface Waters Information, then Section 303(d) List.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/303d/index.html

Internal WSDOT users can view 303(d) listed water bodies at:

GISOSC\GEODATA\maps\ 100K\DOE\303D\.

Statutory Authority – CWA Section 303(d); 40 CFR 130.7.

(c) *Water Quality 305(b) Assessment*

Washington State is required to prepare a water quality assessment report every five years and submit it to USEPA. In addition, USEPA requires the state to submit certain assessment data annually for compilation in a national report. The requirements are administered by Ecology.

For access to the data and a description of requirements for ecoregions, stream/river basins, estuaries, and lakes, refer to the Washington State Water Quality Assessment Section 305(b) reports on Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Impaired and Threatened Surface Waters Information, then 305(b) Report.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/303d/305b%20report/305b-index.html

Statutory Authority – CWA Section 305(b) listed waters; 40 CFR.

(d) Stormwater Management Manual for Puget Sound

The 1992 *Stormwater Management Manual,* developed by Ecology, is intended for statewide use by WSDOT, local governments, and tribes. *WSDOT's Highway Runoff Manual* (M 31-16), 1995, was developed subsequent to Ecology's *Stormwater Management Manual* and provides technically equivalent guidance.

The main purpose of the manual is to provide a reference for identifying appropriate stormwater BMPs. Ecology developed the manual in response to stormwater quality problems in the Puget Sound basin. The manual addresses:

- Program implementation guidance for local governments.
- Erosion and sediment control, runoff control, and control of pollution from urban land uses.
- Working with WSDOT on a program to control runoff from state highways.

Ecology has drafted a new *Stormwater Management Manual for Western Washington*. The final version of this new manual is scheduled for release in 2001.

Stormwater Management Manual for Puget Sound, February 1992.

(5) Other Water Quality Guidance

(a) Tribal/State/USEPA CWA 303(d) Coordination Project

This tribal/state/federal coordination program for managing polluted waterbodies listed under Clean Water Act Section 303(d) is summarized by Ecology in a fact sheet (**Exhibit 431–8**).

The full document is located in a 303(d) Program Binder. The binder was assembled jointly by Ecology, USEPA, and the Northwest Indian Fisheries Commission to provide background information on the 303(d) Program to all tribes in Washington State. Information includes options for tribal participation in the 303(d) Program, copies of the supremacy clause of the U.S. Constitution, U.S. treaties with the tribes in Washington State, the Centennial Accord, and other related reference documents.

Cooperative Management of the Clean Water Act 303(d) Program for the Tribes in Washington State, the Washington State Department of Ecology, and the U.S. Environmental Protection Agency Region 10: Coordinated Tribal Water Quality Program, November 1997.

(b) Watershed Basin Reports and Action Plans (Local or Inter-Jurisdictional Plans)

Many watershed and basin plans include specific recommended action items on priority environmental issues such as fixing or repairing fish passage barriers. The Water Quality Discipline Report is structured in a way that requires WSDOT projects to address the guidance outlined in watershed/basin action plans.

Some plans are listed under Ecology's Watershed Planning web site below; others are available from local jurisdictions.

http://www.ecy.wa.gov/

Click on Watershed Planning.

Or by direct link:

http://www.ecy.wa.gov/watershed/index.html

431.06 Permits and Approvals

Each water quality permit or approval listed in this section should be considered for relevance during WSDOT project development. See previous sections for policies and other guidance related to these permits. **Exhibit 431-9** is a summary of water-related permits, certificates, and approvals. Permits are listed in the order of federal, state, then local.

WSDOT's Water Quality Discipline Report is structured to provide the information needed to satisfy most permit requirements. If WSDOT is in compliance with water quality permits, then it is in compliance with water quality standards.

The listing of salmonids under the Endangered Species Act (ESA) has triggered the development of new requirements for water quality issues. Planning processes under the ESA and the CWA are becoming increasingly integrated. USEPA, USFWS, National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), and Ecology are working to ensure that Washington's water quality permits and procedures meet the goals and requirements of the ESA. As a result, regulations related to threatened and endangered salmonids are presently in the process of being incorporated into permits related to the CWA. In turn, WSDOT is incorporating ESA-related issues into its water quality procedures and design standards.

Information in this section characterizes permits in a general manner. The permitting agency should be contacted for a more detailed analysis of individual permits, particularly due to the listing of salmonids under the ESA. The salmonid listing is likely to connect ESA with water quality permits.

Permit Assistance – Ecology's online Permit Assistance Center provides questionnaires and other helpful information on environmental permits, including water-related topics such as work in or near water, and discharge to surface water. Available from Ecology's home page:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/index.html

Information on COE permits can be viewed online at the Seattle District web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page

For information on COE research reports and projects potentially related to WSDOT's activities see:

http://www.nws.usace.army.mil/index.cfm

Click on Environmental Resources Section.

Or by direct link:

http://www.nws.usace.army.mil/ers/index.html

Permit Extensions – On request, permit extensions may be granted. Permit extension forms may be required, depending on the agency. The extension process may include the issuance of a public notice. Requests for permit extensions are usually submitted at least one month before permit expiration. The agency should be contacted for details of permit extension requirements.

(1) Joint Aquatic Resource Permit Application (JARPA)

Agencies Responsible – This joint application is used to apply for COE permits (Section 10 and Section 404), Coast Guard Bridge Permits, WDFW Hydraulic Project Approvals (HPAs), Shoreline Management Permits from local governments, Approvals for Exceedance of Water Quality Standards (only for certain in-water work and aquatic pesticides) from Ecology, Water Quality Certifications (Section 401) from Ecology, and DNR's Aquatic Resources Use Authorization. More information on these permits or approvals is provided below under separate permit headings.

Requirements – The JARPA form, which can be obtained at the Seattle COE web site listed below, is accompanied by an instruction sheet that includes definitions of terms used and a checklist to determine the permits that apply. The JARPA form is structured to lead the WSDOT applicant through the permit requirements.

JARPA submittals to the appropriate agencies must include readable copies of the completed application form, together with project drawings prepared in accordance with the drawing guidance in Appendix A (on web site listed below). Proper project location maps, cross sectional views, and plan views showing crucial project elements are essential for a successful JARPA application. Although detailed engineering plans and specifications are not required, the following list includes project environmental issues that often require detailed descriptions:

- Extent of excavations in wetlands and other sensitive areas.
- Extent of fill or riprap (both volume and footprint).
- Stem length and rootwad specifications for large woody debris placements.
- Type and extent of riparian vegetation disturbance or removal.
- Methods of disturbance.
- Mitigation plans.

The current JARPA form, instructions, appendices, and agency contact telephone numbers are accessible through Ecology's online Permit Assistance Center at:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center, then Permit Applications, then Joint Aquatic Resource Permit Application.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/jarpa.html

Or from the COE Seattle District regulatory web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then Permits and Applicant Information, then Joint Aquatic Resource Permit Application.

Depending on the WSDOT project, other permits not covered by the JARPA application may be required.

Statutory Authority – Please refer to individual permits, certificates, or approvals.

(2) Corps of Engineers (COE) Section 10 Permit

Agency Responsible – COE, Seattle District, Regulatory Branch.

Regulated Activities – This permit is required for any obstruction, dredging, alteration, or improvement of any navigable water, including rechanneling, piers, wharves, dolphins, bulkheads, and buoys. The purpose of the permit is to prevent obstructions to navigation.

Navigable waters are those waters of the United States that are subject to tidal action shoreward to mean high water, or are used, have been used, or are susceptible to use in interstate or foreign commerce.

Requirements – A JARPA form (see JARPA description above) is used to submit Section 10 permit requests. Letters of Permission (LOPs) can be used to permit projects that involve activities governed by Section 10, but they are reserved for minor projects with minimal impacts. The COE obtains input from USFWS, NOAA Fisheries, and Ecology to determine whether a LOP will be issued. Letters of permission require compliance with the ESA. For Section 10 projects that do not meet the LOP limits, a Nationwide Permit or an Individual Section 10 permit can be issued. The Section 10 permit is dependent on Coastal Zone Management (CZM) Certification. Plans (drawings) must be submitted on 8.5 by 11-inch paper because they go to public notice.

Statutory Authority – Section 10 of the Rivers and Harbors Act; 33 CFR 330.5 and 330.6.

(3) Corps of Engineers (COE) Section 404 Permits

Agency Responsible – COE Seattle District Regulatory Branch, and Portland District for port projects and bridge work over the Columbia River. The Coast Guard issues 404 permits for bridges over navigable waters.

Regulated Activities and Requirements – A CWA Section 404 permit is required for discharging, dredging, or placing fill material within waters of the U.S., including wetlands. The permit is submitted as part of the JARPA application form (see JARPA description above). The purpose of the permit is to prevent water quality degradation. Activities regulated under the 404 program include water resource projects (such as dams and berms), and infrastructure development (such as highways and airports). A 404 permit is not required to maintain structures or drainage ditches, but may be required to construct temporary sedimentation basins.

Any activity planned for the navigable waters of Puget Sound, the coastal areas, the Columbia River (except lower Columbia River port authorities), and Eastern Washington waters is processed by the Seattle District office. Activities or projects undertaken by lower Columbia River ports (west of the Bonneville Dam) are processed through the Portland District office. The COE Seattle District also regulates non-navigable waters for the entire state under Section 404.

Certain activities and work can be authorized by general 404 Nationwide permits (NWP), which are issued on a national, regional, or state basis for particular categories of activities (for example, minor road crossings and utility line backfill). General nationwide permits are usually granted for projects that have only minimal adverse effects on the waters of the state. Individual permits are usually required for activities that potentially have significant impacts. Both Individual and Nationwide Permits require compliance with the ESA.

At a pre-application conference held at a COE office, or by telephone, WSDOT and the COE decide whether or not an Individual/Nationwide permit is required for a proposed project. A pre-application conference should be held for all controversial projects.

Information on COE permits can be viewed online at:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then Permits and Applicant Information, then Joint Aquatic Resource Permit Application.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/jarpa.html

The web site listed above also provides information on dredged material characterization: Look under Dredge Material Management.

(a) COE Individual 404 Permits

The program is administered jointly by USEPA and COE. In addition, USFWS, NOAA Fisheries, and state agencies have important review roles. Permits are submitted to the COE. Prior to issuance of a 404 permit, 401 Certification, and CZMA consistency if the project is in a coastal county, are required.

JARPA forms are used to submit Individual 404 Permits to the COE (see JARPA description above). For individual permits, plans (drawings) must be submitted on 8.5 by 11-inch paper because they are used for public notice.

Individual permits are required for Section 404 dredge disposal and filling project activities not covered by a NWP. An Individual 404 Permit is processed through the public interest review procedures, including public notice and receipt of comments. Citizens may request that the COE conduct a public hearing. The COE Statement of Finding document describes how the permit decision was made.

Please refer to the August 1996 Section 404 Merger agreement listed in **Section 431.04** for information on the Interagency Working Agreement to integrate Section 404 Individual Permit applications in the NEPA and SEPA processes.

Statutory Authority – Section 404 of the Clean Water Act; 33 CFR 330.5 and 330.6.

(b) COE Nationwide Permits

Nationwide Permits (NWPs) may exempt WSDOT from applying for Individual 404 Permits when WSDOT conducts certain listed activities.

The NWPs that commonly apply to WSDOT projects are:

3 Maintenance

6 Survey Activities

13 Bank Stabilization

14 Linear Transportation Crossing

18 Minor Discharges

23 Approved Categorical Exclusions

27 Stream and Wetland Restoration Activities

33 Temporary Construction, Access, and Dewatering

41 Reshaping Existing Drainage Ditches

43 Stormwater Management Facilities

NWPs were modified June 7, 2000. Permit applicants can view the latest permit requirements and regional conditions on the Seattle COE web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then 2002 Nationwide Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=NWP_2002

Statutory Authority – Section 404 of the Clean Water Act; 33 CFR 330.5 and 330.6; and Section 10 of the Rivers and Harbors Act (33 USC 403).

(4) Coast Guard Section 9 Bridge Permit

Agency Responsible – U.S. Coast Guard

Regulated Activities and Requirements – This permit is necessary for work done on bridges and causeways in navigable waters or waters that are susceptible to improvement for transporting interstate or foreign commerce, or waters that are tidal and used by boats 21 feet or more in length. Lit structures in water that are used as navigational aids are also subject to this permit. The permits are submitted as part of JARPA forms (see JARPA description above).

A Section 9 Bridge Permit requires a CWA Section 401 certification and CZM certification if the project is in a coastal county. The permit approval is also subject to other permits, such as HPA and Shorelines. These various permit requirements are identified during the JARPA application process. Plans (drawings) must be submitted on 8.5- by 11-inch paper because they go to public notice. WSDOT should notify Ecology early on when applying for a 401 certification because public notice is required before issuance.

Statutory Authority – 33 USC 11; 33 CFR 114 and 115; Federal Aid Highway Act of 1987, Section 123(b).

(5) Coastal Zone Management Certification (CZM)

Agency Responsible – Ecology Headquarters, Shorelands and Environmental Assistance Program.

Regulated Activities and Requirements – When applying for federal permits, such as a Coast Guard or COE Section 401 and 404 permit, for a project in one of the 15 coastal counties, WSDOT must certify that the requirements of the state's Coastal Zone Management Program have been met (SMA, RCW 90.58). For a proposal to be consistent with the CZM Program, it must meet the requirements of SEPA, the Shoreline Management Act, federal and state clean water acts, and federal and state clean air acts. Ecology reviews proposed projects for consistency with the above laws.

The CZM form (called Certification of Consistency with Washington's Coastal Zone Management Program for Federally Licensed or Permitted Activities) is a checklist that provides the necessary information for to assure federal consistency. See **Exhibit 452-1** for a copy of the consistency form.

WSDOT requests CZM certification as part of its JARPA submittal, by providing a project description, a brief assessment of the impacts, and a statement that the project complies with the CZM program. Ecology generally includes its CZM Consistency Response with its 401 Certification. The JARPA application is described in **Section 431.06**.

Public notice must be given, allowing a minimum of 20 days review; CZM notice can be combined with notice required under one of the enforceable policies, such as a SEPA determination or a Shoreline Substantial Development permit. WSDOT must indicate how and when public notice was given for CZM consistency. If no WSDOT public notice is given, Ecology must issue a public notice for a minimum of 20 days comment period. Ecology must agree with the CZM statement before a federal permit can be used.

Ecology has denied CZM consistency for the entire COE Nationwide Permit (NWP) program. As a result, any NWP used in a coastal county requires notice to Ecology with a statement that the project is consistent with the enforceable policies of the CZMA, and an explanation of how public notice under the Act has been given.

Statutory Authority – Section 6217 of the U.S. Coastal Zone Management Act (CZMA), 16 USC 1451 *et seq*.; CZMA regulations, 15 CFR 923-930; and RCW 90.58.

See also **Section 452.06** for information on CZM certification as well as shoreline substantial development permits and other shoreline-related requirements.

(6) Water Quality Certification (CWA Section 401)

Agency Responsible – Ecology Headquarters, Shorelands and Environmental Assistance Program, Federal Permits Unit. USEPA's Aquatic Resources Unit issues certifications on tribal and federal land.

Regulated Activities – Federal and state permits, such as COE Section 404 permits, that involve discharge into waters of the United States (including wetlands) are sent to Ecology for a certification of compliance with state water quality standards and other aquatic protection laws, including TMDLs. The federal or state agency can request the 401 Certification on behalf of WSDOT following receipt of relevant permit applications, such as a JARPA form (described above).

WSDOT notifies Ecology's Environmental Review Section of COE Individual 404 Permits and Nationwide Permits (NWPs). WSDOT should notify Ecology early on when applying for a 404 Individual or Nationwide Permit so the Ecology 401 certification review and 20-day public notice can start prior to issuance of a COE final permit decision.

Please see COE Seattle District web site below to find current Section 401 conditions for new and revised NWPs.

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then 2002 Nationwide Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=NWP_2002

Statutory Authority – CWA Section 401, WAC 173-225.

(7) Approval of Temporary Exceedance of Water Quality Standards

Agency Responsible – Ecology, Environmental Coordination Section.

Regulated Activities and Requirements – Activities that result in a minor increase in turbidity and were previously regulated through the issuance of water quality modifications (administrative orders) are currently regulated by a temporary turbidity mixing zone (WAC 173-201A-110 (3)) associated with the disturbance of in-place sediments. Most activities either need to use BMPs to meet the temporary turbidity mixing zone for in-water work or be authorized through other Ecology permits or certifications. Ecology must be notified if a project is expected to exceed state water

quality standards. Ecology has the authority to issue short-term water quality modifications on a site-specific basis if necessary to accommodate essential activities, respond to emergencies, or otherwise protect the public interest.

Statutory Authority – WAC 173-201A.110 (short-term modifications).

(8) NPDES Permit, Section 402

Agency Responsible – Ecology issues these permits under authority delegated by the USEPA.

Regulated Activities and Requirements – The discharge of pollutants into waters of the state, including wetlands and groundwater, is regulated through NPDES permits. Permits typically place limits on the quantity and concentration of pollutants that may be discharged.

To ensure compliance with these pollutant concentration limits, permits require wastewater treatment or impose other operational conditions. In most cases, permits have a five-year life span. Some WSDOT projects may require an individual NPDES permit for construction; however, NPDES permits applicable to most WSDOT projects fall under the category of general permits: Municipal Stormwater Discharge (based on watershed), Stormwater Associated with Construction Activity (project specific), Sand and Gravel General Permit and Stormwater Associated with Industrial Activity (ferry specific). The following descriptions describe these permits more fully:

Statutory Authority – Federal Clean Water Act Section 402; WAC 173-226 (general permits).

(a) Municipal Stormwater Discharge Permit

WSDOT is required to obtain coverage under NPDES municipal stormwater permits to control stormwater discharges during construction and for the long-term operation and maintenance of its facilities. The permits cover WSDOT-operated municipal separate storm sewers that are located within permitted municipalities (those with separate storm sewer systems serving populations over 100,000).

These municipal permits are watershed specific. The permits authorize stormwater discharges into ground and surface waters during a five-year period. NPDES groundwater-related permits are discussed in more detail in **Section 433.06**.

WSDOT currently has coverage for four watershed areas, and is working with Ecology to establish one statewide permit after June 2002. The four Water Quality Management Areas currently permitted are the Island/Snohomish, Cedar/Green, South Puget Sound, and Columbia Gorge watersheds. By March 2003, NPDES Separate Storm Sewer System (MS4) permits, also known as Phase 2 permits, will add coverage for an additional 78 cities and eight counties statewide.

The coverage of WSDOT's four NPDES Water Quality Management Areas can be viewed as GIS data at WSDOT's internal site for GIS users:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

WSDOT's *Highway Runoff Manual* (M 31-16) includes design standards for stormwater discharges (see Section 431.05).

Each permit requires a stormwater management program. WSDOT's 1997 *Stormwater Management Plan* provides stormwater management for the Island/Snohomish, Cedar/Green, and South Puget Sound watersheds. WSDOT stormwater management programs are currently required to address 14 elements, which integrate requirements of the CWA and the ESA. These include technical standards, inspection, maintenance standards, source control, illicit discharge, public education, public involvement, governmental coordination, monitoring, and stormwater planning.

WSDOT's *1997 Stormwater Management Plan* can be accessed from the WSDOT home page:

http://www.wsdot.wa.gov/eesc/environmental/programs/

Click on hazwqec, then docs, then SWAMP1.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/docs/SWMP1.pdf

Statutory Authority – Clean Water Act Section 402; WAC 173-226 (general permits).

(b) Stormwater Construction Permit

This General Permit to Discharge Stormwater Associated with Construction Activity is required for stormwater discharges resulting from construction activities (See **Section 510**).

This permit is administered by Ecology to regulate stormwater discharge on construction sites for each project that disturbs five acres or more. Information and application forms can be obtained from the Ecology web site listed below. Application for the permit is made by completing a single sheet form called a Notice of Intent for Construction Activity (NOI) and a JARPA form. Ecology reviews the NOI to determine if the project should be covered under the general permit or an individual permit. The permit requires development of a Stormwater Site Plan (SSP) and Temporary Erosion Sediment Control Plan (TESC). The applicant must also verify that SEPA and public notice requirements have been met.

The SSP or TESC fulfills the Ecology requirement for development of a Stormwater Pollution Prevention Plan (SWPPP) that identifies BMPs to prevent surface water and groundwater pollution. For information on BMPs, see WSDOT's *Highway Runoff Manual* (M 31-16), described in **Section 431.05**.

See **Exhibit 431-6** for an SSP checklist, and **Exhibit 431-7** for a TESC checklist. See below for additional requirements for projects that discharge to 303d-listed water bodies or waterbodies for which TMDLs have been developed.

For information about the permit and to download an application form see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Stormwater, then Construction Stormwater General Permit.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/docs/SWMP1.pdf

Projects that discharge to 303d-listed water bodies or water bodies for which TMDLs have been developed have additional requirements. These requirements result from an ongoing appeal to the Pollution Control Hearings Board (PCHB) concerning Ecology's issuance of the construction general permit. The appeal claimed that the general permit does not adequately protect 303d-listed water bodies. The PCHB issued the following order granting a partial stay:

1. New discharges to Section 303(d)-listed waters will not be allowed coverage under the Construction Stormwater Permit if the anticipated discharge will include the pollutant for which the water body is listed *unless* it can be documented that no water quality violation will occur.
2. New discharges to a water body for which a TMDL has been developed will not be allowed coverage under the Construction Stormwater Permit *unless* the discharge would be in compliance with the TMDL.

In order to comply with the above order when applying for coverage under the general construction permit, WSDOT must indicate on the NOI how the project will avoid adding new discharges of pollutants to the receiving waters. In order to determine which projects may require extra treatment, all projects requiring coverage under the general permit must determine:

1. Whether or not the site discharges to a 303-listed water body or a water body for which a TMDL has been developed.
2. If a water body is listed or has a TMDL, and if the water body meets state water quality standards for construction-related water quality parameters. Ecology defines construction-related parameters as pH, turbidity, fine sediments, and phosphorus.

The current 303d list and TMDL data is available through the WSDOT internal GIS library:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

The data is stored by: watercourses (rivers and streams), water bodies (lakes), and estuaries. Use GIS to determine the impairment parameters of a particular water body. Use the *Environmental GIS Workbench* to review the 303d-listed water

bodies themes through the water quality section. Use the related parameter tables to view all impairments or query all features for a given parameter (the tables are already cross-linked).

If a project will not discharge to a water body on the 303d list or with a TMDL that is impaired due to pH, turbidity, fine sediments, or phosphorus, follow the standard water treatment design criteria as indicated in the HRM and indicate on the NOI that the SSP is designed to prevent the addition of the pollutant(s) to the receiving waters.

If the project discharges to a water body that is listed for pH, turbidity, fine sediments, or phosphorus, WSDOT must demonstrate in the NOI that the project will not add new discharges of the pollutant(s) for which the water body is listed.

Table 431-1 shows the treatment options available to ensure that projects meet the requirement of not increasing the discharge of construction-related pollutants. Select the treatment options in Table 431-1 and indicate on the NOI what will be done to protect the receiving waters from new discharges of pollutants.

Figure 431-1 illustrates the above instructions.

Information about 303d-listed water bodies and water bodies that have TMDLs is also available on Ecology's web site at:

http://www.ecy.wa.gov/programs/wq/links/impaired_wtrs.html

and

http://www.ecy.wa.gov/programs/wq/tmdl/index.html

Statutory Authority – Federal Clean Water Act Section 402; WAC 173-226 (general permits).

(c) Sand and Gravel General Permit

This general permit provides coverage for discharges of process water, stormwater, and mine dewatering water associated with sand and gravel operations, rock quarries and similar mining activities, including stockpiles of mined materials, concrete batch operations, and hot mix asphalt operations. The permit authorizes wastewater discharges to waters of the state subject to the permit conditions.

For information about the permit and to download an application form see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Stormwater, then Sand and Gravel General Permit.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/sand/index.html

Statutory Authority – Federal Clean Water Act Section 402; WAC 173-226 (general permits).

(d) Industrial Stormwater Permit

For information on the NPDES permit for industrial activities, please see section on ferries under non-road project requirements (**Section 431.07**).

Statutory Authority **–** Federal Clean Water Act Section 402; WAC 173-226 (general permits).

(9) Shoreline Substantial Development Permit

Agency Responsible – Local counties or cities. The Shoreline Management Act is implemented by local government, but Ecology ensures compliance and provides assistance. A new rule (WAC 173-26) that changes SMA requirements has been adopted (see web site listed below).

Regulated Activities and Requirements – A permit is required for projects that involve substantial development of waters or shorelines of the state. Substantial development includes any development that materially interferes with normal public use of the water or shorelines of the state. Areas within shoreline jurisdiction include lakes and reservoirs 20 acres or greater, streams with a mean annual flow of 20 cubic feet per second or greater, marine waters together with an area landward for 200 feet from the ordinary high water mark (OHWM), and all associated marshes, bogs, swamps, and deltas.

Application requirements typically are contained within the JARPA process (described above). However, not all local jurisdictions accept JARPA and may have specific application forms and drawing specifications. Many local jurisdictions require payment of permit fees before processing the application.

Please see **Section 452.06**, for more details on the Shoreline Substantial Development Permit.

Statutory Authority – RCW 90.58; WAC 173-14 through 173-28.

SMA guidelines provide details on how local governments can achieve the level of protection required by the SMA. Current SMA requirements and guidelines can be viewed online at:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then look under Shoreline Management.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/shorelan.html

(10) Hydraulic Project Approval (HPA)

Agency Responsible – Washington Department of Fish and Wildlife (WDFW).

Regulated Activities – HPA permits are required for projects that will use, cross, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state up to the ordinary high-water line. Examples of regulated activities include culvert work, stream realignment, and bridge replacement. HPA permits include habitat and stormwater protection requirements. A SEPA determination applicable to the project must be provided to WDFW for WDFW to consider the JARPA complete and start the 45-day review.

Depending on the nature of the work and its effects on fish and wildlife, either an Individual HPA or a General HPA (GHPA) is required. See **Section 436.06.**

Requirements **–** The HPA requirements are included as part of the JARPA process (described under (1) above). Written approval must be obtained from WDFW before commencement of construction or other work.

Statutory Authority – RCW 77.55.100; WAC 220-110; Second Substitute House Bill 2879.

(11) Water Quality Modification - Use of Herbicides for Noxious Weeds

Agency Responsible – Ecology, Environmental Coordination Section.

Regulated Activities **–** This authorization is necessary for the application of herbicides to waters of the state to control noxious weeds at WSDOT-owned or managed sites. Such sites include construction sites, wetland mitigation sites, and rights of way.

Requirements **–** Only herbicides approved in the authorization can be used. Approved methods of application must be followed and made by a licensed applicator. Special restrictions are required for publicly accessible areas. When making applications in, or adjacent to, fish-bearing streams, contact with WDFW is required. This authorization is negotiated annually, so the conditions are subject to change.

📖 Water Quality Permit #DE99WQ-002 – Use of Herbicides to Control Noxious Weeds on WSDOT Properties and Projects within the State of Washington (**Exhibit 431-10**).

Statutory Authority **–** RCW 90.48, and WAC 173-201A-110.

(12) Water Quality Modification– Use of Herbicides for Non-Noxious Weeds

Agency Responsible – Ecology, Environmental Coordination Section.

Regulated Activities – This authorization is necessary for the application of herbicides to waters of the state to control non-noxious weeds at WSDOT-owned or managed sites. Such sites include construction sites, wetland mitigation sites, and right of ways.

Requirements – Only herbicides approved in the administrative order can be used. Approved methods of application must be followed and made by a licensed applicator. Special restrictions are required for publicly accessible areas. When making applications in, or adjacent to, fish-bearing streams, contact with WDFW is required. This authorization is negotiated annually, so the conditions are subject to change.

📖 Administrative Order #DE99WQ-003 – WSDOT Use of Herbicides to Control Non-noxious Weeds on WSDOT Properties and Projects within the State of Washington (**Exhibit 431-11**).

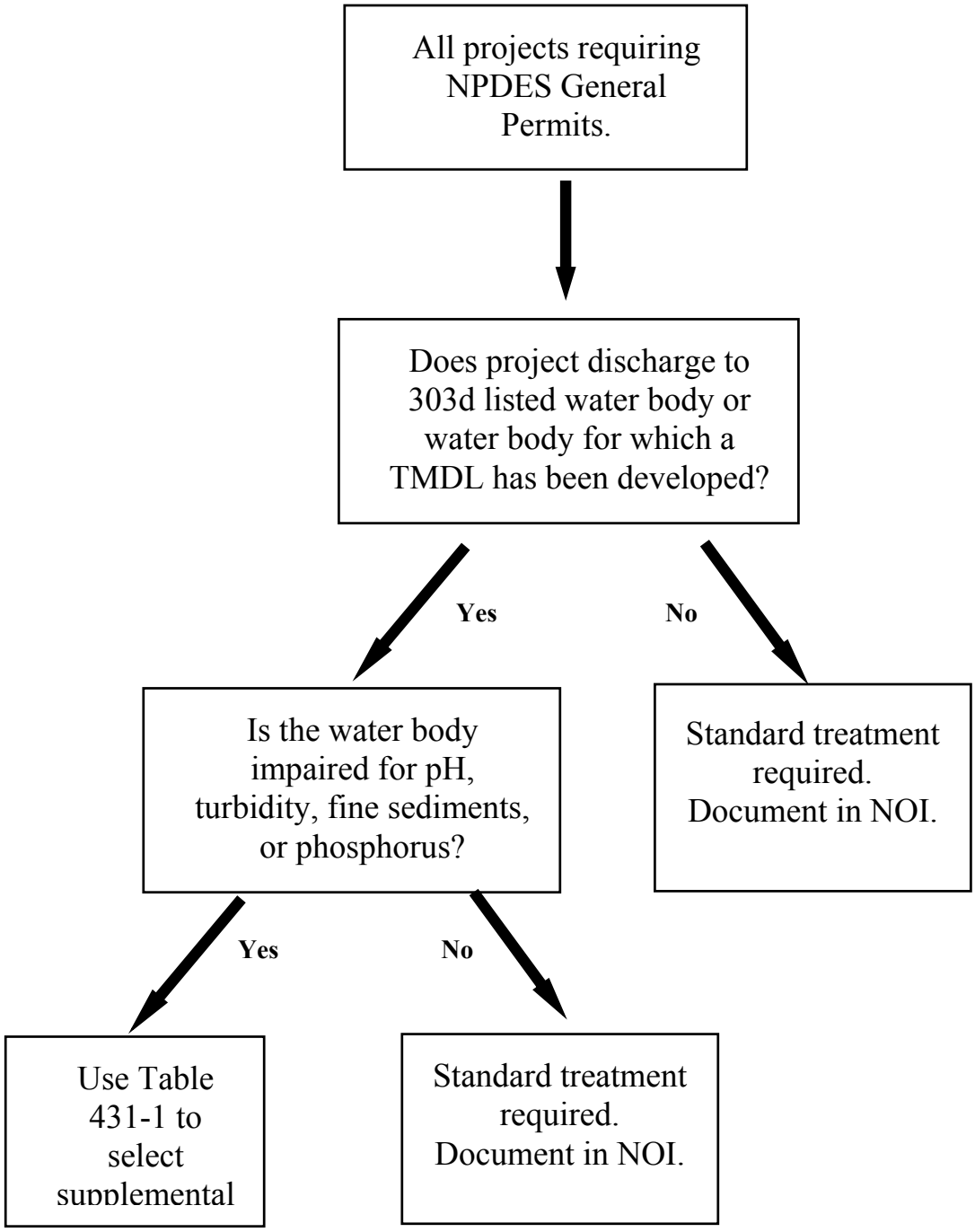
Statutory Authority – RCW 90.48, and WAC 173-201A-110.

Table 431-1:
Methods to Prevent Listed Parameters from Entering 303d-Listed Streams During Construction

Water Quality Parameter	Listed Water Body Locations	Treatment Options	Rationale	Means of Monitoring Compliance
PH	Variable-most common parameter of concern	1. Disperse water and neutralize in acidic forest duff or compost. 2. Reduce pH with carbon dioxide or other treatment system. 3. Dispose of high-pH concrete influenced water by trucking it back to the plant where the concrete was generated.	WSDOT can prevent high pH discharges either by neutralizing the pH on site, or hauling the water to a site that is permitted to take high pH water.	If concrete-affected runoff is discharged from the site, test pH of runoff.
Turbidity/fine sediments-	Turbidity-Few water bodies listed. (*Fine sediments-Mostly in mountain streams.)	1. Standard TESC BMPs. 2. Enhanced erosion control with PAM. 3. Dispersal/infiltration of turbid runoff.	Properly implemented erosion control plans prevent discharges of turbidity or sediment.	Monitor runoff for turbidity.
Phosphorus	Only lakes listed to date.	1. Standard TESC BMPs. 2. Enhanced erosion control with PAM. 3. Dispersal/infiltration of runoff.	Eroded soil is the biggest source of phosphorus on construction sites. Erosion control = phosphorus control.	Monitor turbidity. If turbidity meets state standards, the site likely meets standards for phosphorus.

*No standard defined in WAC 201A.

Figure 431-1: Additional Treatment Requirements



(13) DNR Easement

Agency Responsible – DNR.

Regulated Activities – WSDOT may obtain an easement at no charge for highway or toll facility rights-of-way, including the right to make necessary fills on, over, or across beds of navigable waters under DNR jurisdiction. Easements crossing harbor areas must be approved by the harbor line commission as a public place.

Requirements – WSDOT Real Estates Services must submit plans and a letter of intent to DNR so that DNR can convey an easement.

Statutory Authority – RCW 47.12.026.

(14) Critical/Sensitive Area Ordinances (CAO/SAO)

Agencies Responsible – These ordinances are under jurisdiction of local governments.

Regulated Activities – These laws protect locally designated critical/sensitive areas. Critical areas are defined as wetlands, frequently flooded areas, aquifer recharge areas, geologically hazardous areas, and areas necessary for fish and wildlife conservation. Unless the local laws conflict with state law, WSDOT must be consistent with the requirements of local regulations. Local planning departments should be contacted to determine the provisions that affect a particular sensitive area such as a wetland or a hazardous slope. In some cases, local regulations may include sensitive areas not covered by federal and state regulations, and the regulations may be more restrictive than federal or state regulations. (See also **Section 451**.)

Statutory Authority – GMA (RCW 36.70A), and SMA (RCW 90.58); city and county ordinances.

431.07 Non-Road Project Requirements

(1) Ferries

Surface water treatment for portions of WSF terminals is often difficult because of the confined areas, and because most of the docks slope toward the water.

(a) MOUs

The 1998 Water Quality Implementing Agreement between Ecology and WSDOT regarding compliance with Washington surface water quality standards includes activity-specific conditions that apply to the ferry system. Such activities include ferry terminal transfer span cleaning and painting activities, and work on existing ferry structures. The agreement is described in **Section 431.04** and can be located online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Regulatory Compliance, then Water Quality Implementing Agreement (under Environmental Documents).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

Implementing Agreement between the Washington State Department of Ecology and the Washington State Department of Transportation Regarding Compliance with the State of Washington Surface Water Quality Standards, February 13, 1998.

(b) General Permit Requirements

The ferry system is subject to the same permits as the road system for upland and aquatic projects. The most commonly required road project permits that are also required for ferry projects are Corps of Engineers Section 10 or Section 404 permits, (including NWPs and Letters of Permission), Coast Guard Section 9, HPA, and shoreline permits. These permits are typically obtained through the JARPA process. WDFW regulates areas below OHWM in salt water. A few WSF terminals have NPDES general permits. Please see **Section 431.06** for more details about these permits.

In order to comply with these permit requirements, it is important to know the accurate distance from the shoreline to the project. For marine water the shoreline is measured from the mean higher high water (MHHW) and for freshwater it is measured from the ordinary high water mark (OHWM) or line.

(c) NPDES Stormwater Industrial Permit

This permit for stormwater discharges associated with industrial activities is required for WSDOT ferry facilities that provide fueled vehicles to remove stalled vehicles from docks. Information and application forms can be obtained from the web site listed below. Application for the permits can be made by completing a single form called a Notice of Intent (NOI) for Industrial Activity.

Development of a Stormwater Pollution Prevention Plan (SWPPP) that identifies BMPs to prevent surface water and groundwater pollution is the most significant permit requirement. WSDOT's *Highway Runoff Manual* (M 31-16), described in **Section 431.05**, is the primary document used for selection of BMPs.

See **Exhibit 431-6** for an SSP checklist, and **Exhibit 431-7** for a TESC checklist.

For information about the permit and to download an application form, see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Stormwater, then Industrial Stormwater and Construction Stormwater General Permits.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/stormwater/sw_prmts.html

(2) Airports, Rail, and Non-Motor

Airport, rail, and non-motorized projects are generally subject to the same water quality policies, procedures, and permits as for road projects.

In rail projects, railroad fills, including ties, rails, and structures over streams are considered impervious. To prevent materials falling off trains into waterbodies, enclosed structures must be used to transport materials.

431.08 Exhibits

(1) MOUs, MOAs, and IAs

Exhibit 431-1 – MOU between Washington State Department of Fish and Wildlife, Washington State Military Department Emergency Management Division, Washington State Association of Counties, Association of Washington Cities, Washington State Department of Ecology, and Washington State Department of Transportation: Concerning Work in Watercourses, December 16, 1996.

Exhibit 431-2 – Working Agreement between the Seattle District, Corps of Engineers, the Washington Division, Federal Highway Administration, and the Washington State Department of Transportation, July 26, 1993.

Exhibit 431-3 – Memorandum of Understanding between the Washington State Departments of Fisheries, Wildlife, and Transportation concerning Compliance with the Hydraulic Code. (Revision of August 29, 1990 MOU is under review as of January 22, 2001. When complete it may be inserted here as an exhibit or referenced online.

(2) Technical Guidance

Exhibit 431-4 A – Water Quality Discipline Report Checklist.

Exhibit 431-4 B – SURFACE Water Quality Discipline Report Technical guidance

Exhibit 431-4 C – QUANTITATIVE PROCEDURES FOR WATER QUALITY IMPACT ASSESSMENTS Discipline Report Checklist Water Quality

Exhibit 431-5 – Information Source Listing for WSDOT Water Quality Discipline Reports.

Exhibit 431-6 – WSDOT Stormwater Site Plan Checklist.

Exhibit 431-7 – WSDOT Temporary Erosion and Sediment Control Plan Checklist.

Exhibit 431-8 – Section 303(d) Tribal/State/ Federal Coordination. Ecology Publication 97-2025-W&FA.

(3) Permits or Requirements

Exhibit 431-9 – Summary of Water Permits, Certificates, and Approvals.

Exhibit 431-10 – Water Quality Permit #DE99WQ-002. Use of Herbicides to Control Noxious Weeds on WSDOT Properties and Projects within the State of Washington.

Exhibit 431-11 – Administrative Order #DE99WQ-003. Use of Herbicides to Control Non-noxious Weeds on WSDOT Properties and Projects within the State of Washington.

Memorandum of Agreement
Between
Washington State Department of Fish and Wildlife and
Washington State Department of Transportation
Concerning
CONSTRUCTION OF PROJECTS IN STATE WATERS
(Chapter RCW 77.55. RCW and Chapter 220-110 WAC)
June, 2002

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This Memorandum of Agreement (MOA) is made between the Washington State Department of Fish and Wildlife, hereafter referred to as WDFW and Washington State Department of Transportation, hereafter referred to as WSDOT.

Purpose

This MOA establishes and promotes mutual understanding of the needs of the respective agencies and to facilitate a more consistent application of Chapter 220-110 WAC (Hydraulic Code Rules) and other existing interagency agreements (e.g. Alternative Mitigation Policy Guidance Interagency Implementation Agreement, February 2000; Washington State Department of Transportation Wetland Compensation Bank Program Memorandum of Agreement, September 15, 1994). This MOA replaces the Memorandum of Agreement Concerning Work in Watercourses, December 16, 1996 and Memorandum of Understanding between Washington State Department of Transportation and Washington State Department of Fish and Wildlife (1990).

Objectives

1. Work cooperatively to ensure that state transportation projects protect fish life, and habitats, and ensure the consistent and uniform application of Chapter 77.55 RCW (Construction Projects in State Waters) and Chapter 220-110 WAC (Hydraulic Code Rules).
2. Provide a venue to discuss other wildlife and habitat related issues related to transportation projects not addressed through Chapter 77.55 RCW.
3. Work cooperatively to ensure that WSDOT can fulfill its mission to safely, effectively, and efficiently build, operate, and maintain state transportation systems and WDFW can fulfill its mission to protect fish life.
4. Work cooperatively to identify and evaluate potential project impacts on fish life and habitat and to reach accord on mitigation measures early in the design process to facilitate project design and construction.
5. Provide a framework within which general Hydraulic Project Approvals (HPAs) can be developed and approved that will provide WSDOT with flexibility in planning and programming maintenance, repair, mitigation and minor improvement projects for state transportation facilities, and structures, while reducing the permit workload with both agencies, and properly protecting fish life and habitat.
6. Increase efficiency, reduce paperwork, and maintain consistency in the application of the Hydraulic Code to state transportation activities.
7. The agencies will work together to develop and provide training to appropriate staff.

Background

1. Washington State faces significant challenges in meeting society's need to build and maintain safe and efficient transportation systems while maintaining healthy populations of fish and wildlife species and an ecosystem that provides functions to support the needs of fish life and humans.
2. State law directs WSDOT to construct and maintain a safe and viable transportation system within the state. For example, **RCW 47.01.260** provides that *"the department of transportation shall exercise all the powers and perform all the duties necessary, convenient, or incidental to the planning, locating, designing, constructing, improving, repairing, operating, and maintaining state highways, including bridges and other structures, culverts, and drainage facilities and channel changes necessary for the protection of state highways, and shall examine and allow or disallow bills for any work or services performed or materials, equipment, or supplies furnished."*
3. State law directs WDFW and the commission to preserve, protect, perpetuate, and manage the wildlife and food fish, game fish, and shellfish in state waters and offshore waters. For example, **RCW 77.04.012** identifies the mandate of the department and commission. Wildlife, fish, and shellfish are the property of the state. For example, **RCW 77.55.100** provides that *"in the event that any person or government agency desires to construct any form of hydraulic project or perform other work that will use, divert, obstruct, or change the natural flow or bed of any salt or fresh waters of the state, such person or*

government agency shall before commencing construction or work thereon and to ensure the proper protection of fish life, secure the approval of the department as to the adequacy of the means proposed for the protection of fish life." Both agencies intend that this agreement should advance their ability to satisfy their obligations.

4. Permit Efficiency and Accountability (TPEAC) **RCW 47.06C** of 2001, an act to improve the efficiency and accountability of environmental permitting and compliance process for transportation projects. It is the intent of the legislature to achieve transportation permit reform that expedites the delivery of transportation projects through a streamlined approach to environmental decision-making.
5. On November 29, 2000 the Blue Ribbon Commission on Transportation issued a recommendation to streamline permitting for transportation projects. The recommendation calls for the development of standards to streamline permit approvals and reduce process review delays.
6. State agencies are directed by the governor to develop and implement plans for the recovery of salmon under: Extinction is Not an Option: A Statewide Strategy to Recover Salmon September 1999.
7. State agencies were also directed by the governor in executive order 97-03 Quality Improvement to streamline and improve government performance and customer service.
8. The State of Washington Transportation Commission issued an Environmental Organization Study in January 1994. The study issued the following recommendations:
    a. WSDOT should encourage and participate in current and future efforts to minimize duplication and overlap of environmental regulations of regulatory agencies
    b. WSDOT should continue to explore ways to enable earlier involvement by state and federal regulatory agencies
    c. WSDOT should explore, with all relevant parties, the development and adoption of environmental standards commensurate with appropriate levels of environmental protection and
    d. The Secretary of the Department of Transportation should work with resource and regulatory agency directors to foster better understanding between both agencies.

Definitions

For purposes of the MOA the following definitions apply.

1. AHB: Area Habitat Biologist - the WDFW biologist charged with processing permit applications under the Hydraulic Code.
2. BMP(s): Best Management Practices.
3. Capital project: WSDOT identifies capitol projects as those that fall under the Capitol Budget category which include the following budget programs; Improvement (I), Preservation (P), New Building Construction (D3), Ferry Construction (W4), Highways and Local Programs (Z2), and Rail (Y/V). Capitol project activities are typically bid out to contract. Capitol project activities may involve the construction or acquisition of new assets or work that results in the improvement and/or addition to a highway that increases capacity or utilization, extends the useful life, or changes the function. Maintenance or repair of currently serviceable structure is not a capitol project.
4. Channel: a feature that collects drainage water, can be parallel or perpendicular to the highway facility, and may or may not be a natural stream. Channels may support fish and work within them will fall under HPA authority. WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000. WSDOT agrees that WDFW AHBs shall determine what is a stream, channel, or ditch for HPA purposes and to abide by these determinations.
5. Complete Application: See appendix A.
6. Construction Projects in State Waters: Chapter 77.55 of the Revised Code of Washington.
7. Ditch: a drainage feature that is a man-made (i.e. not a modified stream) conveyance system that collects, conveys, channels, holds, inhibits or diverts the movement of stormwater or ground water from the

WSDOT facility and adjacent properties. It is not a channelized stream, nor does it support fish. Work within ditches will not require an HPA. WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000. Figure 2 provides technical assistance for determining the difference between a ditch and channel. WSDOT agrees that WDFW AHBs shall determine what is a stream, channel, or ditch for HPA purposes and to abide by these determinations.

8. Emergency (WDFW – RCW 77.55.100 (5)): an immediate threat to life, the public, property, or of environmental degradation, arising from weather or stream flow conditions or other natural conditions.

9. Emergency/Disaster Maintenance: activities that are required to alleviate an emergency condition. Work activities are the same or similar to routine maintenance activities except that they are greater in magnitude and scope depending upon the nature and intensity of the emergency.

10. Highway Maintenance: those activities conducted on currently serviceable road structures, facilities and equipment involving no expansion or use beyond that previously existing. Typically, WSDOT maintenance activities are funded from the operating budget.

11. Hydraulic Code Rules: Chapter 220-110 WAC, administrative rules, including procedures and technical provisions to implement Chapter 77.55 RCW.

12. Imminent Danger (RCW 77.55.100(3)): a threat by weather, water flow, or other natural conditions that is likely to occur within sixty days of a permit application.

13. Mitigation (WAC 220-110-020 (54)): actions, which shall be required as provisions of the HPA to avoid or compensate for impacts to fish life resulting from the proposed project activity. The type(s) of mitigation required shall be considered and implemented, where feasible, in the following sequential order of preference:

    a. Avoiding the impact altogether by not taking a certain action or parts of an action;

    b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;

    c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

    d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

    e. Compensating for the impact by replacing or providing substitute resources or environments; or

    f. Monitoring the impact and taking appropriate corrective measures to achieve the identified goal.

For projects with potentially significant impacts, a mitigation agreement may be required prior to approval. Replacement mitigation may be required to be established and functional prior to project construction.

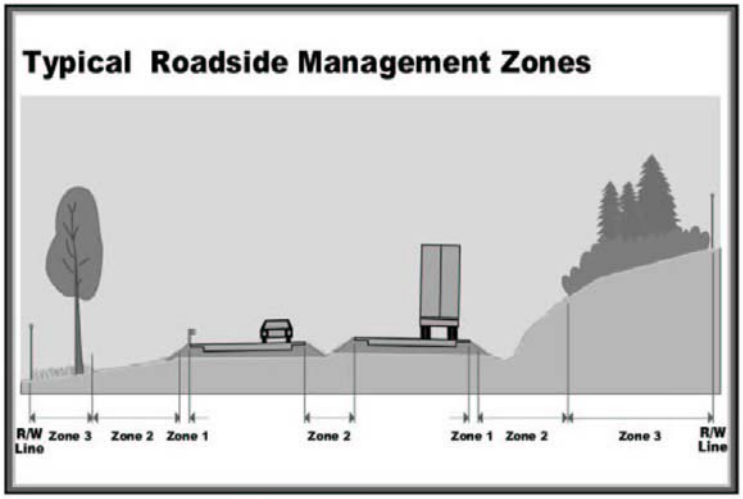
14. PHS: WDFW Priority Habitat and Species List and management guidelines.

15. RHPM: WDFW Regional Habitat Program Manager.

16. Road Structure: components of a road, including: roadway, drainage, sediment containment, retention/detention, utilities permits/franchises (telecommunication, gas, electrical etc.), street lighting, and traffic signals. Figure 1 shows three zones, which may be present in any given location. Routine maintenance activities occur within Zone 2.Routine Maintenance: This category means budgeted work performed routinely on a scheduled basis. It is intended to maintain the highway facility/element so that it retains its original intended use.

17. Unscheduled (non-emergency) Maintenance: unanticipated activities that occur due to unusual weather condition, vandalism, accident, etc. Work activities are conducted similar to routine maintenance activities except that work is unanticipated and poses an imminent danger to the existing structures or traveling public.

Figure 1. Roadway cross section



Roles and Responsibilities

The signatories will work together to:

- Obtain funding to fully implement this MOA.
- Provide active support and guidance within their respective agencies to achieve the objectives of this MOA.

Training

WSDOT and WDFW recognize that understanding and communication are essential to develop good working relationships between all levels of our agencies. A training committee comprised of representatives from the WDFW Habitat Program (WSDOT Liaison), WSDOT Environmental & Engineering Service Center (Environmental Services & Design Offices), Field Operations Support Service Center (Construction and Maintenance Offices), Rail Office, Highways & Local Programs Service Center, and Washington State Ferries will meet annually to determine training needs and develop training as determined necessary for personnel in each agency and with contractors. The goals of this training are to ensure contractors, staff, and decision makers

- Have basic knowledge of ecological and transportation issues,
- Understand the HPA program, and
- Are aware of their roles and responsibilities, in terms of fieldwork, technical support, permits, and documentation.

Training will be conducted with an adaptive management philosophy with future needs addressed as questions and issues arise during program implementation. Training programs will be integrated into existing programs within both agencies.

Project Review Coordination

1. WSDOT Responsibilities
   a. Arrange annual meetings for the following:
      i. *Capitol Improvement Activities*: Proposed projects identified in the WSDOT preservation and improvement programs may be reviewed at annual meeting(s), between both agencies, each year between January 15th and March 15th. WSDOT design personnel, environmental personnel, and other WSDOT personnel as necessary shall attend meetings.
         (1) One meeting will be held for each WSDOT region in western Washington at a mutually agreed upon location to discuss capitol construction projects in western Washington.
         (2) One meeting will be held at a mutually agreed upon location in eastern Washington to discuss capitol construction projects in eastern Washington.

ii. *Planned Maintenance Activities:* Each maintenance area superintendent shall arrange one meeting each spring at a mutually agreed upon date and location to review planned maintenance activities with WDFW AHB. The area superintendent shall develop maps and/or aerial photographs and a list identifying potential hydraulic activities. The maps and list shall be kept up to date with new activities added and completed or abandoned activities removed. A copy of the maps and/or aerial photographs list will be made available to WDFW AHB.

iii. *Ferry Projects:* One meeting will be held in Seattle or other mutually agreed upon location to discuss upcoming ferry maintenance, repair, and construction projects.

(1) Apply for and obtain an individual HPA for all projects, and maintenance activities which require an approval, and which are not approved under existing and valid general HPA approvals issued to WSDOT.

Joint Meetings: Capitol Improvement project and planned maintenance activity meetings may be held jointly at the discretion of the regions.

2. WDFW Responsibilities:

a. WDFW AHB will attend the annual meetings to discuss capitol projects, maintenance projects and ferry projects. AHBs will determine what water bodies are ditches channels, and streams; WSDOT agrees to abide by these determinations. WDFW will identify chronic repair/maintenance problems in which WDFW may have an interest and will require HPA approval

b. Provide information as available from WDFW databases to WSDOT personnel on fish and wildlife resources that may be affected by a WSDOT project.

c. Provide information regarding anticipated project conditions and mitigation.

d. Process complete applications and issue or deny permits within the time lines identified for type of application (e.g. standard, expedited, or emergency) submitted to WDFW following procedures outlined in Section 9 (Hydraulic Project Applications)

e. Work with WSDOT to develop general HPAs for specific types of WSDOT projects and maintenance activities.

Project Review Procedures For Annual Meetings

1. Capitol Improvement Projects

a. During the project scoping phase WSDOT shall: Review current PHS and Fish Distribution data and contact the AHB for information on resource protection needs, possible conditions, and timing windows for sampling and construction activity.

b. WSDOT shall update their PHS database from WDFW every six months by contacting, **PRIORITY HABITATS & SPECIES** - Habitat Program, Priority Habitats and Species Division (360) 902-2534.

c. Consult WSDOT Fish Passage Barrier Database to determine if any identified fish passage problem is identified in the project area.

d. Use information in existing guidelines (Appendix D) in designing WSDOT projects that potentially affect fish life or fish-bearing water bodies.

e. At least one month prior to the annual meetings WSDOT regions will supply to WDFW RHPM(s) a list of all projects to be discussed at the annual meeting. This list will include: project name, project description, location, and WSDOT contact person.

f. At least two weeks prior to the annual meetings RHPM(s) will supply to WSDOT the name, address, and phone number of AHB(s) that will be working each project.

g. WSDOT will coordinate annual meetings. Westside regional meetings will be coordinated with WDFW regions 4, 5, and 6 RHPM(s) and WSDOT Northwest, Olympic and Southwest region environmental managers. Eastside meetings will be coordinated with WDFW regions 1,2, and 3 RHPM(s) and WSDOT Northcentral, Southcentral, and Eastern region environmental managers. Region 5 will also be contacted for eastside meetings if any projects are proposed in Klickitat County.

h. At the meetings both agencies will discuss:

   i. Project design and alternatives, including project purpose and need (deficiency and design) and alternatives for avoidance and minimization of impacts.

   ii. Applicability of other agreements (e.g. MOAs, Mitigation Agreements, general HPAs) to project design.

   iii. Potential permit conditions

   iv. Mitigation including opportunities to restore or enhance habitat disturbed by previous projects

   v. Data resource gaps and future data needs

i. Some improvement mobility projects that require an EIS may undergo early inter-agency environmental review through the NEPA/SEPA/404 merger agreement.

j. Follow-up meeting may be held between WSDOT and WDFW staff as necessary to address any changes in project scope and design:

   i. Discuss impacts to fish and wildlife resources including alternatives to avoid impacts either through modifications in project design and/or implementation of best management practices.

   ii. Identify mitigation measures that may be necessary to compensate for impacts to fish life resulting from the proposed project activity.

2. Maintenance Projects

   a. Planned maintenance

      i. At least one month prior to the annual meeting WSDOT maintenance area superintendent will supply to WDFW AHB a list of planned maintenance activities to be discussed at the annual meeting. This list will include: site number, highway, milepost location, description and Best Management Practices (BMPs).

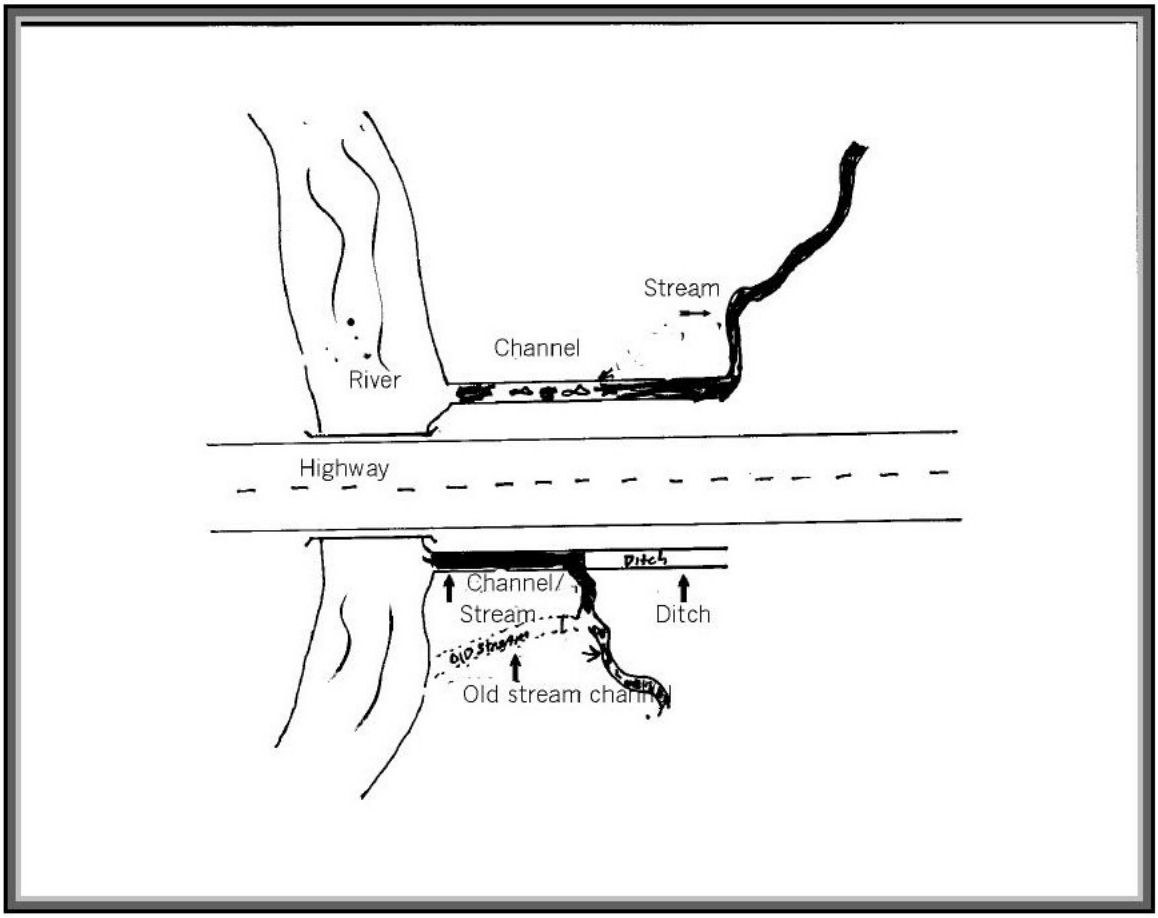
      ii. These maintenance activities will be discussed at the annual meeting with WDFW AHB to:

         (a) Agree on drainage ditch and channel maintenance activities. Ditch maintenance does not require HPAs. Figure 2 provides assistance for determining the difference between a natural watercourse, modified natural watercourse, and artificial drainage ditch.

         (b) Identify and agree on which activities will be covered by general HPAs, can be batched by activity or, that require an individual HPA.

         (c) Identify and agree on potential chronic repair/maintenance problems.

Figure 2. Typical stream, channel, and ditch



iii. WSDOT Maintenance Superintendents within each region, using a definition and criteria developed jointly by WSDOT and WDFW, develops a detailed and accurate list of known chronic environmental deficiencies. WSDOT intends to develop a new funding category that will provide an inventory, scoping, prioritization, and programming process for environmental deficiency removal projects where implementation of maintenance and operations BMPs may not be able to avoid and minimize significant adverse environmental impacts. Chronic environmental deficiencies that are prioritized by this process, that pose the greatest risk to fish life, would be targeted for retrofit construction. Projects would be limited to the amount of funding received by the Washington State Legislature. Until projects are funded WDFW agrees to issue HPAs for maintenance activities to keep the highway operational and WSDOT agrees to provide mitigation through avoidance and minimization of impacts for these projects. If the I-4 retrofit program ceases to function then compensatory mitigation may be required as appropriate on a project-by-project basis.

iv. WSDOT will submit JARPAs for HPAs based on annual meeting discussions.

v. WDFW AHB will review and comment expeditiously on JARPA applications, as described in this MOA under section 9.

vi. WSDOT will not begin work until the HPA is received.

b. Unscheduled maintenance

i. Unscheduled maintenance may be required for any number of reasons or events both natural (e.g. windstorms) and man induced (e.g. accidents).

ii. WSDOT will submit a JARPA application for each unscheduled maintenance activity and arrange for a site review with WDFW AHB.

iii. WDFW will attend the site review if the maintenance activity poses a high likelihood to adversely affect fish life.

iv. WDFW AHB will review and comment expeditiously on JARPA applications, as described in this MOA under Section 9. It is anticipated that most unscheduled maintenance activities will meet the requirements for an expedited application and be processed as an expedited application. In rare circumstances, the danger may escalate to immediately. If this is the case WSDOT will notify WDFW by phone and follow the procedures for emergency/disaster maintenance.

v. WSDOT will not begin work until the HPA is received.

c. Emergency/disaster maintenance and repair

i. While WSDOT is mandated the authority under RCW 47.28.170 and RCW 47.32.130 (1) to protect and restore highways in the event of an emergency, WSDOT emergency response actions that fall under WDFW jurisdiction shall be consistent with RCW 77.55.100 (5)): where emergency means *"an immediate threat to life, the public, property, or of environmental degradation, arising from weather or stream flow conditions or other natural conditions."*

ii. If an emergency condition exists and an HPA has not been issued or there is insufficient time to secure an HPA through normal channels, WSDOT will contact WDFW for verbal approval of HPA per WAC 220-110-030(7), as soon as practicable with respect to the given condition. During normal business hours the AHB (if known) in that area will be contacted directly; if not known the WDFW regional office will be contacted for approval. The after-hours telephone number (360) 902-2537, will be used. Verbal approval shall be granted immediately upon request for emergency work to repair existing structures, move obstructions, restore banks, or protect property that is subject to immediate danger by weather, flow, or other natural conditions.

iii. Whenever possible WDFW will conduct a site visit before issuing an emergency HPA. If it is not possible to conduct a site visit, WDFW will grant verbal permission for emergency work and outline conditions to protect fish life per RCW 77.55.100(5)(a)(b)(c). Conditions will be reduced to writing and supplied to WSDOT within 30 days. The permit for emergency work will be valid for work started within 15 days of the declaration of emergency and only for work to eliminate the emergency condition. Additional repair and mitigation work will require either submittal of a Hydraulic Project Application for a standard or expedited HPA.

iv. WSDOT will conduct its emergency repair work in the most environmentally sensitive manner possible, using the menu of BMPs outlined in WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000 and as specified in the HPA.

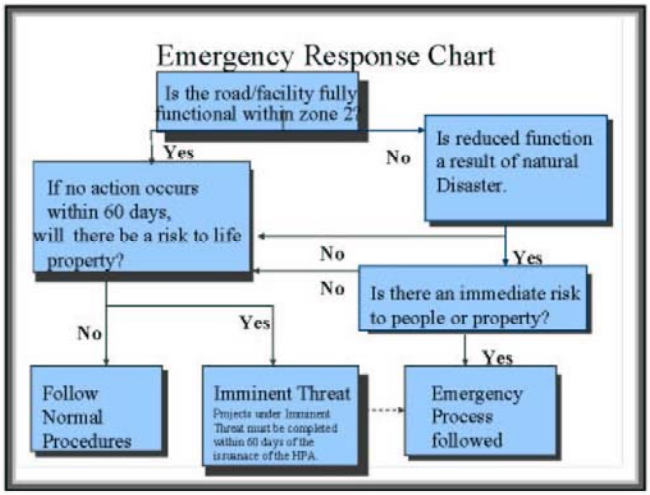
v. Repairs will be limited to short-term fixes necessary to maintain the safety and serviceability of the facility. Where permanent methods of repair can be used they will be employed with the understanding that for each action WSDOT is required to submit a restoration plan within 30 days. The restoration plan shall be completed within one year of the event, or within the next available work window. A restoration plan will not be necessary for reconstruction of facilities within their original footprint.

vi. Long-term fixes will be secured through standard application and approval processes.

vii. Figure 3 provides technical assistance for determining WSDOT emergency response.

Emergency Response Chart Is the road/facility fully functional within zone 2? Is reduced function a result of natural Disaster. If no action occurs within 60 days, will there be a risk to life property? **Yes No** Is there an immediate risk to people or property? **Yes No** Follow Normal Procedures Imminent Threat Projects under Imminent Threat must be completed within 60 days of the issuanace of the HPA. Emergency Process followed **No Yes No Yes**

Figure 3. Flow chart for emergency response



Hydraulic Project Applications

1. Both agencies should coordinate and establish agreement on design and any necessary mitigation issues prior to final HPA application submittal. This may be accomplished during the annual meetings (See Section 7 and 8) to review capitol improvement projects or by coordinating with the local AHB. For all projects that are anticipated to require mitigation for unavoidable impacts, whether or not they were reviewed at the annual meeting; project information will be sent to WDFW with adequate information regarding project design, method of construction, and mitigation, so that potential design and mitigation issues may be addressed before an application is submitted. An application for the HPA shall be submitted to WDFW when final project plans are near completion and shall contain information required under WAC 220-110-030 (application submittal procedures). See Appendix A for application requirements.
2. WDFW shall process each Hydraulic Project Application as described in WAC 220-110-030 and summarized in the following table.

Application Type	Review time by WDFW	Valid for	Renewable	SEPA Requirements
Standard	decision within 45 days of receipt of complete application	maximum of 5 years	Yes	Yes
Expedited	decision within 15 days of receipt of complete application	maximum of 60 days	No	No
Emergency	immediately, verbal or written	for duration of emergency	Yes	No

3. If an application for a permit is received that is incomplete per WAC 220-110-030(2), which states: “The application shall contain general plans for the overall project, complete plans and specifications for the proposed construction or work waterward of the mean higher high water line in salt water or waterward of the ordinary high water line in fresh water, and complete plans and specifications for the proper protection of fish life. The application shall be signed and dated by the applicant or their agent,” then, the AHB shall notify WSDOT, in writing, within 10 working days of receipt of that application, listing what information is needed and return the application to WSDOT. The AHB may hold the application attachments at their office pending re-submittal of the application with the missing information.
4. WAC 220-110-020 (54) "Mitigation” represents the standard for determining when and what type of mitigation is required for a given project. If an application is received by WDFW that is complete for

review purposes but does not fully mitigate direct and indirect impacts to fish life, the AHB shall notify WSDOT of the intent to deny a permit at the end of the 45 days review period. WSDOT may request the 45-day clock be suspended pending additional negotiations unless full mitigation measures can be agreed upon within the 45-day review. If approval is denied, WDFW shall provide the WSDOT, in writing, a statement of the specific reason(s) why and how the proposed project would adversely affect fish life (WAC 220-110-035).

5. WSDOT shall incorporate the provisions of the HPA into transportation project contract documents.
6. WDFW shall coordinate site inspections with the WSDOT project engineer for preservation and improvement projects when practicable.
7. WDFW will coordinate site inspections with the WSDOT area region environmental office and maintenance office for maintenance activities when practicable.

Oversight and Monitoring

WSDOT will encourage the training of project inspectors on how to monitor projects for compliance with HPA provisions.

If at any time after the HPA is issued project designs change or circumstances arise at the construction site that require modifications to design or construction methods, the AHB will be contacted and a meeting arranged to discuss the changes to design and potential modifications to the HPA. Page 12 of 45

The AHB will notify WSDOT anytime conditions of the HPA need to be modified to protect fish life and habitat per WAC 220-110-030(17). AHBs may modify or revoke an existing HPA when new biological or physical information indicates the need for such action. Such changes will be discussed with WSDOT prior to issuing a revised permit, or revoking an existing permit.

Conflict Resolution

It is expected that conflicts will be resolved at the field level in a cooperative and professional manner. In the event that issues cannot be resolved at the local level and before an application for an HPA is issued or denied, field personnel from either agency may request that a WDFW/WSDOT Liaison be assigned to mediate the dispute. In the event that mediation fails, the applicant may request an informal appeal per WAC 220-110-340 with WDFW in writing within 30 days of the issuance or denial of an HPA (Appendix G).

In the event that issues cannot be resolved with mediation or informal appeal, a Formal Appeal of Administrative Decisions, WAC 220-110-350 shall be followed (Appendix G).

In the event of an unlawful hydraulic activity project (e.g. violation of provisions of the HPA) then:

- WSDOT and/or the contractor will be held liable for the violation and shall be issued a citation(s) if deemed necessary.
- In the event of violations, corrective actions, appropriate to the circumstances, will be taken by WSDOT. Corrective actions include; stop work, improved maintenance activities BMPs, additional training, providing improved information (i.e. sensitive area maps) to WSDOT personnel, and conducting additional performance assessments. If violations are related to the absence of adequate equipment and/or materials, procurement of needed items will be sought through the normal departmental means. Any personnel corrective actions will be taken in accordance with Chapter 12 of WSDOT Human Resource Desk Manual.

In the event that damages to fish resources occur as a result of work on WSDOT projects, WSDOT will work with WDFW to develop plans to repair damage and provide compensation. WSDOT and/or the contractors shall be held responsible for damages and restoration. WSDOT will be responsible for working with the contractor to repair damage done to fish resources and to prevent future violations.

Adaptive Management

This MOA will be reviewed within six months of adoption of revisions to Chapter 220-110 WAC.

The conditions of this MOA may be reassessed at any time when:

• A condition of this MOA is found to be ineffective.

• The workload for either party becomes problematic.

Either agency may propose changes at any time by supplying a copy of the proposed changes to the other agency for review.

No changes become effective until both agencies have signed the new MOA.

Duration of MOA

This MOA becomes effective upon signature by both parties and remains in effect unless either party terminates the agreement with 60 days written notice to the other party.

Signatures

MOU
WDFW/WSDOT

May, 2002

APPROVED AS TO FORM

_____	_____
Assistant Attorney General	Assistant Attorney General
Department of Fish and Wildlife	Department of Transportation
Date:_____	Date:_____
_____	_____
ASSISTANT DIRECTOR HABITAT PROGRAM	DIRECTOR OF ENVIRONMENTAL AFFAIRS OFFICE
Department of Fish and Wildlife	Department of Transportation
Date:_____	Date:_____

Appendix A: Complete Application

The following will be considered an application for an HPA:

- A Joint Aquatic Resource Permit Application (JARPA) or its successor(s) or,
- A Section 10 or 404 public notice circulated by the United States Army Corps of Engineers or United States Coast Guard.

Complete application procedures are identified in WAC 220-110-030. A complete application will contain the following:

1. A set of near complete drawings for the project; detailed plans for those parts of the project to be constructed within state waters,
2. Upon the request of the AHB, WSDOT will provide a brief summary describing how the proposed project is consistent with stormwater standards in the current Highway Runoff Manual,
3. Detailed plans for construction or installation of mitigation features for identified project impacts ,
4. Discussion of construction techniques which will or may be used,
5. Monitoring and reporting schedule for mitigation or experimental techniques (if required), and
6. Alternative plans should experimental techniques prove unsuccessful.

Application will be sent to (in order of preference) the Area Habitat Biologist, WDFW Regional Office (Appendix 2) where the project will occur, or WDFW Headquarters Habitat Program.

Washington State Department of Fish and Wildlife
Habitat Program
600 Capitol Way North,
Olympia, WA 98501-10

AREA HABITAT BIOLOGIST=S GEOGRAPHIC COVERAGE AREAS

Last update: May 6, 2002

Please contact Lynette Wickett with any updates or changes: (360) 902-2532 wickelrw@dfw.wa.gov

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
ADAMS REGION 2	All tributaries	34, 36, 41, 43	Vacant (contact RHPM)	WDFW, Region 2 1550 Alder ST, NW Ephrata, WA 98823-9651	(509) 754-4624
	Forest Practices		Lynda Hofmann hofmalah@dfw.wa.gov	WDFW, Region 2 P.O. Box 1118 Twisp, WA 98856	(509) 997-9428
ASOTIN REGION 1	Mainstem Snake River	35	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave #115 Kennewick WA 99336	(509) 734-7432
	All tributaries EXCEPT mainstem Snake River	35	Tom Schirm schirtbs@dfw.wa.gov	WDFW, Region 1 Post Office Box 142 Dayton, WA 98328	(509) 382-1266
BENTON REGION 3	Yakima River and tributaries Mainstem Columbia River and tribs.	31, 37, 40	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave #115 Kennewick WA 99336	(509) 734-7432
CHELAN REGION 2	Only tributaries associated with Forest Practices	40, 45, 46, 47	Lynda Hofmann hofmalah@dfw.wa.gov	WDFW, Region 2 P.O. Box 1118 Twisp, WA 98856	(509) 997-9428
	Mainstem Columbia River and all tributaries (includes Colockum, Stemilt, and Squilchuck Creeks; Wenatchee and Entiat River drainages; Lake Wenatchee, Lake Chelan and all tribs.	40, 45, 46, 47	Bob Steele steelrms@dfw.wa.gov	WDFW, Region 2 3860 Chelan Hwy. N. Wenatchee, WA 98801	(509) 662-0503
CLALLAM REGION 6	Marine waters only (includes Strait of Juan de Fuca, Diamond Point in Diamond Bay and Pacific Ocean)	17, 18, 19, 20	Anne Shaffer shaffjas@dfw.wa.gov	WDFW, Region 6 332 East 5th ST, Suite 100 Port Angeles, WA 98362	(360) 457-2634

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
CLALLAM REGION 6 (continued)	Strait of Juan de Fuca watersheds and lakes located in Clallam and Jefferson Counties. Major streams include Dungeness, Elwha, Pysht, Hoko, Lyre, Clallam, and Sekiu Rivers; Snow, Siebert, Morse, and Ennis Creeks.	17, 18, 19	Chris Byrnes byrnechb@dfw.wa.gov	WDFW, Region 6 332 East 5th ST, Suite 100 Port Angeles, WA 98362	(360) 417-1426
	Ocean watersheds and lakes located primarily in Clallam and Jefferson (west) Counties. Major streams include Big, Bogachiel, Dickey, Hoh, Queets, Salmon, Soleduck, and Sooes Rivers	20	Dan Dafoe dafoedad@dfw.wa.gov	WDFW, Region 6 332 East 5th ST, Suite 220 Port Angeles, WA 98362	(360) 457-2516
CLARK REGION 5	All tributaries (WRIA 27 only) including mainstem Columbia River.	27	Vacant (Contact RHPM)	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 906-6731
	All tributaries (WRIA 28 only) including mainstem Columbia River	28	Vacant (Contact RHPM)	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 906-6731
COLUMBIA REGION 1	Mainstem Snake River	33, 35	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave # 115 Kennewick WA 99336	(509) 734-7432
	All tributaries EXCEPT mainstem Snake River.	32, 33, 35	Tom Schirm schirtbs@dfw.wa.gov	WDFW, Region 1 P.O. Box 142 Dayton, WA 99328	(509) 382-1266
COWLITZ REGION 5	Chehalis River	23	Vacant (contact RHPM)	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 906-6731
	All tributaries EXCEPT those in WRIA 27 (includes Abernathy, Coal, Germany, Mill, Owl, and Skamokawa Creeks; and Coweeman, Cowlitz, Deep, Elochoman, Grays, Green, and Toutle Rivers). Mainstem Columbia River.	25, 26	Bob Bicknell bicknrjb@dfw.wa.gov	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 274-9814
	All tributaries including mainstem Columbia River (WRIA 27 only).	27	Vacant (contact RHPM)	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 906-6731
DOUGLAS REGION 2	All tributaries EXCEPT mainstem Columbia River downstream from Chief Joseph Dam (S24 T29N R25E)	42, 44, 50	Vacant (contact RHPM)	WDFW, Region 2 1550 Alder ST NW Ephrata, WA 98823-9699	(509) 754-4624
	Mainstem Columbia River downstream from Chief Joseph Dam (S24 T29N R25E)	41, 44, 50	Bob Steele steelrms@dfw.wa.gov	WDFW, Region 2 3860 Chelan Hwy. N. Wenatchee, WA 98801	(509) 662-0503

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
DOUGLAS REGION 2 (continued)	Forest Practices		Lynda Hofman hofmalah@dfw.wa.gov	WDFW, Region 2 1550 Alder ST, NW Ephrata, WA 98823-9651	(509) 997-9428
FERRY REGION 1	All tributaries	53 58, 60	Allen Palmanteer palmagap@dfw.wa.gov	WDFW, Region 1 Post Office Box 29 Boyds, WA 99107	(509) 738-2364
FRANKLIN REGION 3	All tributaries including mainstem Columbia River and mainstem Snake River	33, 34, 36	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave Suite 115 Kennewick WA 99336	(509) 734-7432
GARFIELD REGION 1	Mainstem Snake River	35	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave # 115 Kennewick WA 99336	(509) 734-7432
	All tributaries EXCEPT mainstem Snake River	35	Tom Schirm schirtbs@dfw.wa.gov	WDFW, Region 1 Post Office Box 142 Dayton, WA 98238	(509) 382-1266
GRANT REGION 2	All tributaries EXCEPT mainstem Columbia River	36, 41, 42, 43, 44	Vacant (contact RHPM)	WDFW, Region 2 1550 Alder ST, NW Ephrata, WA 98823-9651	(509) 754-4624
	Mainstem Columbia River upstream from Priest Rapids Dam (SO1 T13N R23E)	36,41	Bob Steele steelrms@dfw.wa.gov	WDFW, Region 2 3860 Chelan Hwy N. Wenatchee, WA 98801	(509) 662-0503
	Mainstem Columbia River downstream from Priest Rapids Dam (SO1 T13N R23E)	41	Paul LaRiviere larivpel@dfw.wa.gov`	WDFW, Region 3 3030 W Clearwater Ave #115 Kennewick WA 99336	(509) 734-7432
	Forest Practices		Lynda Hofmann hofmalah@dfw.wa.gov	WDFW, Region 2 P.O. Box 1118 Twisp, WA 98856	(509) 997-9428
GRAYS HARBOR REGION 6	Marine waters only (includes Pacific Ocean, Grays Harbor, and North and South Bays	21, 22	Key McMurry mcmurklm@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 249-4628 Ext. 231
	The following systems within and tributaries to these systems within Grays Harbor Co: Porter, Gibson, Cedar, Gerrard, David, Williams, Rock, Shelton, Cloquallum, Mox Chehalis. Chehalis River and tribs upstream of the Satsop River. East Satsop River and tribs. Delezene Creek and South Bank Chehalis tribs.	23	Gloria Rogers rogergsr@dfw.wa.gov	WDFW, Region 6 P. O. Box 695 Elma, WA 98541	(360) 495-3068

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
GRAYS HARBOR REGION 6 (continued)	North and Little North Rivers	22, 24	Key McMurry mcmurklm@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 249-4628 (Ext. 231)
	Copalis, Hoquiam, Humptulips, Moclips, Quinault, Wishkah, Wynoochee, mainstem and West Fork Satsop Rivers; Conner and Joe Creeks. Chehalis River and tribs (downstream of the Satsop River). Independent tribs to Pacific Ocean North of Quinault River. Newskah, Campbell, Indian, Stafford, O=Leary Creeks, Johns and Elk Rivers; all other tribs of Grays Harbor. Independent tribs in Grays Harbor Co north of the Pacific Co line.		Gary Bell bellgwb@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 249-1228
	Forest Practices		Dave Kloempken kloemdck@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 249-1218
ISLAND REGION 4	All marine and fresh water. Marine waters includes Admiralty Inlet, Possession Sound, Puget Sound, Rosario Strait, Saratoga Passage, Skagit Bay, and Strait of Juan de Fuca. Whidbey Island.	06	Julie Klacan klacajlk@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.272)
	Forest Practices and mineral prospecting.		Alan Looff looffacl@dfw.wa.gov	WDFW, Region 4 P.O. Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext. 251)
JEFFERSON REGION 6	Marine waters only in East county, includes Discovery Bay, Port Townsend, Puget Sound, Oak Bay, Port Ludlow, Bywater Bay, Dabob Bay, and Hood Canal. Pacific Ocean in West County.	16, 17, 20	Anne Shaffer shaffjas@dfw.wa.gov	WDFW, Region 6 332 East 5th ST, Suite 100 Port Angeles, WA 98362	(360) 457-2634
	Upper Dungeness	18	Chris Byrnes byrnechb@dfw.wa.gov	WDFW, Region 6 332 East 5th St, Suite 100 Port Angeles, WA 98362	(360) 417-1426
	Hood Canal tribs. Freshwater in East county; Quilcene, Little Quilcene, Dosewallips, and Duckabush Rivers. Shine, Chimacum, Ludlow, Leland, Fulton, Thorndyke, Snow, Salmon, and Contractors Creeks. All lakes within these watersheds	16, 17	Jeff Davis davisjpd@dfw.wa.gov	WDFW, Region 6 502 High ST, Suite 108 Port Orchard, WA 98366	(360) 895-3965
	West County; Goodman, Hoh, Clearwater, and Queets Rivers. Misc. tributaries	20, 21	Daniel Dafoe dafoedad@dfw.wa.gov	WDFW, Region 6 332 East 5th ST, Suite 220 Port Angeles, WA 98362	(360) 457-2516

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
KING REGION 4	All marine waters includes lower Duwamish, Colvos Passage, Elliott Bay, East Passage, Puget Sound, and waters around Maury and Vashon Island (Snohomish River to I-5 bridge)	08, 09, 15	Pam Erstad erstapke@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2306
	Lake Sammamish, Lake Washington, Lake Union, and Ship Canal to Ballard Locks. Laughing Jacob, Lewis, and Vasa Creeks. Miscellaneous lakes include: Beaver, Boren, Phantom, Kathleen, Pine, Shadow, and Shady Lakes.	07 08 (08.0028; 08.0141 thru 08.0221; 08.0224 thru 08.0461	Rich Johnson (**ONLY** Lakes Washington, Sammamish, Union and Ship Canal) johnsrj@dfw.wa.gov **ALL OTHER AREAS** Contact Deborah Cornett	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext 254)
	Lake Washington tribs **north** of 520 bridge. Tribs to Puget Sound (Seattle to Everett). Tribs to Lake Sammamish. Boeing, Pipers, Lyon, Thornton, Denny, Forbes, Mill, Issaquah, McAleer, Juanita, Bear, Little Bear, North, Swamp, and Yarrow Creeks. Sammamish River.	08 (08.0017; 08.0020; 08.0049; 08.0057 thru 08.0142)	Eric Pentico pentiedp@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2305
	Skykomish and Snoqualmie Rivers. Patterson, Woods, and Cherry Creeks. Raging, Sultan, Tolt, and Wallace Rivers. East King County.	07	Mark Wenger wengemnw@dfwlwa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2321
	Lake Washington tribs **south** of 520 bridge (includes Coal, Kelsey, May, Taylor, and Meydenbauer Creeks and the Cedar River system).		Tony Oppermann opperajo@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2309
	White River and all tribs. Hylebos Creek.	10	Vacant (Temporarily Larry Fisher)	WDFW, Region 4 c/o DOE 3190 160th AVE SE Bellevue WA 98008-5452	(425) 649-7042
	All tribs. on Vashon Island. Green/Duwamish River from 14th Avenue bridge to its headwaters. Soos Creek. All tribs. and lakes in WRIA 09.	09, 15	Larry Fisher fisheldf@dfw.wa.gov	WDFW, Region 4 c/o DOE 3190 160th AVE SE Bellevue WA 98008-5452	(425) 649-7042
KITSAP REGION 6	Kitsap County Marine waters.	15	Randi Thurston thursrlt@dfw.wa.gov	WDFW, Region 6 502 High St., Suite 108 Port Orchard, WA 98366	(360) 895-6123

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
KITSAP REGION 6 (continued)	Purdy, Burley, Olalla, Judd, Curley, Salmonberry, Beaver, Wilson, Annapolis, Blackjack, Ross, Anderson, Gorst, Chico, Barier, Clear, Steele, Scandia, Dogfish, and Grovers Creeks; Hood Canal tribs.; Gamble, Little Anderson, Big Beef, Seabeck, Stavis, Boyce, and Anderson Creeks. All lakes within these watersheds.	15	Jeff Davis davisjpd@dfw.wa.gov	WDFW, Region 6 502 High ST, Suite 108 Port Orchard, WA 98366	(360) 895-3965
	Bainbridge Island Tribs.	15	Danette Guy guydlg@dfw.wa.gov	WDFW, Region 6 502 High ST, Suite 108 Port Orchard, WA 98366	(360) 895-4757
KITTITAS REGION 3	Little Naches River	38	Richard Visser visserhv@dfw.wa.gov	WDFW, Region 3 1701 S 24th Avenue Yakima, WA 98902-5720	(509) 457-9308
	Only tributaries associated with Forest-Practice	39, 40	Ken Bevis beviskrb@dfw.wa.gov	WDFW, Region 3 1701 S 24th AVE Yakima, WA 98902-5720	(509) 457-9309
	Yakima River and tribs.	39, 40	Brent Renfrow renfrbr@dfw.wa.gov	WDFW, Region 3 201 N. Pearl ST Ellensburg, WA 98926	(509) 925-1013
KLICKITAT REGION 5	All tributaries including mainstem Columbia River, EXCEPT tributaries in WRIA 37	29, 30, 31	Bill Weiler weilewjw@dfw.wa.gov	WDFW, Region 5 PO Box 213 Lyle, WA 98635	(509) 365-3972
LEWIS REGION 5	Cowlitz River and tribs. Nisqually River above Alder Dam	26	Steve Bell bellswb@dfw.wa.gov	WDFW, Region 5 249 Fish Hatchery Rd Mossyrock WA 98564	(360) 983-8326
	All tribs. Chehalis River (includes Bunker, Lincoln, and Stearns Creeks; and Newaukum, all Forks of Newaukum and Skookumchuck Rivers.)	11, 13, 23, 26	Scott Brummer brummsjb@dfw.wa.gov	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 748-2189
	Green River and tribs.	26	Bob Bicknell bicknrjb@dfw.wa.gov	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 274-9814
LINCOLN REGION 1	All streams and tributaries	43, 53	Karin Divins divinkad@dfw.wa.gov	WDFW, Region 1 8702 N Division ST Spokane, WA 99218-1199	(509) 255-6103
MASON REGION 6	All marine waters in Mason County, except north of Skokomish River and west side of Hood Canal. Case, Totten, Skookum, and Hammersley Inlets. Pickering and Peale Passages, and Hartstene Island. East side of Hood Canal.	14	Margie Schirato schirmms@dfw.wa.gov	WDFW, Region 6 600 Capitol Way N Olympia WA 98501-1091	(360) 427-2179

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
MASON REGION 6 (continued)	Skokomish mainstem and South Fork downstream of Forest Service Boundary in valley.	14	Jim Fraser frasejlf@dfw.wa.gov	WDFW, Region 6 600 Capitol Way N Olympia WA 98501-109	(360) 902-8302
	Freshwater in Mason County except mainstem Skokomish River and SF Skokomish up to Forest Service boundary and Kitsap Peninsula Union River and west. Hood Canal tribs; Lake Cushman; Vance, Weaver, Hunter, Finch, Eagle, Hill, Clark, Miller, Sund, Jorsted, Waketickeh, Schaffer, Alderbrook, and Twanoh Creeks. Lilliwap and Hamma Hamma Rivers. South Puget Sound tribs; Kennedy, Skookum, Little, Mill, Shelton, Johns, Cranberry, Deer, Malaney, Uncle John, Campbell, and Sherwood Creeks. All lakes within these watersheds, including Mason Lake.	16	Gloria Rogers rogergsr@dfw.wa.gov	WDFW, Region 6 P. O. Box 695 Elma, WA 98541	(360) 495-3068
	(Kitsap Peninsula) Dewatto, Tahuya, and Union Rivers. Also includes Big Mission, Little Mission, Rendsland, Caldervin, Coulter, and Shoofly Creeks. All lakes within these watersheds.	15	Danette Guy guydlg@dfw.wa.gov	WDFW, Region 6 502 High ST, Suite 108 Port Orchard, WA 98366	(360) 895-4757
	East Fork Satsop River. All lakes within these watersheds.	22	Gloria Rogers rogergsr@dfw.wa.gov	WDFW, Region 6 P. O. Box 695 Elma, WA 98541	(360) 495-3068
	Hood Canal Marine waters north of the Skokomish River on west side of Hood Canal.	16	Bob Burkle burklblb@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano WA 98563-9618	(360) 249-1217
OKANOGAN REGION 2	All tributaries EXCEPT mainstem Columbia River downstream from Chief Joseph Dam (S24 T29N R25E)	48, 49, 50, 51, 52, 53, 60	Connie Iten itencri@dfw.wa.gov	WDFW, Region 2 P.O. Box 753 Omak, WA 98841	(509) 826-3123
	Mainstem Columbia River downstream from Chief Joseph Dam (S24 T29N R25E)	48, 49, 50	Bob Steele steelrms@dfw.wa.gov	WDFW, Region 2 3860 Chelan Hwy. N Wenatchee, WA 98801	(509) 662-0503
	Forest Practices		Lynda Hofmann hofmalah@dfw.wa.gov	WDFW, Region 2 P.O. Box 1118 Twisp, WA 98856	(509) 997-9428
PACIFIC REGION 6	Upper Chehalis River & tribs.	23	Vacant (contact Jim Fraser)	WDFW, Region 6	(360) 902-8302
	Forest Practices		Dave Kloempken kloemdck@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 249-1218

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
PACIFIC REGION 6 (continued)	Marine waters (includes Pacific Ocean, Grays Harbor, and North and South Bays)	24	Key McMurry mcmurklm@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano WA 98563-9618	(360) 249-4628 (Ext. 231)
	North River Willapa Drainages, Willapa, Palix, and Bone River	24	Key McMurry mcmurklm@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano WA 98563-9618	(360) 249-4628 Ext. 231
PEND OREILLE REGION 1	All streams and tributaries	55, 57, 59, 61, 62	Jeff Lawlor lawlojjl@dfw.wa.gov	WDFW, Region 1 8702 N Division St. Spokane, WA 99218-1199	(509) 467-4085
PIERCE REGION 6	All marine waters (Puget Sound, Commencement Bay, Carr Inlet, Case Inlet, Gig Harbor, Colvos Passage, the Narrows)	10, 11, 12, 15	David Molenaar molendcm@dfw.wa.gov	WDFW, Region 6 600 Capitol Way N Olympia, WA 98501-1091	(360) 902-8303
	Freshwater in west county (west of Narrows) [Kitsap Peninsula] (Rocky, Dutcher, Artondale, Lackey, Minter, Purdy, McCormick, North, and Cresent Creeks. Rocky, Minter, and Huge Creeks. All lakes within these watersheds.	15	Danette Guy guydlg@dfw.wa.gov	WDFW, Region 6 502 High ST, Suite 108 Port Orchard, WA 98366	(360) 895-4757
	Freshwater in east county (east of Narrows), Entire Puyallup watershed, includes Hylebos, Wapato, Lake Tapps. All lakes within these watersheds. Nisqually River and tribs up to Alder Dam, Chambers, Clover, and Sequalichew Creeks; all lakes within these watersheds.	10, 11, 12	Travis Nelson nelsotwn@dfw.wa.gov	WDFW Voights Creek Hatchery 19112 Pioneer Way Orting, WA 98360	(360) 893-1721
	Nisqually River Basin. Freshwater above LaGrande Dam in WRIA 11.	11	Debbie Carnevali carneddc@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 264-5148
SAN JUAN REGION 4	Marine waters, includes Boundary Pass, East Sound, Haro Strait, Lopez Sound, Rosario Strait, San Juan Channel, Strait of Juan De Fuca, Upright Channel and West Sound. All freshwater, except Forest Practices.	02	Brian Williams willibww@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.250)
	Forest Practices		Alan Looff looffacl@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.251)
SKAGIT REGION 4	All marine waters includes: Bellingham Channel, Burrows Bay, Fidalgo Bay, Guemes Channel, Padilla Bay, Rosario Strait, and Samish Bay. Skagit River (WRIA 03) downstream of Fir Island Road.	01, 03, 04	Julie Klacan klacajlk@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext. 272)

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
SKAGIT REGION 4 (continued)	Skagit River and tribs; Samish River and tribs; Baker, Cascade, and Sauk Rivers; Colony, Finney, Grandy, and Oyster Creeks. Day Creek and Lake.	01, 03, 04	Brendan Brokes brokebjb@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext 253)
	Stillaguamish River; Pilchuck Creek	05, 07	David Brock brockdwb@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2302
	Forest Practices		Alan Looff looffacl@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.251)
SKAMANIA REGION 5	All tributaries (WRIA 28 and 29 only) including mainstem Columbia River	28, 29	Bill Weiler weilewjw@dfw.wa.gov	WDFW, Region 5 PO Box 213 Lyle, WA 98635	(509) 365-3972
	Cowlitz River tributaries	26	Bill Weiler weilewjw@dfw.wa.gov	WDFW, Region 5 PO Box 213 Lyle, WA 98635	(509) 365-3972
SNOHOMISH REGION 4	Marine waters south of Priest Point. Snohomish River downstream of I-5. Port Gardner, Possession Sound, Snohomish River Estuary.	07, 08	Pam Erstad erstapke@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2306
	Marine waters north of Priest Point.	07	Julie Klacan klacajlk@dfw.wa.gov	WDFW, Region 4 PO Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext 272)
	Stillaquamish and Snohomish Rivers; Quilceda, Allen, Pilchuck, Canyon, Church, French, Jim, Portage, and Squire Creeks. Ebey and Steamboat Sloughs.	05	David Brock brockdwb@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2302
	Skagit, Sauk, Carpenter, and Suiattle Rivers.	04	Brendan Brokes brokebjb@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext 253)
	Tribs to Puget Sound (Seattle to Everett). Sammamish River tribs. (Includes Bear, Little Bear, North, and Swamp Creeks)	07, 08, (07.1722) (08.0006; 08.0009; 08.0057 thru 08.0142)	Eric Pentico pentiedp@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2305
	Skykomish River; Woods Creek; Sultan and Wallace Rivers.	07	Mark Wenger wengemnw@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296	(425) 379-2321

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
SPOKANE REGION 1	All tributaries south of the line dividing T25N and T26N. Spokane River and all tribs west of Spokane River.	34, 43, 54, 56, 57	Karin Divins divinkad@dfw.wa.gov	WDFW, Region 1 8702 N Division ST Spokane, WA 99218-1199	(509) 255-6103
	All tributaries north of the line dividing T25N and T26N. All tribs east of Spokane River. Spokane Co Public Works projects.	54, 55, 57	Jeff Lawlor lawlojjl@dfw.wa.gov	WDFW, Region 1 8702 N Division ST Spokane, WA 99218-1199	(509) 467-4085
STEVENS REGION 1	All streams and tributaries	54, 55, 58, 59, 60, 61, 62	Allen Palmanteer palmagap@dfw.wa.gov	WDFW, Region 1 Post Office Box 29 Boyds, WA 99107	(509) 738-2364
THURSTON REGION 6	All marine waters (includes Nisqually Reach, Budd Inlet, Totten Inlet, Eld Inlet, and Henderson Inlet)	13	Margie Schirato schirmms@dfw.wa.gov	WDFW, Region 6 600 Capitol Way N Olympia WA 98501-1091	(360) 427-2179
	Freshwater in Thurston County. Nisqually, Deschutes Rivers, Woodland, Woodard, Green Cove, Schneider, and Perry Creeks.	parts of: 11, 13, 14	Debbie Carnevali carneddc@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 264-5148
	Chehalis River Basin and its tribs. South Thurston County. Black, and Skookumchuck Rivers. Blooms Ditch, Salmon, Beaver, Sherman, Waddell, Dempsey, Stoney, and Scatter Creeks. Lands owned by DNR and Weyerhaeuser throughout Thurston Co.	parts of: 23	Debbie Carnevali carneddc@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618	(360) 264-5148
WAHKIAKUM REGION 5	All tributaries including mainstem Columbia River.	25	Bob Bicknell bicknrjb@dfw.wa.gov	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661	(360) 274-9814
WALLA WALLA REGION 1	Mainstem Snake River & Columbia River	32, 33	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave Suite 115 Kennewick WA 99336	(509) 734-7432
	All other streams and tributaries	32, 33	Mark Grandstaff grandmhg@dfw.wa.gov	WDFW, Region 1 Post Office Box 456 Walla Walla, WA 99362	(509) 529-0260
WHATCOM REGION 4	All fresh water **EXCEPT** areas covered by Looff, Brokes, and Williams. Includes Nooksack and Sumas Rivers; California, Dakota, and Chuckanut Creeks. Lake Whatcom.	00, 01	Robert Warinner warinrjw@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.252)
	Forest Practices		Alan Looff looffacl@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext.251)

COUNTY/ REGION	STREAMS	WRIAS	BIOLOGIST	ADDRESS/	PHONE #
WHATCOM REGION 4 (continued)	Colony Creek, Samish River, Samish Lake.Upper Friday and Oyster Creeks. Samish and Skagit River headwaters.	01, 03, 04	Brendan Brokes brokebjb@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext 253)
	Marine waters (includes Bellingham Bay, Birch Bay, Burrows Bay, Fidalgo Bay, Guemes Channel, Padilla Bay, Rosario Strait and Samish Bay; Freshwater within the City of Bellingham **EXCEPT** Whatcom Lake. Whatcom Creek.	01, 03	Brian Williams willibww@dfw.wa.gov	WDFW, Region 4 Post Office Box 1100 La Conner, WA 98257	(360) 466-4345 (Ext. 250)
WHITMAN REGION 1	Mainstem Snake River	34, 35	Paul LaRiviere larivpel@dfw.wa.gov	WDFW, Region 3 3030 W Clearwater Ave Suite 115 Kennewick WA 99336	(509) 734-7432
	All other tributaries	34, 35	Karin Divins divinkad@dfw.wa.gov	WDFW, Region 1 8702 N Division ST Spokane, WA 99218-1199	(509) 255-6103
YAKIMA REGION 3	Upper Klickitat River (in Yakima County) Yakima River, Little Naches, Naches, and Tieton Rivers, and Ahtanum and Wenas Creeks; Mainstem Columbia River and its tributaries downstream to Priest Rapids Dam	30, 37, 38, 39	Richard Visser visserhv@dfw.wa.gov	WDFW, Region 3 1701 S 24th Avenue Yakima, WA 98902-5720	(509) 457-9308
	Only streams and tributaries associated with Forest Practices	37, 38	Ken Bevis beviskrb@dfw.wa.gov	WDFW, Region 3 1701 S 24th Avenue Yakima, WA 98902-5720	(509) 457-9309

REGIONAL HABITAT PROGRAM MANAGERS			
Region 1	Spokane	Kevin Robinette robinkwr@dfw.wa.gov	WDFW, Region 1 8702 N Division ST Spokane, WA 99218-1199 (509) 625-5545
Region 2	Ephrata	Tracy Lloyd lloydtml@dfw.wa.gov	WDFW, Region 2 1550 Alder ST NW Ephrata, WA 98823-9651 (509) 754-4624
Region 3	Yakima	Ted Clausing claustac@dfw.wa.tov	WDFW, Region 3 1701 S 24th Avenue Yakima, WA 98902-5720 (509) 457-9314
Region 4	Mill Creek	Deborah Cornett cornedmc@dfw.wa.gov	WDFW, Region 4 16018 Mill Creek Blvd. Mill Creek, WA 98012-1296 (425) 775-1311 Ext 114
Region 5	Vancouver	Steve Manlow manloswm@dfw.wa.gov	WDFW, Region 5 2108 Grand Blvd. Vancouver, WA 98661 (360) 906-6731
Region 6	Montesano	Steve Kalinowski kalinsak@dfw.wa.gov	WDFW, Region 6 48 Devonshire RD Montesano, WA 98563-9618 (360) 249-1227 Ext 223

Include, in the project definition (scoping), a recommended conceptual design approach to remove a barrier to fish passage for projects scheduled for construction where a fish passage barrier has been inventoried, evaluated and prioritized. The barrier must be identified on the Subprogram I4 deficiency list six-year plan. The recommended conceptual design approach will be a joint effort between the WDFW SSHEAR Program and WSDOT region environmental/hydraulics offices. Barrier correction may be included in the project as per the following, which is derived from the subprogram I4 programming instructions:

Paving project (subprogram P1): The purpose of these projects is to preserve the roadway, and fish barriers are typically not fixed in these projects. The program does allow for minor, spot safety improvements, with a dollar limit of $25,000. Low cost barriers could be fixed under this allowance, at the discretion of WSDOT.

Safety (subprogram I2) and Mobility (I1) projects: The purpose of these projects is to eliminate safety deficiencies, primarily high accident corridors and locations (HACs & HALs), and increase capacity, respectively. Fish barriers can be fixed in I2 and I1 projects in one of two ways:

If the safety or mobility project requires work on a culvert that is a barrier and the culvert work necessitates an HPA, then WSDOT is required to fix the barrier.

If there is a barrier culvert within the limits of the safety or mobility project, but the project does not require work on the culvert, WSDOT may fix the barrier on a case-by-case exception basis.

When using its discretion in these cases, WSDOT will consider the priority of the barrier and the relative cost of the fix. WSDOT does not want to divert large sums of funding away from the intended purpose of these subprograms, which necessitates the case-by-case review.

The above does not address all funding subprograms, only the common ones.

The highest priority fish passage barriers are fixed as stand-alone projects funded by subprogram I4 (environmental retrofit).

WSDOT will install and maintain all culverts, fishways, and bridges to provide unrestricted fish access, per RCW 77.55.060. Design will be based on the latest version of the Fish **Passage Design at Road Culverts** manual or its successor. In addition to fish passage, passage for other aquatic and terrestrial species will be considered and addressed to the extent possible when designing crossing structures.

WSDOT will not be required to maintain fish passage facilities off their right-of-ways which they do not own. However, WSDOT will provide funding to apply corrective measures and maintenance where it has been shown, that the barrier resulted from a WSDOT action or facility.

WSDOT/WDFW will continue to participate in the statewide inventory of fish passage barriers in WSDOT right-of-ways. The inventory will include a recommended course of action to correct fish passage problems on high priority projects. Additionally, personnel will note instances where other wildlife species movement is disrupted by WSDOT crossing structures. Passage problems related to other wildlife species will be discussed with the local AHB when maintenance or replacement projects occur. This inventory will be reviewed and upgraded annually .

The participating agencies agree to establish priorities for correcting identified fish passage barriers using WDFW priority index as a guideline using the following criteria:

- Fish Species Presence and Stock Condition as documented in federal threatened or endangered species listings and Washington State Salmon and Steelhead Stock Inventory (SASSI) reports).
- Fish production increase as a result of the project.
- Habitat or potential habitat opened up to fish access.
- Cost to correct.

The priority for barrier removal shall be established on a statewide basis.

The goal is for removal of all identified barriers shall be done by 2021.

WSDOT/WDFW shall jointly decide which agency will remove each barrier on a case by case basis.

List barriers by priority in the WSDOT/WDFW Fish Passage Barrier Database

Where it has been determined that WDFW will conduct corrective work for WSDOT, an interagency agreement will be developed for each project to identify agency responsibilities and budgetary commitment, and scope of work of on a project by project basis.

Appendix D: GUIDELINES

The latest edition of the following sources will be used in designing transportation projects to eliminate or minimize impacts to fish life.

1. The most recent final version of the Integrated Streambank Protection Guidelines
2. Fish Passage at Road Culverts Manual
3. Fish Barrier Assessment and Prioritization Manual
4. WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000.
5. Additional documents will be added as they become available.

Appendix E: Conditions for issuance of Standard, Expedited, and Emergency HPAs

STANDARD	EXPEDITED	EMERGENCY
Circumstances under which HPA shall be issued		
When WSDOT desires to construct any form of hydraulic project or perform other work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state per RCW 77.55.100 (1).	When normal permit processing would result in significant hardship for WSDOT or unacceptable damage to the state highway facility or environment. In cases of imminent danger, WDFW shall issue an expedited written permit, upon request, for work to repair existing structures, move obstructions, restore banks, protect property, or protect fish resources per RCW 77.55.100 (3). "Imminent danger" means a threat by weather, water flow, or other natural conditions that is likely to occur within sixty days of submission of a permit application. ,	When WDFW determines or the county legislative authority issues a written declaration that an emergency exists and is an immediate threat to life, the public, property, or of environmental degradation, arising from weather or stream flow conditions or other natural conditions. (RCW 77.55.100 (5)).
Requirements for issuance		
Complete written application, and Notice of compliance with SEPA	Complete **written** application SEPA compliance is **not** required	No application required — request may be verbal or written SEPA compliance is **not** required
How issued		
Written only	Written only	In writing or verbally and if verbally then:
Time frame for issuance		
Within 45 days of receipt of a complete application and compliance with SEPA	Within 15 days of receipt of a complete **written** application	Immediately upon request **Must** be reduced to writing within 30 days of a verbal approval

Highway Maintenance: Repair and maintenance includes activities conducted on currently serviceable road structures, facilities and equipment involving no expansion or use beyond that previously existing and resulting in no significant hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems and includes replacement of improperly functioning facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure is not changed. (An example would be replacing a collapsed, fish-blocking, round culvert, with a new box culvert under the same span, or width, of highway.) Highway maintenance will fall into one of three general categories:

Routine maintenance

This category means budgeted work, performed on a scheduled basis. It is intended to maintain the highway facility/element so that it retains its original intended use and function. Examples include: Sweeping and debris removal; Cleaning ditches, culverts, and catch basins; Correcting moderate slides and slope failures; Vegetation management and litter pickup; Routine bridge maintenance; Rest Area operation and maintenance; Pavement patching, crack sealing, and routine surface treatment; Bridge maintenance such as debris removal, scour; Restoration/replacement of traffic control devices; Maintaining access control; Drainage restoration; Placing riprap; Snow and ice control; Traffic control. WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000.

In marine waters the following are examples of maintenance; cleaning ferry docks and approaches, replacing cable on counter weights, refacing sacrifice structures, minor dredging (#50 cubic yards), replacing 18 or fewer pilings in dolphins, wingwalls, and docks that do not result in an increase in the number of pilings or the square footage of pilings and which do not contain creosote.

Unscheduled (non-emergency) Maintenance

This category consists of unanticipated activities that occur due to unusual weather condition, vandalism, accident, and so on, but do not pose an immediate danger to the highway or structure. Work activities are conducted similar to routine maintenance activities except that work is unanticipated and the condition poses an imminent danger to the existing structures or traveling public. In cases of imminent danger, WSDOT shall complete and submit a JARPA requesting an expedited written HPA permit, for work to repair existing structures, move obstructions, restore banks, protect property, or protect fishlife resources. It only retains the existing functionality of its original design. Maintenance does not include construction of new roadway elements. Examples include: Streambank protection; Bridge maintenance such as debris removal, scour (approaches, abutments & piers); Repair slides and slope failures; Repair of culverts. BMPs from WSDOT Maintenance Manual for Water Quality and Habitat Protection, June 2000 shall be used during maintenance activities.

Emergency/Disaster Maintenance

This category is activities required to alleviate an emergency condition. Work activities are the same or similar to routine maintenance activities except that they are greater in magnitude and scope depending upon the nature and intensity of the emergency. This work is not budgeted and/or scheduled and the situation creates an immediate threat to life, the public, property, or environmental degradation. This includes work accomplished on a damaged highway facility/element that has substantially retained the intended functionality of it original design. It does not include construction of new roadway elements. Examples include: Erection, dismantling, and maintenance of a Bailey bridge; Establishment of detours and temporary minor structures; Emergency traffic control; Any work needed to protect and maintain the area affected by the emergency. WSDOT Maintenance Manual for Water Quality and Habitat Protection,

Chronic Repair/Maintenance: When the AHB determines and WSDOT agrees to the frequency of the maintenance activity exceeds an acceptable threshold. The thresholds for chronic repair/maintenance varies with types of maintenance activities being performed on road structures and may include the following consideration:

- Extensive and frequent repairs are not normally a part of the initial road structure and might be an indicator of inadequate design. Damage from large flood events would not be considered as chronic repair/maintenance.
- The original project design criteria should be considered; if it was under-designed, or changes in the watershed have occurred, retrofit should be considered.

A chronic Repair/Maintenance Retrofit category is being created in the I-4 - Environmental Retrofit Improvement subprogram that will be administered through WSDOT Environmental Services Office. Projects identified as chronic repair/maintenance problems will be prioritized using an environmental retrofit index. Chronic repair/maintenance problems which, have been prioritized by this index, pose the highest risk to fish life, would be targeted for retrofit construction using I-4 category funding. Projects would be limited to the amount of funding received by the Washington State Legislature. Until projects are funded WDFW agrees to issues HPAs for maintenance activities to keep the highway operational.

WAC 220-110-340 Informal appeal of adverse administrative decisions. It is recommended that an aggrieved party contact the local habitat biologist responsible for the hydraulic permit decision of concern prior to initiating an informal or formal appeal. Discussion of concerns with the habitat biologist often results in resolution of the problem without the need for an informal or formal appeal. The habitat biologist may request review of your concerns by his or her supervisor. All parties are encouraged to take advantage of this informal appeal process prior to initiating a formal appeal. However, this informal appeal process is not mandatory, and a person may proceed directly to a formal appeal. (1) The following procedures shall govern informal appeals of department actions taken pursuant to RCW 75.20.100, 75.20.103, 75.20.106, and 75.20.160. This rule does not apply to any provisions or conditions in pamphlets or supplemental approvals as defined in WAC 220-110-020 (44)(c). A person who disagrees with a provision or condition in a pamphlet HPA or its supplemental approval may apply for an individual written HPA. A person who is aggrieved or adversely affected by the following department actions may request an informal review: (a) The denial or issuance of an HPA, or the conditions or provisions made part of an HPA; or (b) An order imposing civil penalties. (2) A request for an informal review shall be in writing and shall be received by the department within thirty days of the denial or issuance of an HPA or receipt of an order imposing civil penalties. The thirty-day time requirement may be stayed by the department if negotiations are occurring between the aggrieved party and the habitat biologist and/or their supervisor. Requests for informal review shall be mailed to Department of Fish and Wildlife, Habitat and Lands Services Program, 600 Capitol Way N., Olympia, Washington 98501-1091, or hand delivered to 1111 Washington Street S.E., Habitat and Lands Services Program, Fifth floor. (3) Upon receipt of a written request for informal agency review, the department shall initiate a review of the agency decision. This review shall be conducted by the regulatory services division manager or the division manager's designee. Upon completion of the comprehensive review, the division manager, or designee shall recommend a decision to the director or the director's designee. This recommended decision shall be approved or disapproved by the director or the director's designee within sixty days of the date the informal appeal was received by the department. The department shall notify the appellant in writing of the decision of the director or the director's designee. (4) If, following this informal agency review process, the appellant still wishes to contest the agency action, a formal appeal may be initiated pursuant to WAC 220-110-350. Formal review must be requested within the time periods specified in WAC 220-110-350.

[Statutory Authority: RCW 75.08.080 , 75.20.100 and 75.20.330 . 99-01-088 (Order 98-252), § 220-110-340, filed 12/16/98, effective 1/16/99. Statutory Authority: RCW 75.08.080. 94-23-058 (Order 94-160), § 220-110-340, filed 11/14/94, effective 12/15/94; 87-15-086 (Order 87-48), § 220-110-340, filed 7/20/87. Statutory Authority: RCW 75.08.012, 75.08.080 and 75.20.100. 84-04-047 (Order 84-04), § 220-110-340, filed 1/30/84. Statutory Authority: RCW 75.20.100 and 75.08.080. 83-09-019 (Order 83-25), § 220-110-340, filed 4/13/83.]

WAC 220-110-350 Formal appeal of administrative decisions. (1) The following procedures shall govern formal appeals of department actions taken pursuant to RCW 75.20.100 or 75.20.106. This rule does not apply to any provisions or conditions in pamphlets or supplemental approvals as defined in WAC 220-110-020 (44)(c). A person who disagrees with a provision or condition in a pamphlet HPA or its supplemental approval may apply for an individual written HPA. This rule does not apply to an appeal in which a person contests the denial, conditioning or issuance of an HPA issued pursuant to RCW 75.20.103 or 75.20.160, which shall be heard by the hydraulic appeals board. A person who is aggrieved or adversely affected by the following department actions may request a formal appeal: (a) The denial or issuance of an HPA, or the conditions or provisions made part of an HPA; (b) An order imposing civil penalties; or (c) Any other "agency action" for which an adjudicative proceeding is required under the Administrative Procedure Act, chapter 34.05 RCW. (2) As required by the Administrative Procedure Act, the department shall inform the permittee, or person subject to civil penalty or order of the department, of the opportunity for appeal, the time within which to file a written request for an appeal, and the place to file it. (3) A request for an appeal shall be in writing and shall be received during office hours by the department within thirty days of the agency action

that is being challenged. Requests for appeal shall be mailed to Department of Fish and Wildlife, Habitat and Lands Services Program, 600 Capitol Way N., Olympia, Washington 98501-1091, or hand delivered to 1111 Washington Street SE, Habitat and Lands Services Program, Fifth floor. If there is no timely request for an appeal, the agency action shall be final and unappealable. (4) The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, the deadline for requesting a formal appeal shall be within thirty days of the date of the department's written decision in response to the informal appeal. (5) The written request for an appeal shall be plainly labeled as "Request for Formal Appeal" and shall contain the following: (a) The name, address, and phone number of the person requesting the appeal; (b) The specific agency action that the person contests; for example, denial of an HPA, a particular condition in an HPA, order imposing civil penalties, etc.; (c) Whether the person is the permittee, landowner, resident, or other basis for the person's interest in the agency action in question; (d) The date of denial, issuance, or condition of an HPA, if the person is contesting denial, issuance, or conditioning of an HPA; (e) Specific relief requested; and (f) The attorney's name, address, and phone number, if the person is represented by legal counsel. (6) The appeal may be conducted by the director, the director's designee, or by an administrative law judge (ALJ) appointed by the office of administrative hearings. If conducted by an ALJ, the ALJ shall issue an initial order pursuant to RCW 34.05.461. The director or the director's designee shall review the initial order and enter a final order as provided by RCW 34.05.464. (7) All hearings conducted by the director, the director's designee, or an ALJ pursuant to subsection (6) of this section, shall comply with the Administrative Procedure Act and the model rules of procedure, chapter 10-08 WAC.

[Statutory Authority: RCW 75.08.080 , 75.20.100 and 75.20.330 . 99-01-088 (Order 98-252), § 220-110-350, filed 12/16/98, effective 1/16/99. Statutory Authority: RCW 75.08.080. 94-23-058 (Order 94-160), § 220-110-350, filed 11/14/94, effective 12/15/94; 87-15-086 (Order 87-48), § 220-110-350, filed 7/20/87. Statutory Authority: RCW 75.08.012, 75.08.080 and 75.20.100. 84-04-047 (Order 84-04), § 220-110-350, filed 1/30/84. Statutory Authority: RCW 75.20.100 and 75.08.080. 83-09-019 (Order 83-25), § 220-110-350, filed 4/13/83.]

Working Agreement
Between
The Seattle District, Corps of Engineers,
The Washington Division, Federal Highway Administration, and
The Washington State Department of Transportation

July 26, 1993

I. Purpose

The purpose of this working agreement is to clarify and streamline the Corps of Engineers (Corps) permit process for the Washington Division, Federal Highway Administration (FHWA) and the Washington State Department of Transportation (WSDOT), and to facilitate earlier involvement of the Corps in WSDOT projects. As a result it is anticipated that permit applications will be submitted and permit decisions will be made earlier in the WSDOT project development process, and that the Corps will be a more integral part of WSDOT design decisions, thereby saving time and money for all three agencies. It is designed primarily to facilitate the processing of WSDOT/FHWA permit applications involving wetland fills and mitigation; however, it can be used for WSDOT projects involving other types of work.

Specifically, this is to be accomplished by the early and continuous flow of information between the project managers at the Corps and WSDOT, so that both parties are fully aware at the earliest possible stages of the project of any possible problems, necessary design changes, or other contingencies. To facilitate contacts between agencies, a list of staff positions and telephone numbers involved in permit applications is included as Appendix A to this agreement. Normal procedure will be for WSDOT district staff to coordinate with the Corps project manager assigned to the area where the project is located.

This agreement will also assist in integrating the Corps permit process and NEPA processes whenever possible, in order to avoid unnecessary duplication of effort and paperwork for agencies and the public. Through this integration, it is anticipated that FHWA and WSDOT will be better able to satisfy the requirements of the National Environmental Policy Act (NEPA) regarding early identification and resolution of environmental issues. This agreement is consistent with *Applying the Section 404 Permit Process to Federal-Aid Highway Projects* (the red book) published jointly by the Federal Highway Administration (FHWA), the National Oceanic and Atmospheric Administration Fisheries, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service in September 1988.

II. Authority

All work in navigable waters of the U.S. requires a Corps of Engineers permit under Section 10 of the Rivers and Harbors Act of 1899. Discharges of dredged or fill material into navigable waters, and all other waters, including wetlands, require a permit under Section 404 of the Clean Water Act.

III. Preliminary Coordination Meetings

This section contains descriptions of the various meetings and field visits that may be utilized early in the permitting process to improve interagency coordination and timeliness. Section IV contains other detailed procedures for coordination before and during the permit application process. In addition to these meetings, other contacts such as telephone calls and sharing of documents are encouraged. The meetings are listed in order from those that are general in nature and cover many projects, to meetings that are very specific, covering one, or a few, projects. The timing of the meetings is such that there will be sufficient time to revise a project if potential impacts warrant a change, while still keeping the project on schedule.

A. Biennial Project Review Meeting: The purpose of these meetings is to discuss, in general terms, potential environmental impacts of proposed projects; and to provide an opportunity for agencies to provide information on affected resources that may change a project's schedule or budget. These meetings are conducted by each WSDOT district, and attended by WSDOT staff from the headquarters Environmental Branch, District Program and Project Development offices, FHWA Area Engineers, and Corps project managers. Staff from other agencies and tribes will also be invited, when appropriate. These meetings will be held in even-numbered years when project prospectuses and preliminary project budgets are being developed.

B. Design Alternatives Meeting: This meeting is conducted specifically to review proposed project alternatives and is held only for projects with significant impacts. The meeting is called and conducted by WSDOT Districts, with staff from other agencies and tribes invited, when appropriate. A field review and/or future meeting may be necessary to complete the necessary coordination. Design alternative meetings should occur as early in the project development process as possible. Specific areas of concern to each agency or tribe will be addressed and scheduled for discussion.

C. Monthly Project Review Meeting: These meetings are held monthly by the Corps and WSDOT, specifically for the purposes of considering information pertinent to WSDOT permit applications in process and obtaining information on possible future permits. The meetings are attended by Corps regulatory staff, WSDOT Headquarters Environmental staff, and WSDOT District staff from districts whose projects are under consideration. Staff from the Washington State Department of Ecology and other agencies and tribes will also be invited, when appropriate. At this meeting, specific information related to permit requirements, design alternatives, and permit progress are discussed. All WSDOT projects with potential Corps jurisdiction are considered.

D. Pre-Application Meeting: These are interagency meetings held by the Corps on the third Wednesday of every month for the purpose of allowing other agencies an opportunity to hear first-hand from an applicant the details of a project and to provide preliminary comment. These meetings are generally reserved for very large or controversial projects and must be scheduled with the Corps at least 3 to 4 weeks in advance. WSDOT staff must be prepared to discuss impacts to resources, mitigation, and alternatives at the meeting. Any available information WSDOT wishes to have reviewed by resource agencies prior to the meeting must be submitted to the Corps for distribution at least 3 weeks prior to the meeting.

E. Pre-Construction Conference: These meetings are called and conducted by WSDOT Districts to discuss specific construction techniques for environmental mitigation on individual projects, after the contract has been awarded. The need for the Corps to attend this meeting is based upon the degree of sensitivity anticipated in constructing the mitigation, the use of unconventional construction techniques, or contractor unfamiliarity with constructing environmental features. It is understood by the parties that this meeting is primarily for the benefit of the contractor, and that the contract cannot be changed. Corps project managers may be invited when Corps jurisdiction is significantly involved.

IV. Permit Application Process

The permit application process can vary substantially, depending upon the extent of impact to waters of the U.S., including wetlands, the type of permit applicable (nationwide or individual), and requirements for satisfying NEPA. It is desired by FHWA, WSDOT and the Corps that the permit application be done in phases, with each agency providing input to the other as details become available. The initial phase of the application takes place at the time that project alternatives are being analyzed, either as part of the Design Alternatives meeting, or if that meeting is not held or the Corps does not attend that meeting, prior to the time that a preferred alternative is selected.

A. The following describes general responsibilities and actions in the initial phase of the permit application process (if it is certain that an individual 404 permit will be required, go directly to Section IV.B.):

1. WSDOT: Sends the initial application materials, along with a transmittal letter designating WSDOT contact personnel, to the Corps at the address below:

   Regulatory Branch
   ATTN: Environmental and Processing Section
   Seattle District, Corps of Engineers
   P.O. Box 3755
   Seattle, WA 98124-2255

   For this initial phase of the process, the permit application will include the following:

a. A completed Corps application form (ENG Form 4345, Jan. 91). Standard Corps drawings normally required for individual permits are not required at this time. However, the drawings submitted must indicate Corps jurisdiction, and drawings are required only for parts of the project having Corps jurisdiction.

b. Project description, including location map showing project alignments and Corps jurisdiction.

c. A description of the purpose and need for the project.

d. Type of NEPA documentation anticipated for the project.

e. Wetland Report (see Appendix B for details). The report will include a delineation of affected and avoided aquatic resources. The 1987 manual prepared by the Corps will be used for wetland delineation.

2. Corps: Upon receipt of the application, establishes a file for tracking purposes and assigns a Project Manager. Normally within 15 days, contacts WSDOT district representative for coordination and review of the project, and notifies WSDOT contact personnel of the file number and Corps Project Manager.

Normally within 30 days of receipt of application, arranges a site visit with WSDOT to confirm resource and wetland delineations, if necessary.

Normally within 45 days after receipt of the initial application materials and field inspection, provides a letter advising that:

a. Additional information is required before a jurisdictional determination can be made (the Corps lists the specific information needed); or

b. The project does not fall within the jurisdiction of the Corps of Engineers and a permit is not required; or

c. The project meets the Corps requirements for a nationwide permit or multiple nationwide permits and may require coordination with other agencies (Corps will initiate or notify WSDOT); or

d. The project would meet the Corps requirements for a nationwide permit or permits if listed specific design changes were adopted; or

e. The project requires an individual permit (the Corps lists additional information which needs to be provided).

B. Individual Permit Process

The individual permit process is a comprehensive public review process which includes application of the Section 404(b)(1) guidelines for projects involving placement of fill material into waters of the U.S., including wetlands. The 404(b)(1) evaluation includes analysis of project purpose, water dependency, alternatives, impacts, and proposed mitigation. It is anticipated that for most projects requiring individual permits, a SEPA or NEPA environmental process will be undertaken simultaneously, that WSDOT will be conducting its alternative analysis concurrently, and that much of the same information will be used in both WSDOT's process and in the Corps permit process. (See Section V. below for further information.) The following steps give the Corps and WSDOT the opportunity to coordinate so that the proper information is included in permit applications and environmental documentation, and is received by the appropriate parties at the appropriate time.

1. WSDOT After notification by the Corps of the need for an individual permit, submits the following information when applicable:

   a. A summary description of the overall project and a detailed description of the work within Corps jurisdiction, presented on the Corps application form (ENG Form 4345, Jan. 91) (a copy of the project description from the environmental document works well).

   b. Complete, concise drawings of the project site in appropriate format (see Appendix C).

   c. Preliminary Mitigation Plan (see Appendix D for details).

   d. Alternatives Analysis Discussion (a summary description of alternatives considered, including an analysis of cost, logistic and technical considerations and anticipated environmental consequences) and mitigation proposed for each.

2. Corps Upon review of and satisfaction with the above information, including field verification of wetland boundaries, if necessary, initiates the public review process by issuing a public notice. The public notice normally provides for a 30 day period for federal, state, and local agencies, tribes, interest groups, and the general public to provide comment.

3. Corps Upon completion of the public review, and receipt of any additional required information from WSDOT, normally (unless prevented by other federal regulatory requirements, e.g., Endangered Species Act consultation) makes a permit decision (e.g., issues or denies the permit) within 30 days after receipt of the Water Quality Certification (401) from the Washington State Department of Ecology.

4. WSDOT If the project schedule is adjusted, notifies the Corps of the reason for the change and expected completion dates. Any project changes that affect the aquatic resource made after a permit is issued may require a complete new permit application and public notice process. Such changes are to be avoided if at all possible.

5. Corps If additional restrictions or conditions become necessary for protection of the resource during construction, consults with WSDOT prior to modifying the permit (this may be done by telephone in situations which require expediting).

V. Integration of NEPA & §404

A. In order to avoid unnecessary duplication of effort and paperwork for both agencies and the public, it is desirable to integrate the Corps permit process and the NEPA process whenever possible. The goal is to incorporate Section 404 with the NEPA process so that timely permit decisions can be made. Toward that end, the following will take place:

1. WSDOT Coordinates mailing lists and public reviews.

   Invites other appropriate Federal/State agencies to participate as cooperating or commenting agencies.

   Concurrently with the Corps public review process, circulates Draft EIS to Corps and other affected regulatory and resource management agencies.

2. Both Conduct joint or concurrent public hearings if applicable.

3. WSDOT Considers all comments received from SEPA or NEPA public review. Formulates final environmental document.

   Circulates final environmental document.

B. Requests for the Corps to be a Cooperating Federal Agency on EIS Projects

1. The Corps has agreed to be a cooperating federal agency with the FHWA on projects that require an individual permit if a NEPA EIS is to be prepared for the project. A request that the Corps be a cooperating agency must originate from FHWA. FHWA's involvement in the project should be explained fully in the cooperating agency request. Depending on staff availability, the Corps may choose to limit their role as cooperating agency to participating in the scoping process and reviewing the Preliminary Draft and Preliminary Final EIS. The Corp will respond to cooperating agency requests within 30 days of receiving them.

2. The cooperating agency request must include a detailed project description. There should be enough detail for the Corps to determine what impact the project has within Corps jurisdiction. The FHWA must also identify if the project is funded under ISTEA.

3. The Corps will not be a cooperating agency on projects authorized by a nationwide permit or if no Corps regulatory involvement is anticipated.

C. Corps Responsibilities as a Cooperating Agency

When acting as a cooperating federal agency, the Corps will (to the extent that resources allow):

1. Cooperate in the application of principles for integration of NEPA and Section 404 Permits contained in Chapter 11 of *Applying the Section 404 Permit Process to Federal-aid Highway Projects*, published by FHWA.

2. Attend environmental scoping meetings, coordination meetings, and joint field reviews, as appropriate.

3. Participate in joint public involvement activities, as appropriate.

4. Provide meaningful and early input on issues within Corps jurisdiction.

5. Provide assistance to FHWA/WSDOT during development of the project design alternatives.

6. Assist FHWA/WSDOT in determining appropriate and practicable mitigation, including "all practicable measures to minimize harm."

7. Review pre-draft and pre-final environmental documents, making sure that the FHWA/WSDOT are informed of any changes needed to reflect the views and concerns of the Corps on matters related to their jurisdiction.

8. Adopt the final environmental document if, after an independent review, the Corps concludes that the document satisfies NEPA and other requirements for its approvals, permits, licenses and/or clearances on the proposed actions.

D. Corps Responsibilities as a Commenting Agency

The Corps will begin any needed public review process during the draft EIS review stage. All comments received by the Corps from agencies or the public will be sent to FHWA and WSDOT. WSDOT will work with the Corps to resolve the issues in order to have the permit decision made concurrently with the NEPA Record of Decision (unless prevented by other requirements).

VI. Conflict Resolution

It is expected that conflicts will be resolved at the field level. In the event that issues cannot be agreed upon by field personnel of the agencies involved, all parties agree to elevate the issues of concern to equivalent levels in each organization.

The typical hierarchy for the resolution of disputes is as follows:

Corps	**WSDOT**
Project Manager	District Environmental Project Specialist
Chief, Environmental and Processing Section	District Environmental Program Manager
Chief, Regulatory Branch	Headquarters Environmental Program Manager

VII. Duration of Working Agreement

This Working Agreement will become effective upon signatures of the parties, and will remain in effect until terminated. Either party may terminate this agreement upon 30-day written notice to the other. Written notice of termination shall include the reasons for the termination.

VIII. Revisions to This Working Agreement

Revisions to this Working Agreement may be initiated by either party and will become final after agreement by both parties and appropriate signatures are attached. A meeting of the participating agencies may be called at any time as needed.

Agreed to:

(original signed by person named below)
WALTER J. CUNNINGHAM

Colonel, Corps of Engineers
District Engineer

8/5/93
Date

(original signed by person named below)
BARRY F. MOREHEAD

Division Administrator
Federal Highway Administration

8/6/93
Date

(original signed by person named below)
SID MORRISON

Secretary of Transportation

8/9/93
Date

Approval as to form:

(original signed by person named below)

Assistant Attorney General, State of Washington

7/27/93
Date

Appendix A

FHWA, Corps, and WSDOT Permit Coordination Staff

Corps of Engineers Seattle District Contacts

Chief, Regulatory Branch

Tom Mueller
Corps of Engineers
Regulatory Branch
PO Box 3755
Seattle, WA 98124-2255
(206) 764-6695
FAX (206) 764-6602

Chief, Environmental and Processing Section

Ann Uhrich
Corps of Engineers
Regulatory Branch
PO Box 3755
Seattle, WA 98124-2255
(206) 764-6748
FAX (206) 764-6602

Corps of Engineers Permit Conditions

Western Washington

Jack Kennedy
Corps of Engineers
Regulatory Branch
PO Box 3755
Seattle, WA 98124-2255
(206) 764-3495
FAX (206) 764-6602

Eastern Washington

Tim Erkel
Corps of Engineers
Regulatory Branch
PO Box 1929
Airway Heights, WA 99001-1929
(509) 244-0176
FAX (509) 244-5150

Federal Highway Administration Washington Division Contacts

Division Administrator

Barry Morehead
Federal Highway Administration
711 S Capitol Way, #501
Olympia, WA 98501-0943
(206) 753-9413 (SCAN 234)
FAX (206) 753-9889

Environmental Specialist

Jose Miranda
Federal Highway Administration
711 S Capitol Way, #501
Olympia, WA 98501-0943
(206) 753-9556 (SCAN 234)
FAX (206) 753-9889

Department of Transportation Headquarters Contacts

Senior Biologist

Jim Schafer
WSDOT
PO Box 47329
Olympia, WA 98504-7329
(206) 705-7403 (SCAN 705)
FAX (206) 705-6815

Mitigation Specialist

Barb Aberle
WSDOT
PO Box 47329
Olympia, WA 98504-7329
(206) 705-7404 (SCAN 705)
FAX (206) 705-6815

Project Biologist (Impact Assessment)

Paul Wagner
WSDOT
PO Box 47329
Olympia, WA 98504-7329
(206) 705-7406 (SCAN 705)
FAX (206) 705-6815

Biologist

Bill Null
WSDOT
PO Box 47329
Olympia, WA 98504-7329
(206) 705- (SCAN 705)
FAX (206) 705-6815

Biologist

Mary Ossinger
WSDOT
PO Box 47329
Olympia, WA 98504-7329
(206) 705- (SCAN 705)
FAX (206) 705-6815

Department of Transportation District Contacts

(See attached District Map)

District 1

Environmental Coordinators

Ralph Nichols
WSDOT
PO Box 330310
Seattle, WA 98133-9710
(206) 440-4521 (SCAN 440)
FAX (206) 440-4805

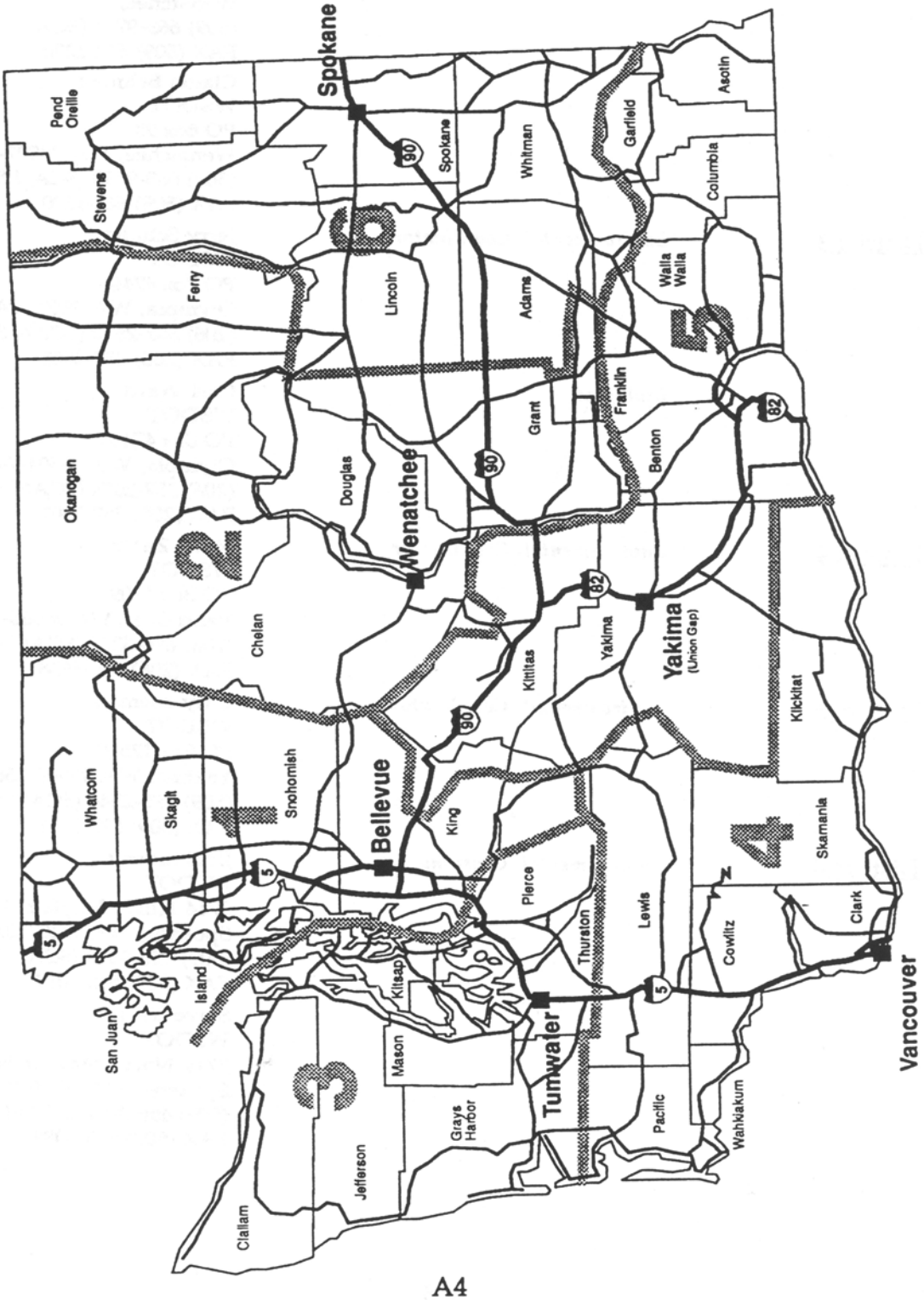
Ben Brown
WSDOT
PO Box 330310
Seattle, WA 98133-9710
(206) 440-4528 (SCAN 440)
FAX (206) 440-4805

Dan Hagglund
WSDOT
PO Box 330310
Seattle, WA 98133-9710
(206) 440-4528 (SCAN 440)
FAX (206) 440-4805

Biologist

Charlie Plummer
WSDOT
PO Box 330310
Seattle, WA 98133-9710
(206) 440-4533 (SCAN 440)
FAX (206) 440-4805

District 2	*Environmental Coordinators*	Bruce Hamilton WSDOT PO Box 98 Wenatchee, WA 98807-0098 (509) 663-9761 (SCAN 565) FAX (509) 664-1200
		Claton Belmont WSDOT PO Box 98 Wenatchee, WA 98807-0098 (509) 663-9690 (SCAN 565) FAX (509) 664-1200
District 3	*Environmental Coordinator*	Jerry Schultz WSDOT PO Box 47440 Olympia, WA 98504-7440 (206) 357-2660 (SCAN 357) FAX (206) 357-2601
	Biologist	Carl Ward WSDOT PO Box 47440 Olympia, WA 98504-7440 (206) 357-2674 (SCAN 357) FAX (206) 357-2601
District 4	*Environmental Coordinator*	Steve Zaske WSDOT PO Box 1709 Vancouver, WA 98668-1709 (206) 696-6338 (SCAN 476) FAX (206) 696-6638
District 5	*Environmental Coordinator*	Gary Beeman WSDOT PO Box 12560 Yakima, WA 98909-2560 (509) 575-2544 (SCAN 558) FAX (509) 575-2561
District 6	*Environmental Coordinators*	Jim Prudente WSDOT 2714 North Mayfair St. Spokane, WA 99207-2090 (509) 456-3015 (SCAN 545) FAX (509) 545-3089
		Steve Yach WSDOT 2714 North Mayfair St. Spokane, WA 99207-2090 (509) 456-3015 (SCAN 545) FAX (509) 545-3089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Appendix B

WSDOT Guidelines for Wetland Reports

Wetland reports are required by regulatory agencies for projects where wetlands may be adversely affected during project construction. At WSDOT, the wetland report supplied to these agencies is composed of two separate elements: the Wetland Inventory Report and Wetland Biology Report. Used to describe and classify wetlands within the vicinity of a proposed highway project, they are requested from a WSDOT wetlands biologist at the earliest stages of project development. The Wetland Inventory Report provides early identification of wetland resources for the consideration of design changes which might avoid and minimize impacts to wetlands. After project alternatives are developed, the Wetland Biology Report is prepared to accurately describe wetlands and other important aquatic resources and impacts to these resources for each alternative under consideration. A typical report includes a wetland assessment, an impact assessment, and may include a mitigation proposal. The following sections describe information required in Wetland Inventory Reports and Wetland Biology Reports.

A. Wetland Inventory Report

This document identifies wetlands in the project vicinity at the earliest stages of project development and classifies and evaluates their functions and values. A WSDOT wetland biologist or qualified consultant prepares this report upon request from the District Environmental Manager.

The following information must be provided in a Wetland Inventory Report:

1. Project description

    a. Location

    b. Setting

    c. Geography

    d. Water resources located within the project area (lakes, streams, ponds)

    e. Published inventory information

    f. National Wetland Inventory Map

    g. Hydric soil map and soils information

    h. Aerial photo wetland interpretation (if available)

    i. Local jurisdiction inventory (if available)

    j. Washington Natural Heritage Program data on rare plants, or high quality wetlands

k. Department of Wildlife Nongame and Priority Habitat information

l. Federal Emergency Management Agency (FEMA) Flood Insurance Rates maps (if applicable)

2. Wetland identification and location

Each wetland community on the site should be described by including:

a. Species composition of each plant community including a map showing plant community boundaries

b. U.S. Fish and Wildlife (Cowardin) classification

c. Connection and proximity to nearby water bodies

d. Known or suspected wildlife use

e. Evidence of recent or historic disturbances

f. Habitat features

g. Characterization of wetland soil

h. A brief description of adjacent upland plant communities

i. A description of the wetland buffer

j. Approximate size of the wetland

k. A subjective determination of wetland functions and values

l. Its rating, based on Ecology's *Washington State Wetlands Rating System* (Rating system data sheets should be appended to the report.)

m. List of potential impacts to wetlands from project implementation if known

3. Wetlands identified within the project area should be mapped and numbered, with corresponding data sheets appended to the report. Wetland location should be listed with reference to milepost, engineers station, toe of slope, or other physical location related to project construction.

Note: statements concerning whether the wetland is isolated or associated are preliminary and are provided to give an indication of the function of the wetland in the landscape. The U.S. Army Corps of Engineers has the final authority to make this determination.

4. The wetlands identified should be presented in a table format that includes the following information:

a. Location of wetland by highway stationing or milepost
b. A subjective determination of wetland functions and values
c. Wetland category (Department of Ecology rating system)

The wetland Inventory Report is submitted to the District Environmental Manager with a copy to the Project Engineer. It is used as part of the data for initial development of project design alternatives.

B. Wetland Biology Report

After project alternatives are developed, the WSDOT district requests a Wetland Biology Report from the Wetlands Biologist. The Wetland Biology Report details specific impacts associated with each proposed alternative. While it includes some of the information from the Wetland Inventory, it is far more specific regarding plant and animal communities. The Wetland Biology Report should provide detailed information on how wetland functions and values will be adversely affected by the proposed project. The report should discuss the effects of both direct impacts (e.g., filling, dredging, clearing, and alterations to wetland hydrology) as well as indirect impacts (increased intrusion, increased noise, light, and glare, etc.) on each wetland. Water quality impacts (e.g., sedimentation, nutrients, hydrocarbons, and toxics) should also be discussed. The report should estimate the area of each wetland. The Wetland Biology Report should also include specific information on how the boundary of the wetland was determined. The report must include the general information found in the Wetland Inventory Report in addition to the following information:

1. A complete set of the field data forms filled out during the wetland determination and delineation

2. The site map showing wetland boundaries and other aquatic resources, and locations of all data points

3. Topographic map of the area

4. The site designation on a National Wetland Inventory map

5. The site designated on local wetland inventories (if available)

6. The site designated on a Soils Survey Report soils map

WSDOT project staff use the Wetland Biology Report to evaluate the location and design alternatives to avoid and/or minimize impacts to wetlands. Wetland acreage and areas of unavoidable impact are determined after the alternatives have been evaluated. This information is used as the basis for determining the size and type of wetland mitigation needed.

The Wetland Biology Report should include a discussion on how the project has been designed (and how it could be modified) to avoid and minimize adverse impacts to wetlands. An estimate of the amount and time of mitigation required to compensate for wetland impacts should be discussed.

Appendix C

Drawing Checklist and Sample Drawings

for Individual Permit Applications

DETAILED DRAWING CHECK LIST FOR PERMIT APPLICATIONS

1. General

( ) Use clear black printing and fewest number of sheets possible.

2. Title Block

( ) Describe the facility or work (e.g., Pier, Float, Mooring Buoy, Bulkhead, Fill, Excavation, Outfall, etc.).
( ) Indicate whether application is for repair and preservation of existing work, proposed work or both.

3. Vicinity Map

( ) Show location of construction site(s). Indicate latitude and longitude of site(s) to nearest second.
( ) Name waterway.
( ) Show roads, streets, and mileage to nearest town or city limits.

4. Plan View

( ) Show Shorelines.
( ) Tidal: Show mean high water line (MHW Line) or mean higher high water line (MHHW Line) for fills.
( ) Lakes: Show ordinary high water line (OHW Line).
( ) Streams: Show ordinary high water line (OHW Line).
( ) Show Federal harbor lines where established.
( ) Show dimensions of structure, distance of structure from property lines and encroachment beyond applicable high water line.
( ) Indicate quantity and type of fill and method of handling material, if any.
( ) Show all existing structures on subject and adjacent properties waterward of applicable high water line.
( ) Show direction of currents such as tidal ebb and flood.
( ) Note existing or pending permits in navigable waters at the site. If none, note age of all existing structures.
( ) Indicate adjacent property ownership.
( ) Show and identify any wetland vegetation that is affected by the project.

5. Elevation and/or Section Views

( ) Show the same water levels as on plan view.
( ) Show original and proposed ground liens, overall and typical dimensions of structure, and pertinent vertical dimensions to top and base of structure.
( ) Show and identify any special aquatic sites that are affected by the project (e.g., sanctuaries or refuges, wetlands, mud flats, vegetated shallows such as eelgrass beds, and riffle and pool complexes).

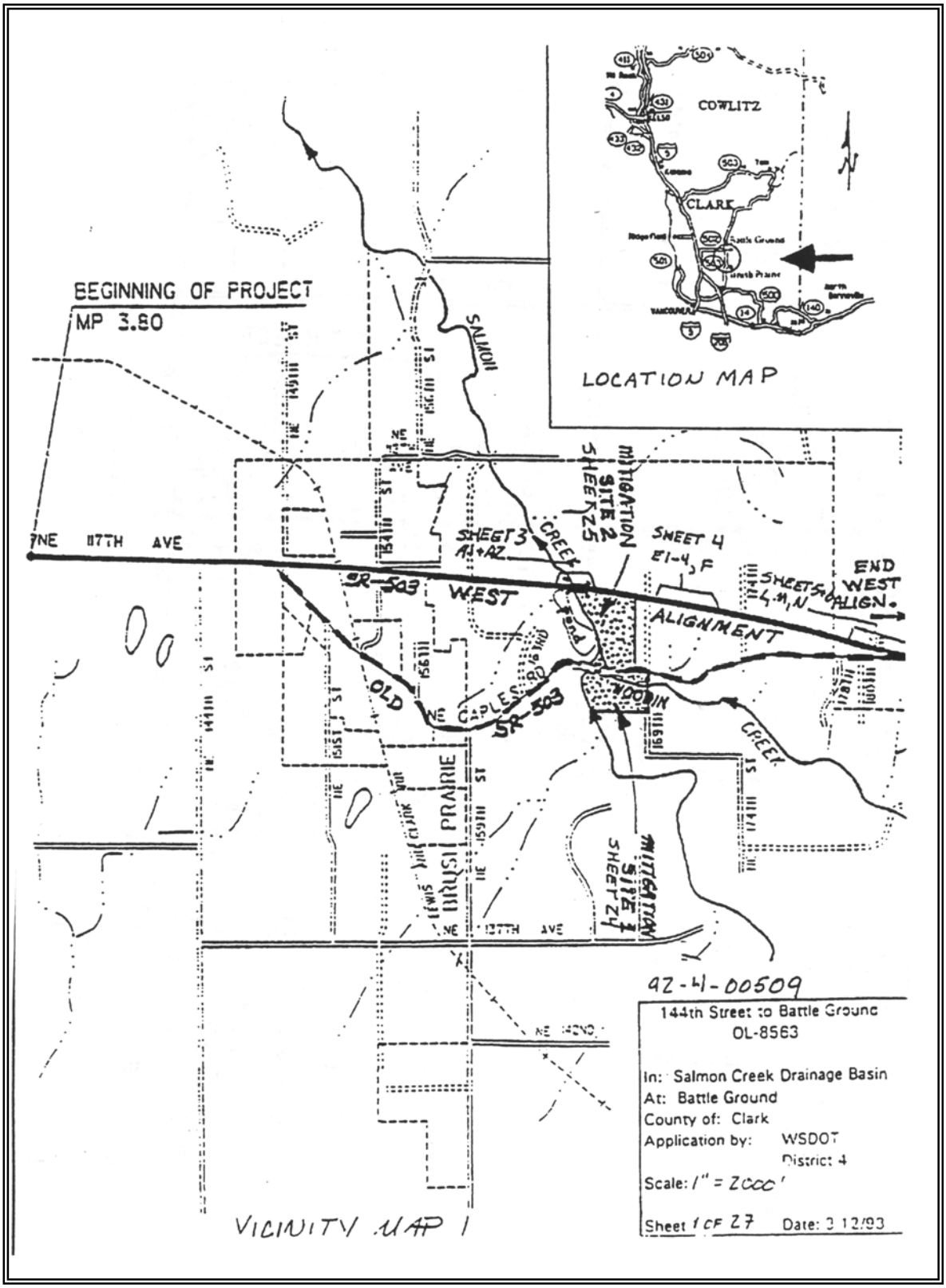
6. Notes

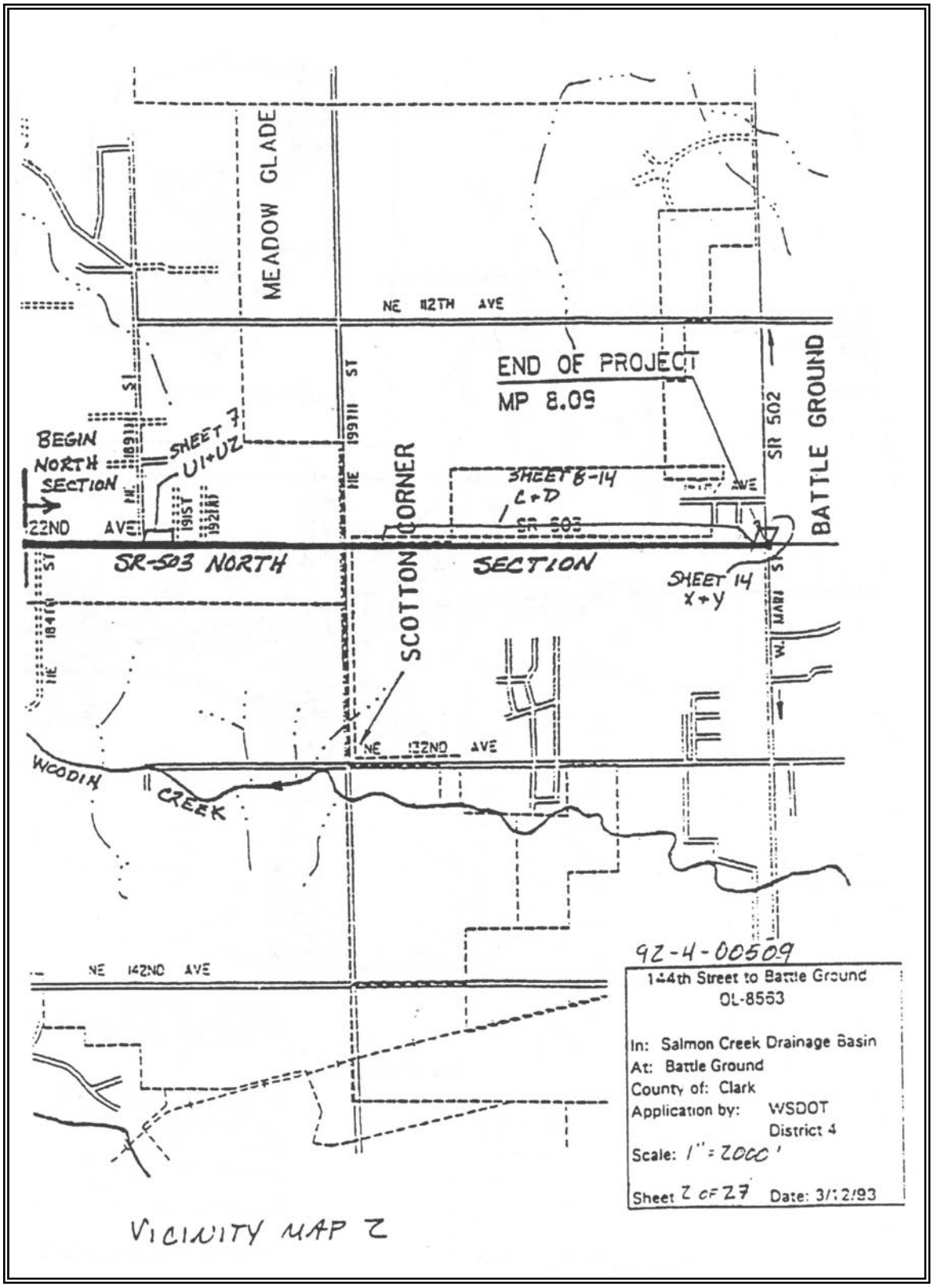
( ) State purpose of the existing or proposed facility or work.
( ) List property owners and indicate by number on plan.
( ) Show datum used in plan and elevation views.
( ) Provide photographs of shoreline in both directions at project site.

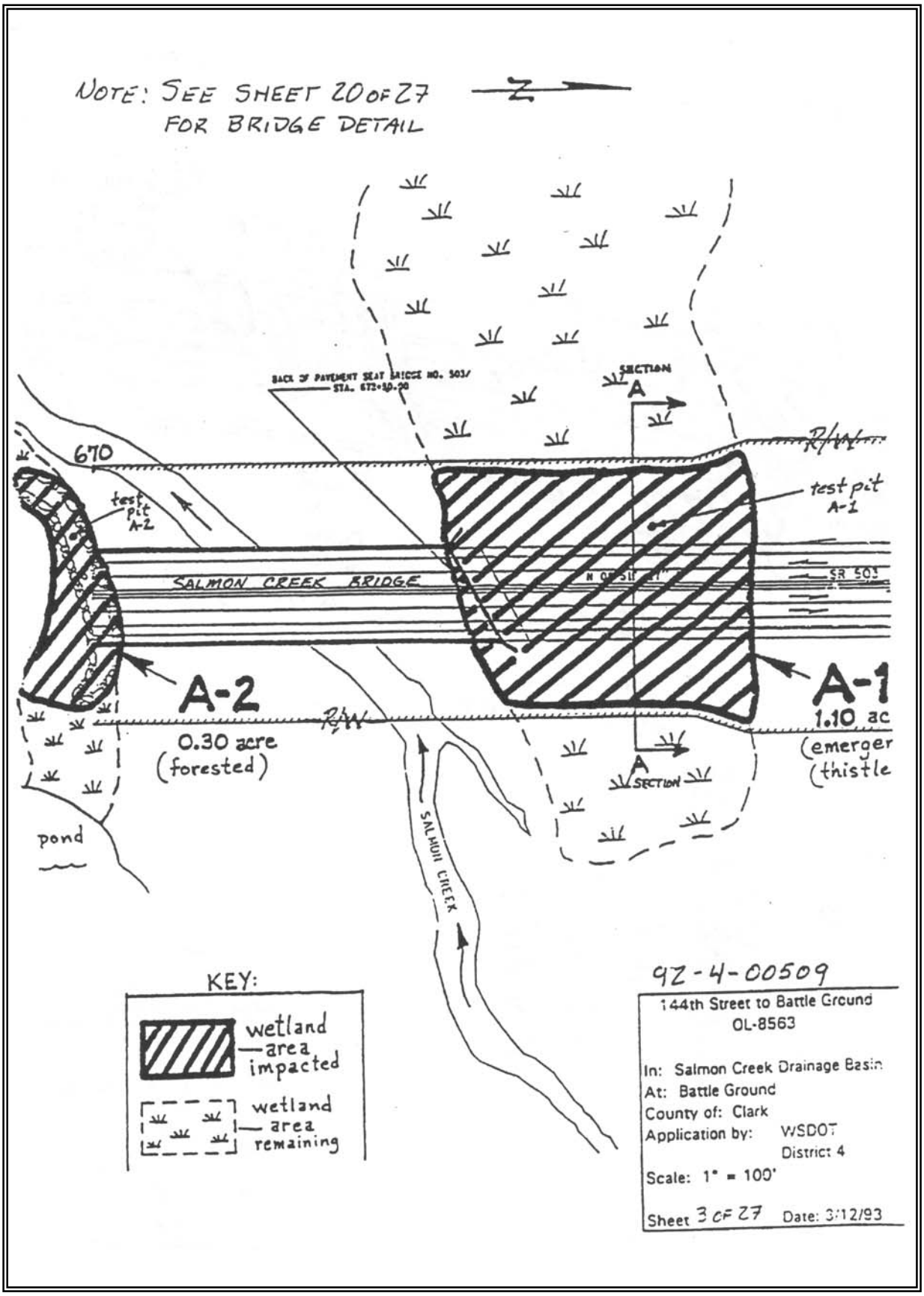
7. Remarks

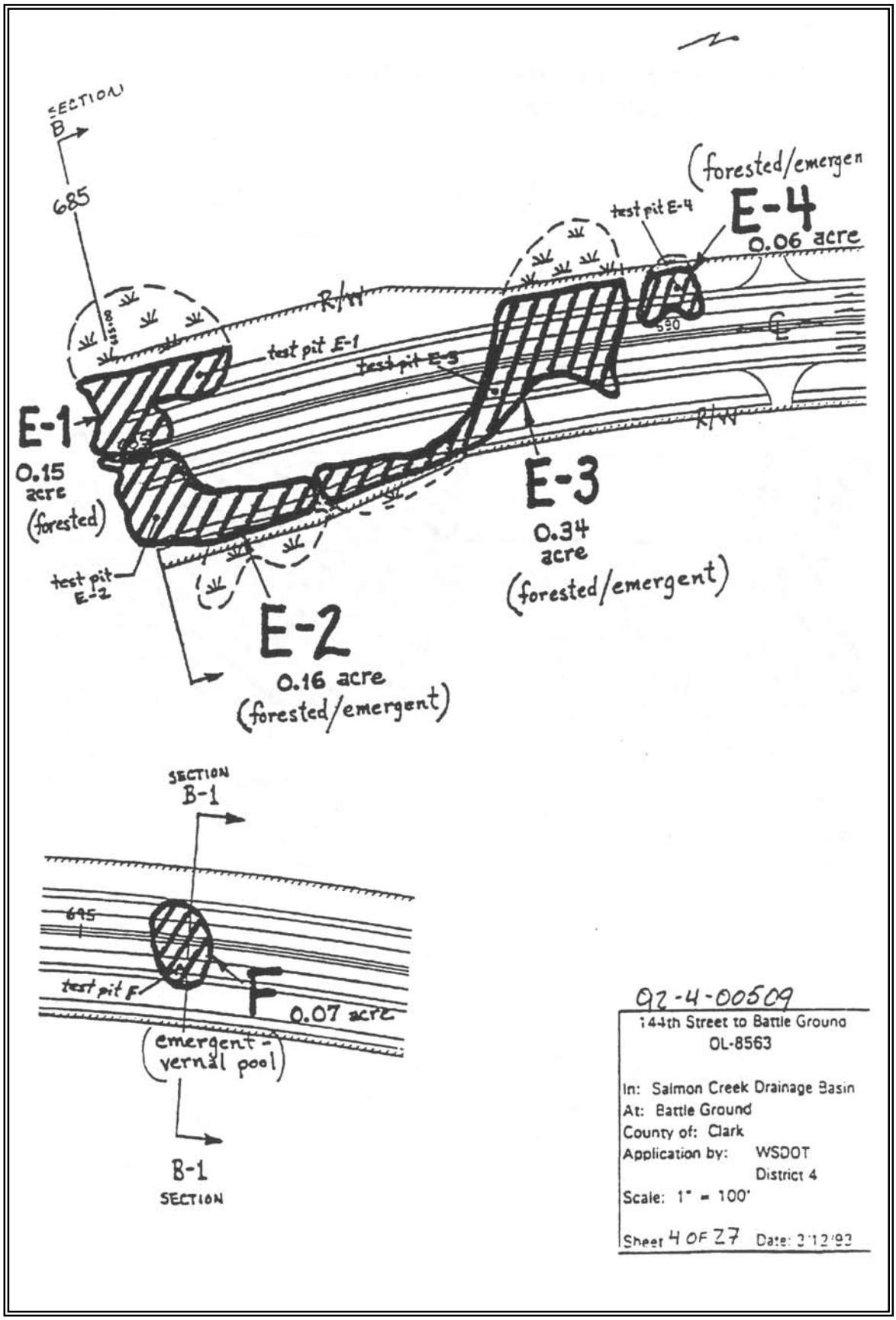
_____

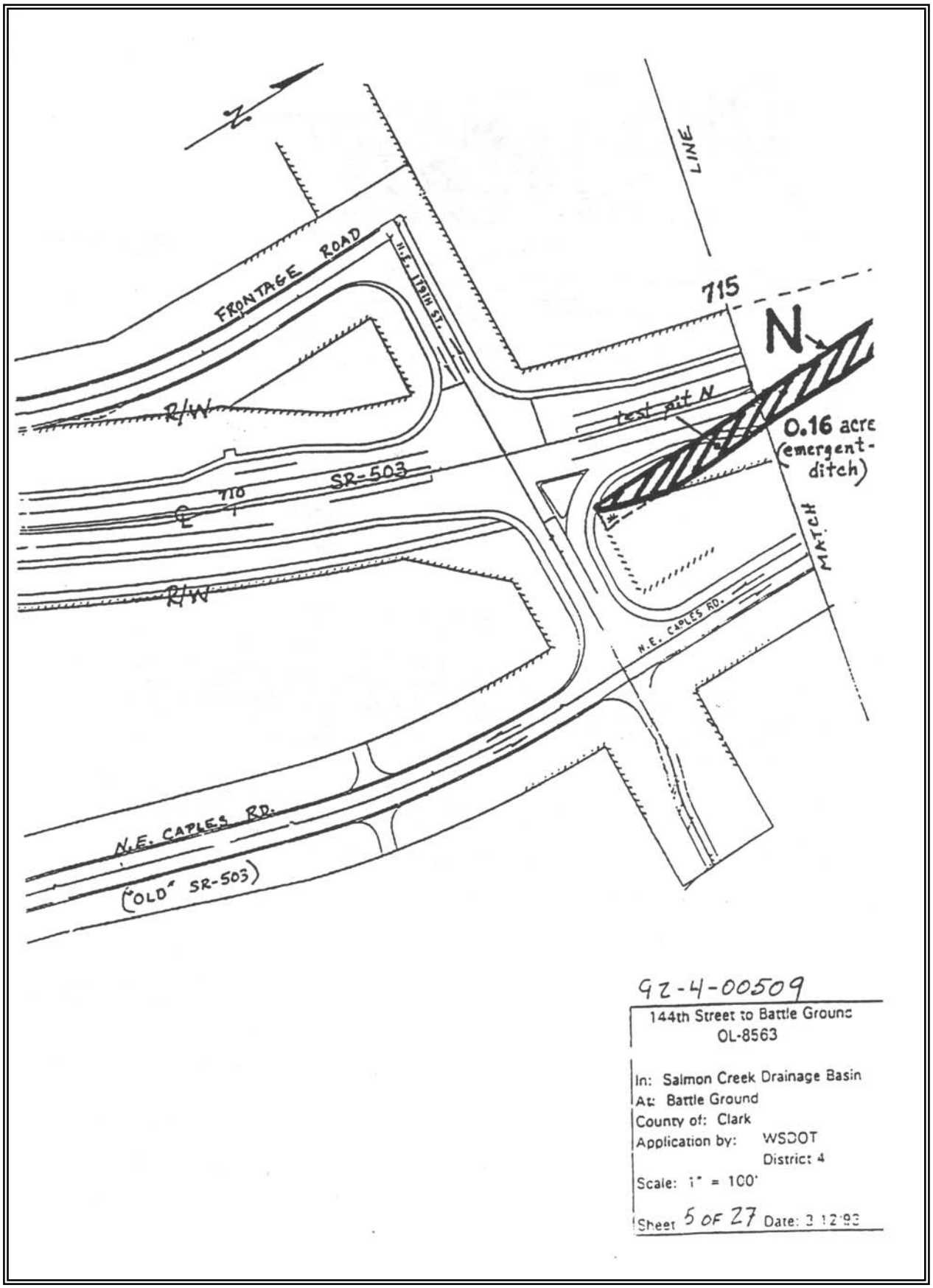
_____

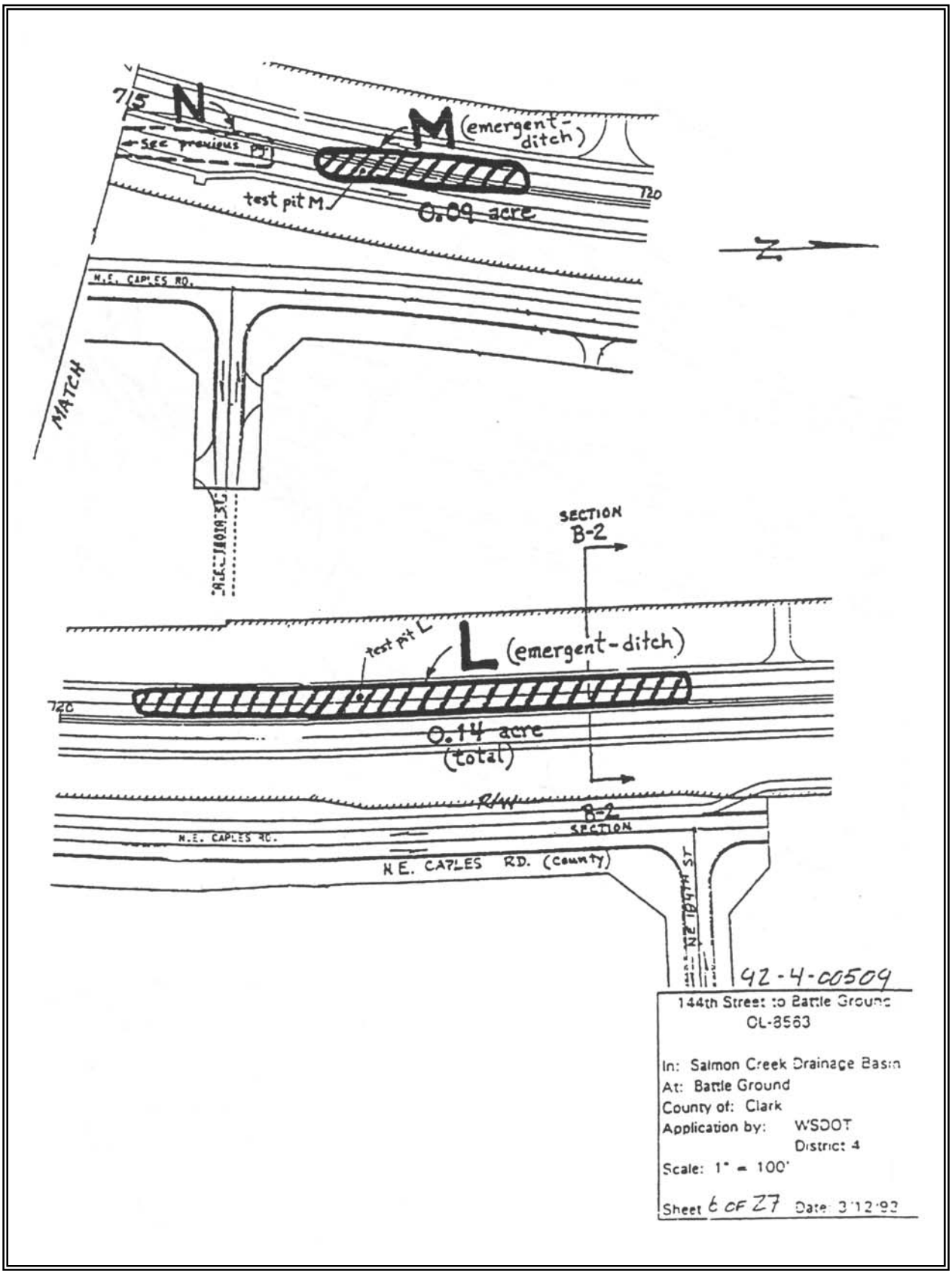

COWLITZ
CLARK
LOCATION MAP
BEGINNING OF PROJECT
MP 3.80
SALMON
MITIGATION SITE 2 SHEET 25
SHEET 3 A1+A2
SHEET 4 E1-4, F
SHEETS 5 & 6 L-M, N
END WEST ALIGN.
NE 117TH AVE
SR-503 WEST
ALIGNMENT
OLD
CAPLES RD
SR-503
WOODIN
CREEK
PRAIRIE
MITIGATION SITE 1 SHEET 24
NE 137TH AVE
92-41-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 2000'
Sheet 1 OF 27
Date: 3 12/93
VICINITY MAP 1

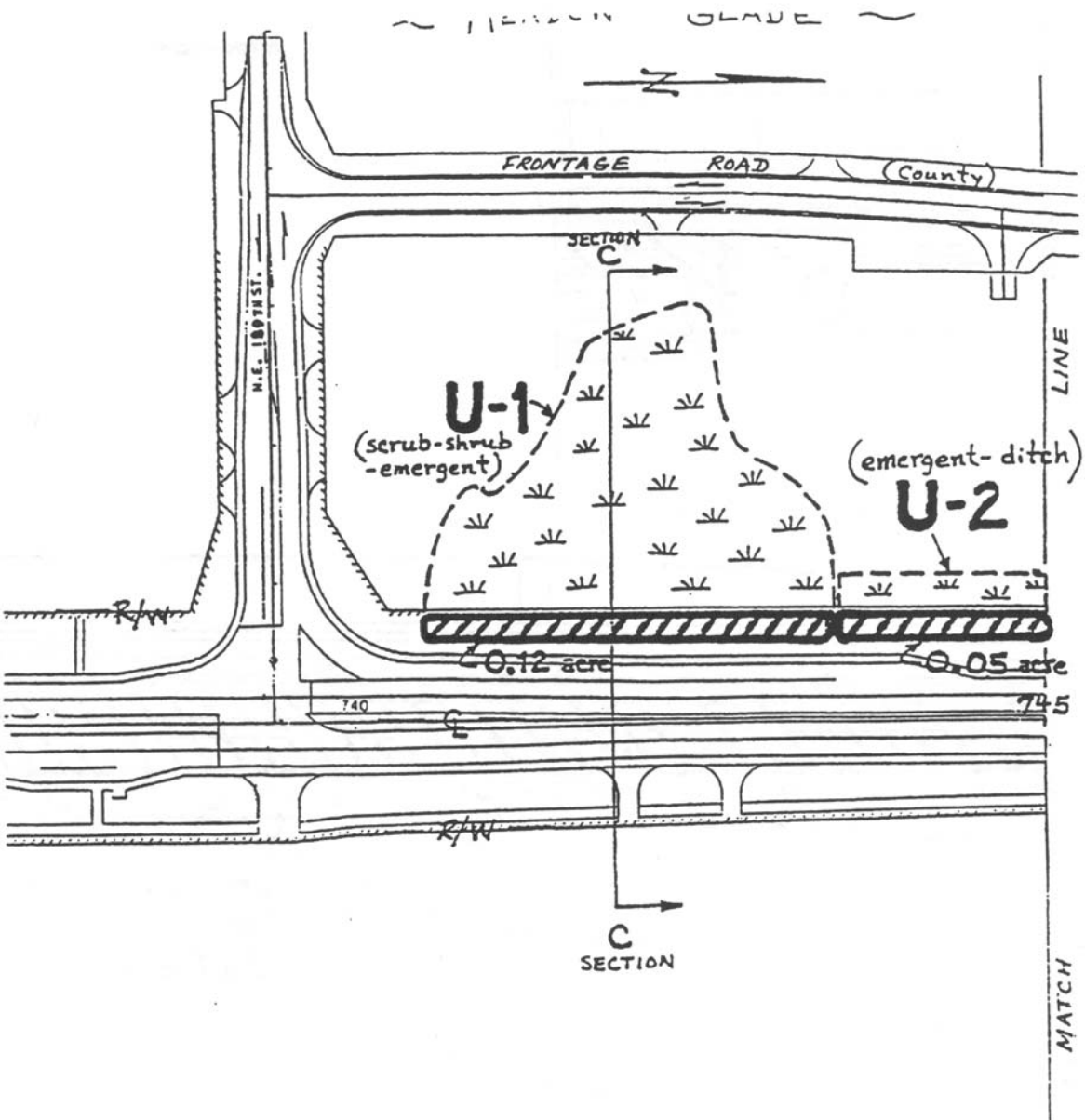

MEADOW GLADE
NE 112TH AVE
END OF PROJECT
MP 8.09
SR 502
BATTLE GROUND
BEGIN
NORTH
SECTION
SHEET 7
U1+U2
SHEET 8-14
C+D
SR 503
22ND AVE
SR-503 NORTH
SECTION
SHEET 14
X+Y
SCOTTON CORNER
NE 132ND AVE
WICODIN CREEK
NE 142ND AVE
92-4-00509
144th Street to Battle Ground
OL-8553
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 2000'
Sheet 2 of 27
Date: 3/12/93
VICINITY MAP 2


NOTE: SEE SHEET 20 OF 27
FOR BRIDGE DETAIL
BACK OF PAVEMENT SEAT BRIDGE NO. 503/
STA. 672+50.00
SECTION
A
670
R/W
test pit
A-2
test pit
A-1
SALMON CREEK BRIDGE
SR 503
A-2
0.30 acre
(forested)
A-1
1.10 ac
(emerger
(thistle
pond
SALMON CREEK
KEY:
wetland
area
impacted
wetland
area
remaining
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 3 OF 27
Date: 3/12/93


SECTION B
685
(forested/emergen
test pit E-4
E-4
0.06 acre
R/W
test pit E-1
test pit E-3
590
E-1
0.15 acre (forested)
E-3
0.34 acre (forested/emergent)
test pit E-2
E-2
0.16 acre (forested/emergent)
SECTION B-1
645
test pit F
F
0.07 acre
(emergent - vernal pool)
B-1 SECTION
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4
Scale: 1" = 100'
Sheet 4 OF 27 Date: 3/12/93


N
FRONTAGE ROAD
N.E. 119TH ST.
R/W
SR-503
710
R/W
715
LINE
N
test pit N
0.16 acre
(emergent-
ditch)
MATCH
N.E. CAPLES RD.
N.E. CAPLES RD.
("OLD" SR-503)
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 5 OF 27 Date: 3 12 93

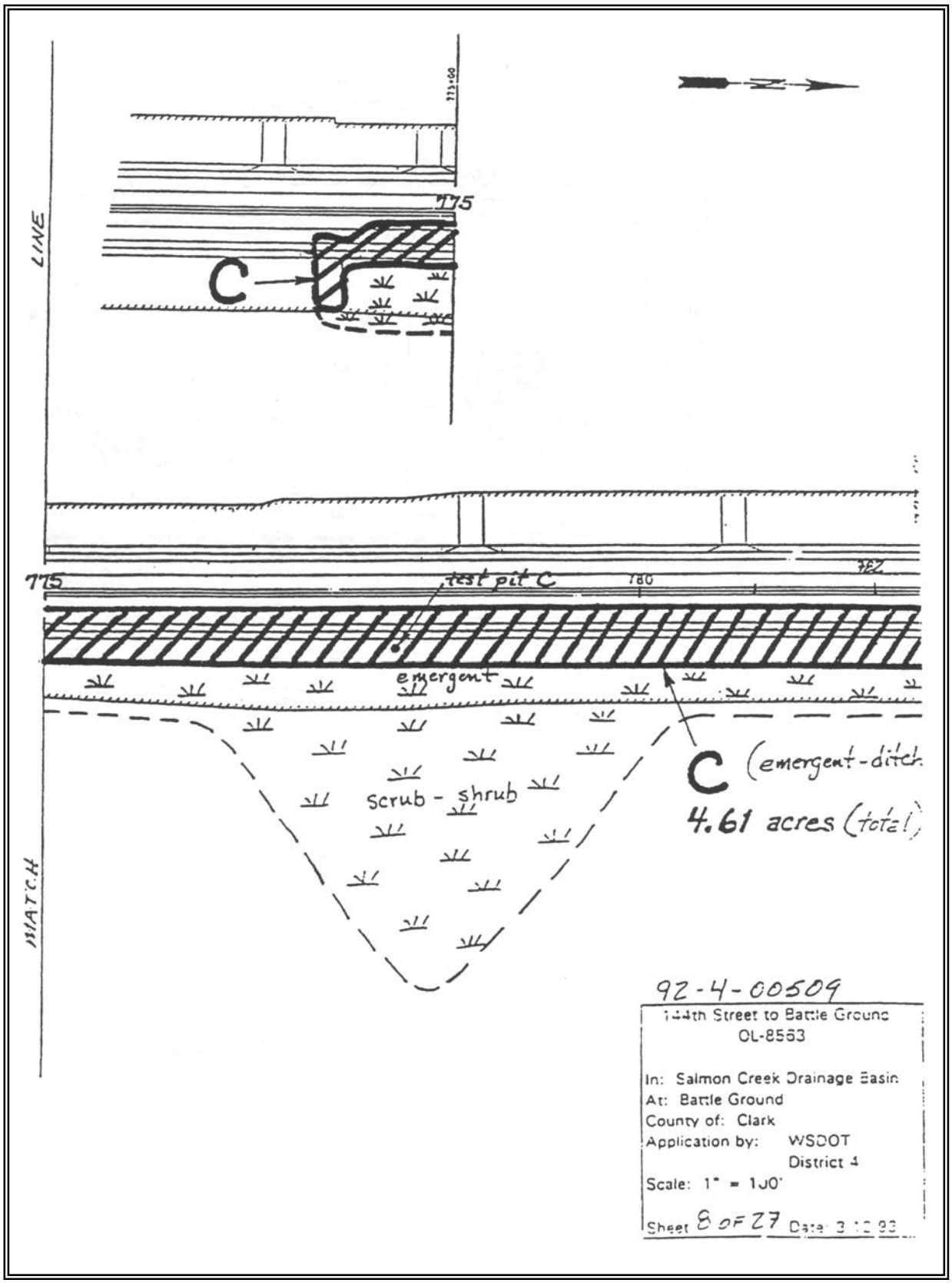

715
N
M (emergent-ditch)
see previous
test pit M
0.09 acre
720
N.E. CAPLES RD.
MATCH
SECTION B-2
test pit L
L (emergent-ditch)
720
0.14 acre (total)
R/W
B-2 SECTION
N.E. CAPLES RD.
N.E. CAPLES RD. (County)
N.E. 119TH ST.
92-4-00509
144th Street to Battle Ground
OL-3563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4
Scale: 1" = 100'
Sheet 6 OF 27
Date: 3/12/93

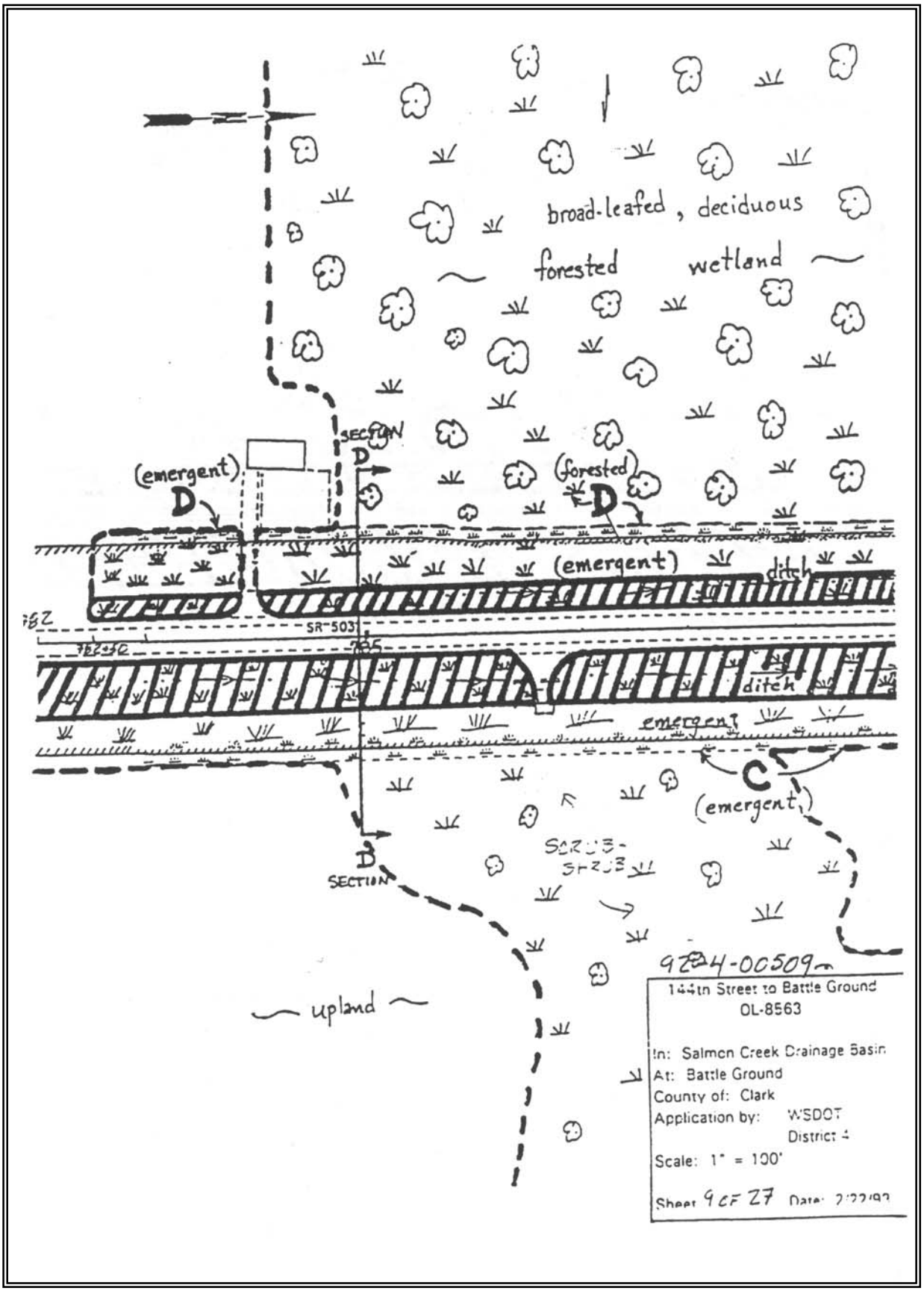


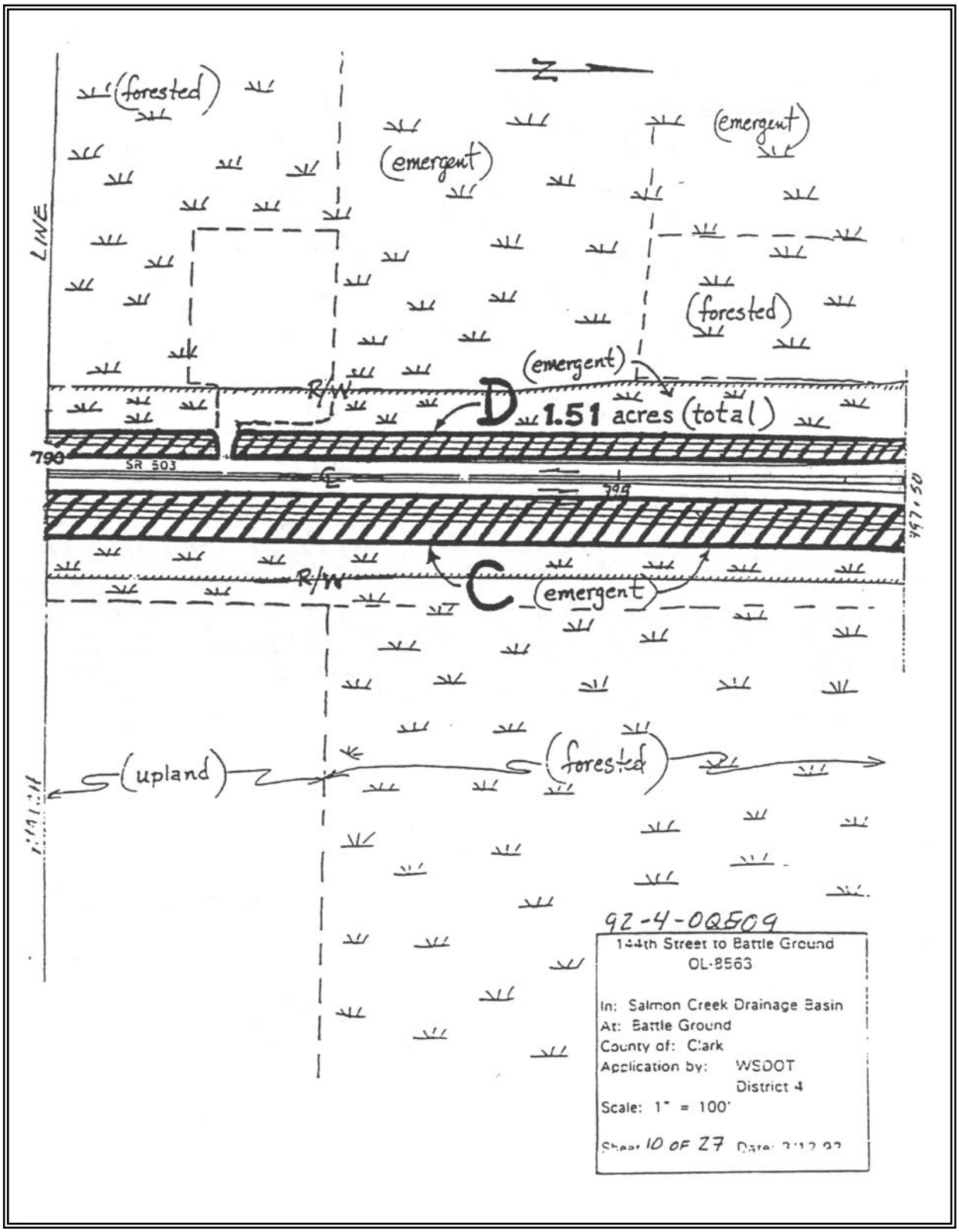
92-4-00509

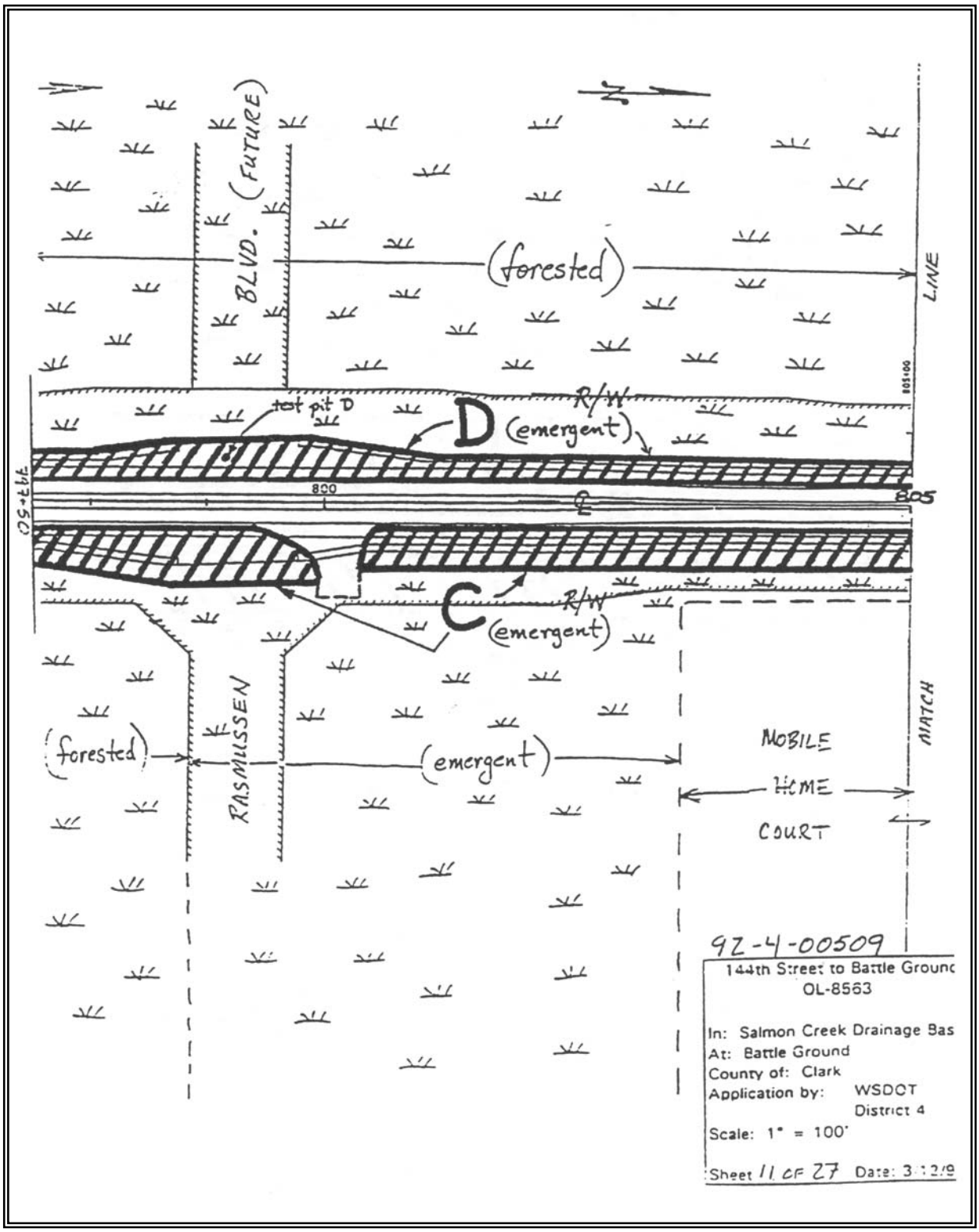
144th Street to Battle Ground
OL-8563

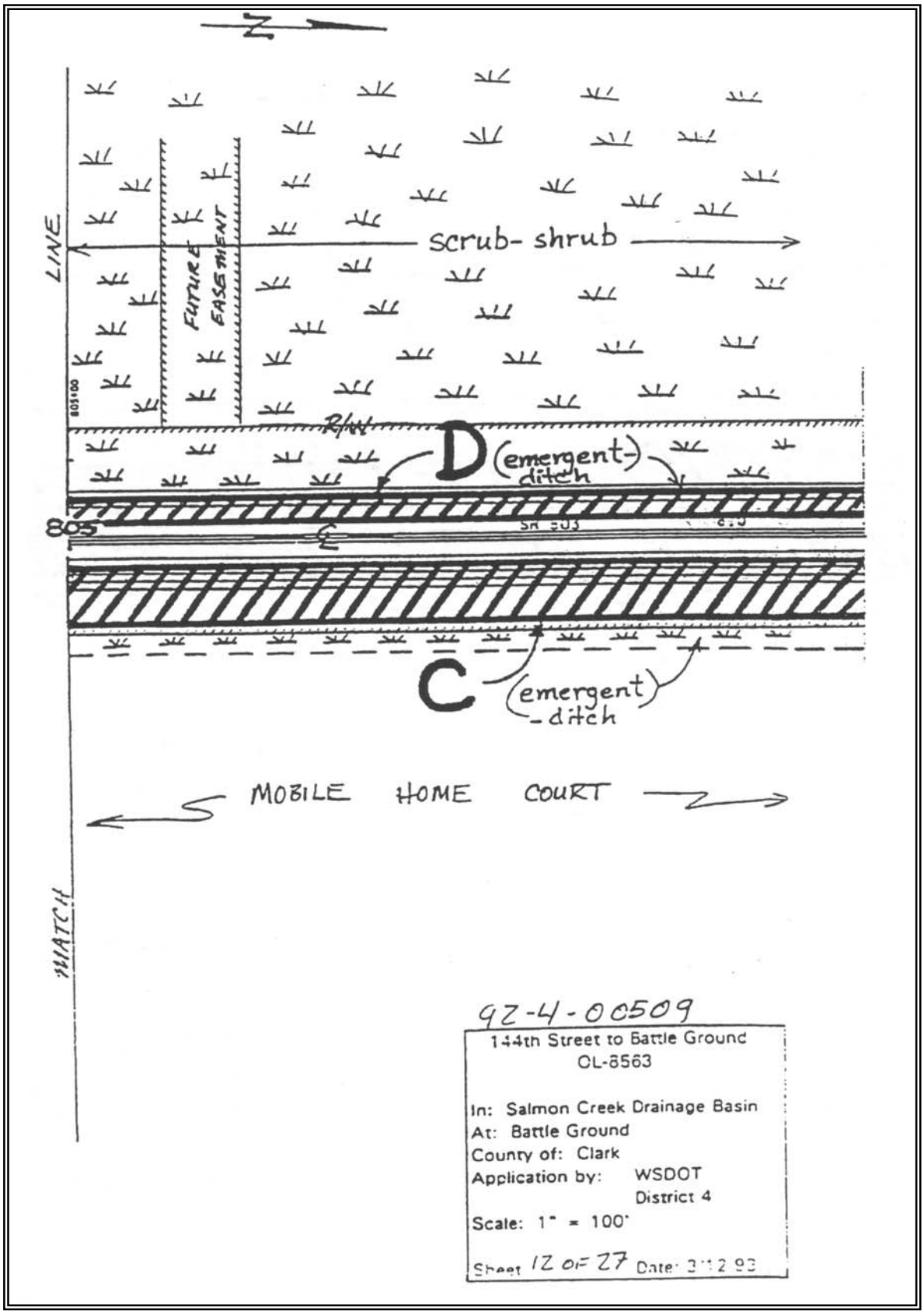
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4
Scale: 1" = 100'
Sheet 7 of 27 Date: 3/12/93

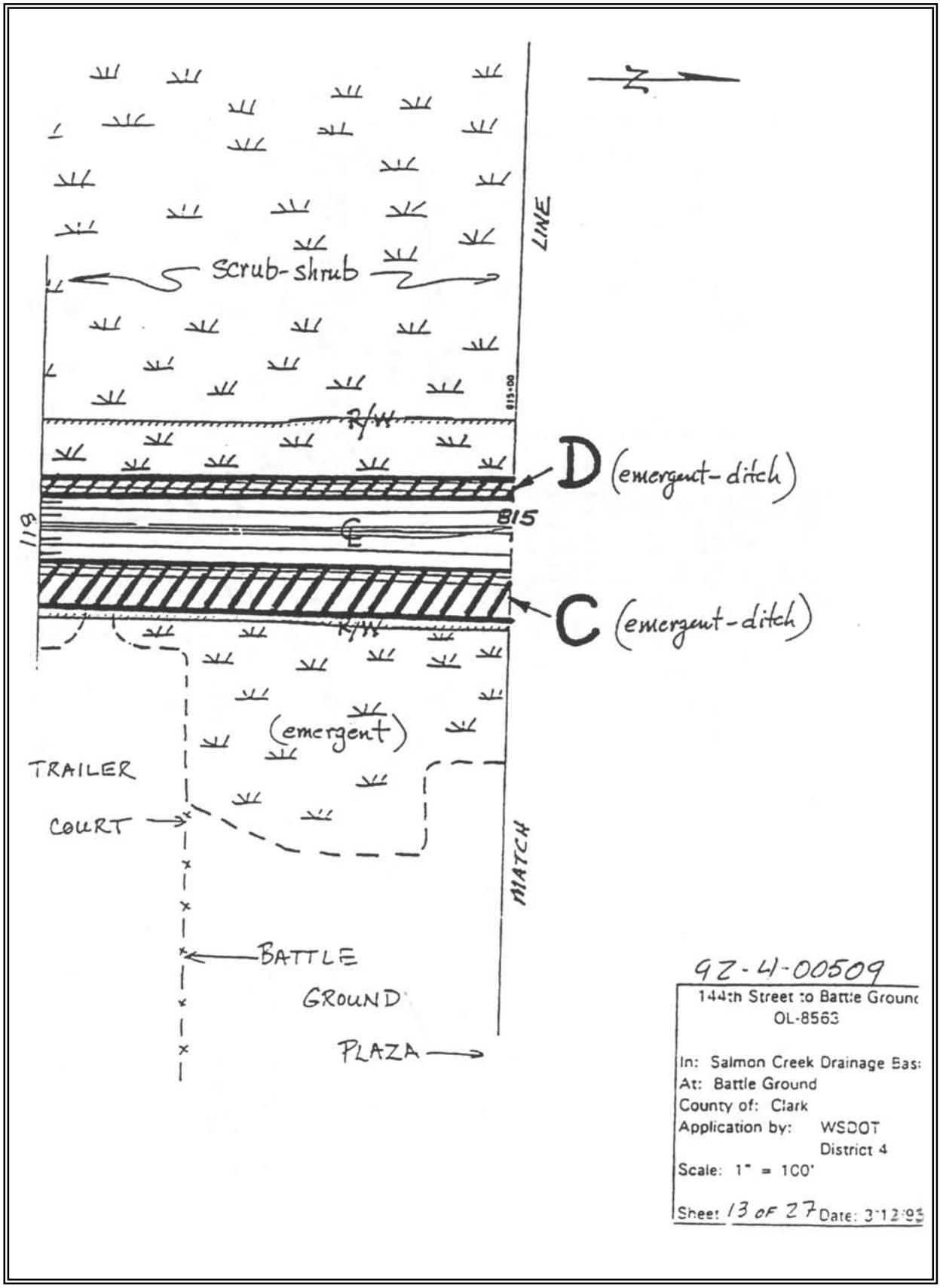

LINE
775
C
775
test pit C
780
emergent
C (emergent-ditch
4.61 acres (total)
scrub - shrub
MATCH
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 8 OF 27

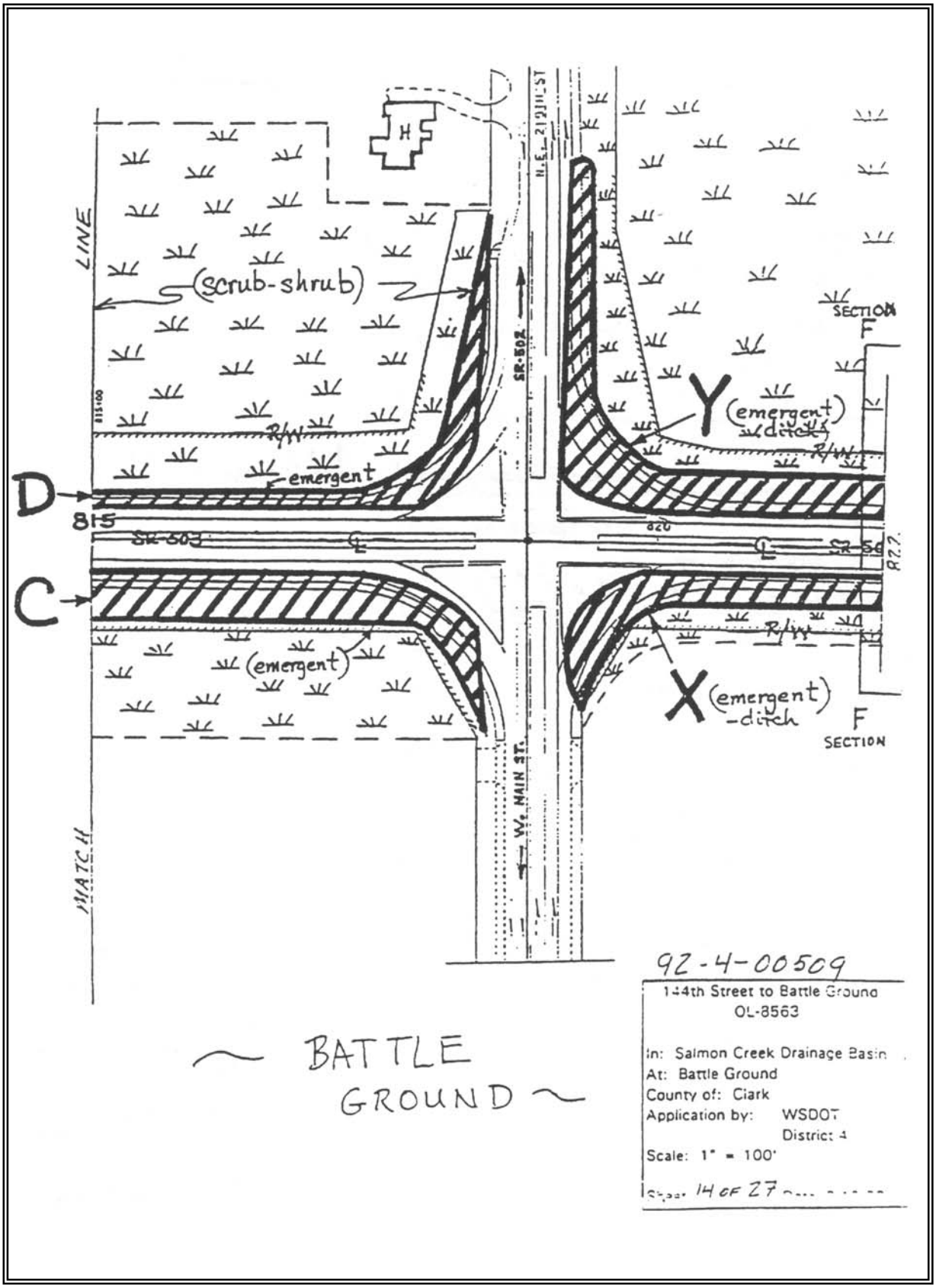

broad-leafed, deciduous
forested wetland
SECTION D
(emergent)
D
(forested)
D
(emergent)
ditch
SR-503
ditch
emergent
C
(emergent)
SCRUB-SHRUB
D
SECTION
upland
9204-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 9 of 27

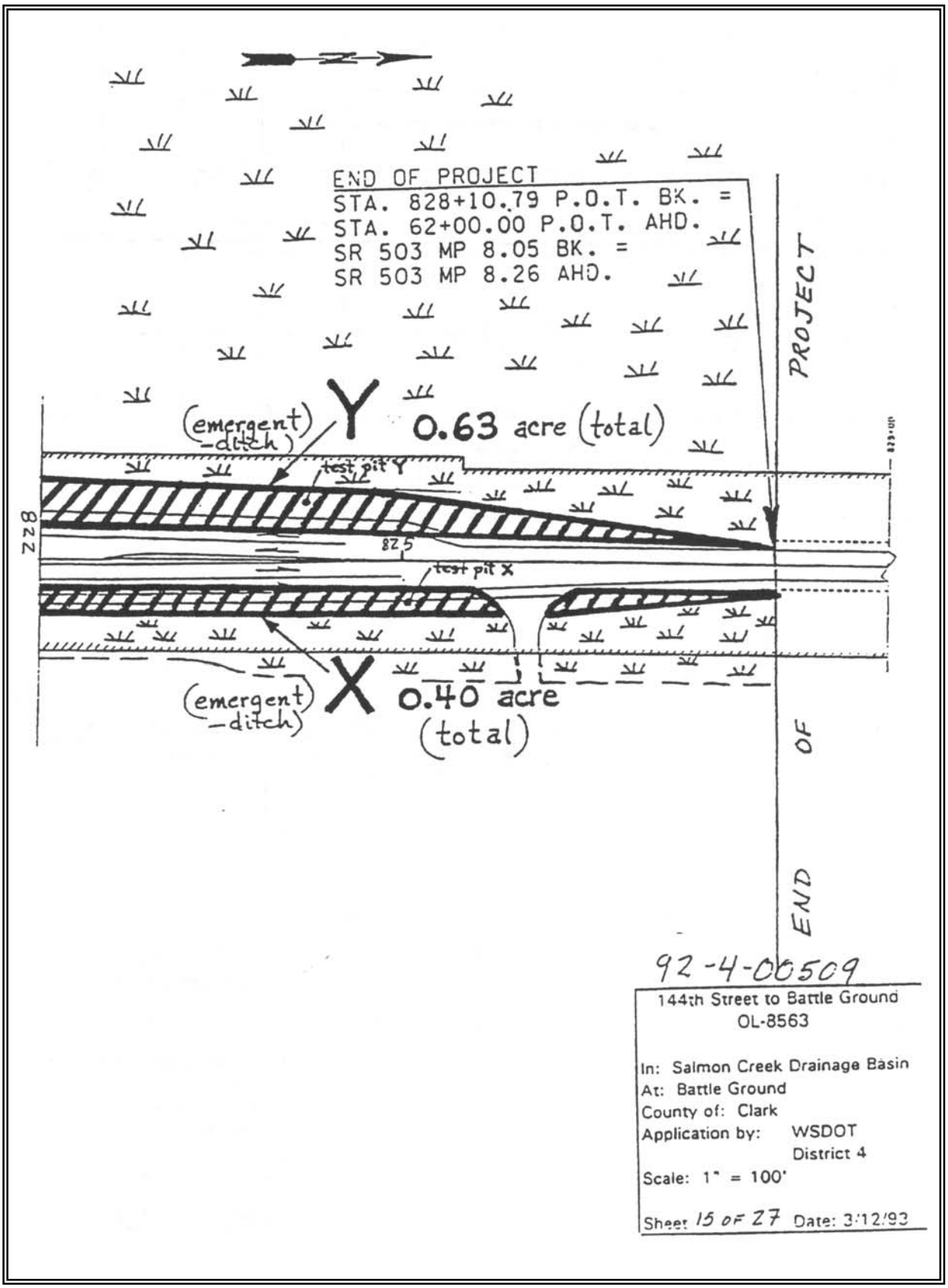

(forested)
(emergent)
(emergent)
(forested)
(emergent)
LINE
R/W
D
1.51 acres (total)
790
SR 503
799
R/W
C
(emergent)
(upland)
(forested)
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 10 OF 27

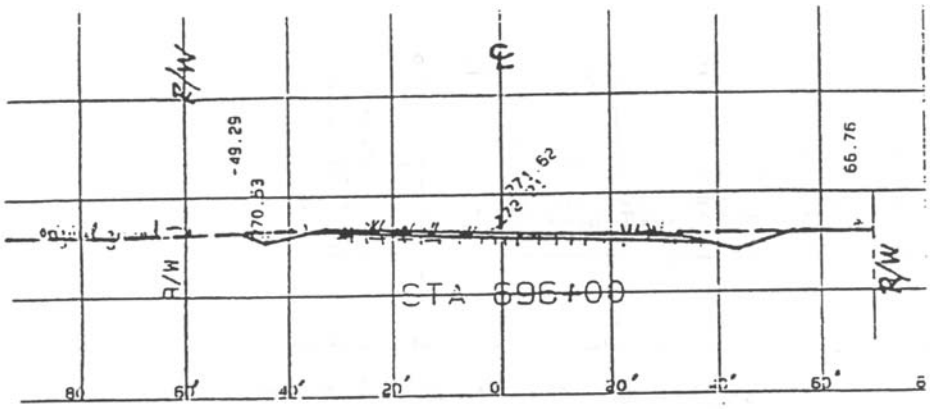

BLVD. (FUTURE)
(forested)
LINE
R/W
test pit D
D
(emergent)
800
805
C
R/W
(emergent)
(forested)
RASMUSSEN
(emergent)
MOBILE
HOME
COURT
MATCH
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Bas
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 11 of 27 Date: 3 12/9


N
LINE
FUTURE EASEMENT
scrub- shrub
R/W
D (emergent-ditch)
805
C (emergent-ditch)
MOBILE HOME COURT
MATCH
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 12 of 27

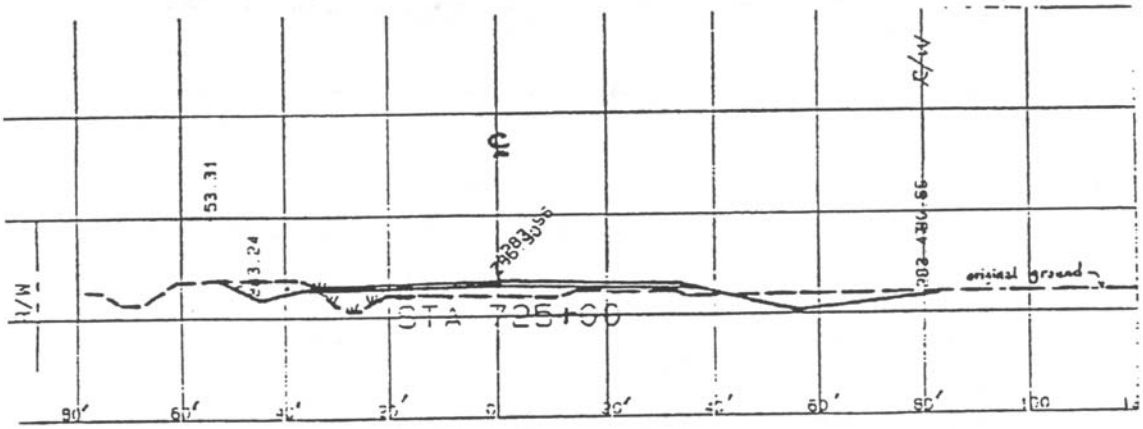

LINE
Scrub-shrub
R/W
D (emergent-ditch)
B15
C (emergent-ditch)
R/W
(emergent)
TRAILER
COURT
MATCH
BATTLE
GROUND
PLAZA
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Bas
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 13 of 27 Date: 3-12-93


LINE
(scrub-shrub)
H
N.E. 21ST ST
SR-502
SECTION
F
Y
(emergent)
-ditch
R/W
D
815
emergent
SR-503
820
SR-50
R.R.
C
(emergent)
X
(emergent)
-ditch
F
SECTION
W. MAIN ST.
MATCH
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 14 of 27
BATTLE
GROUND


END OF PROJECT
STA. 828+10.79 P.O.T. BK. =
STA. 62+00.00 P.O.T. AHD.
SR 503 MP 8.05 BK. =
SR 503 MP 8.26 AHD.
PROJECT
(emergent -ditch)
Y
0.63 acre (total)
test pit Y
828
825
test pit X
(emergent -ditch)
X
0.40 acre (total)
END OF
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4
Scale: 1" = 100'
Sheet 15 of 27
Date: 3/12/93



Section B-1
(WW WW WETLAND LIMIT)
ON SHEET 4 OF 27

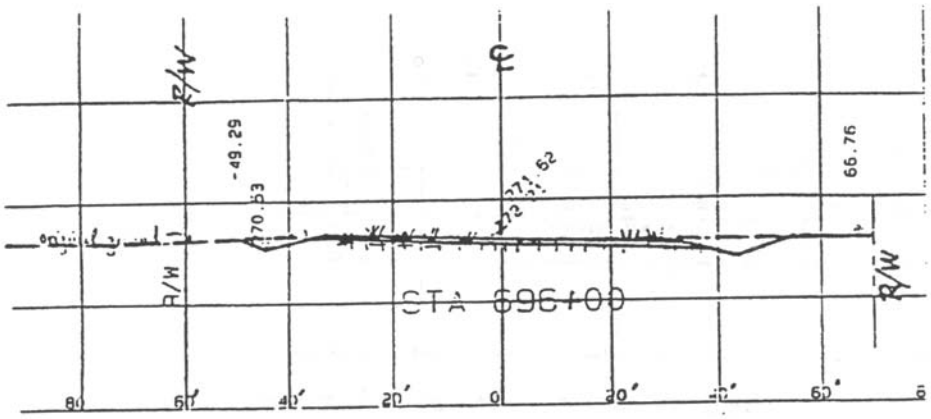


Section B-2
(WW WW WETLAND LIMIT
ON SHEET 6 OF 27)

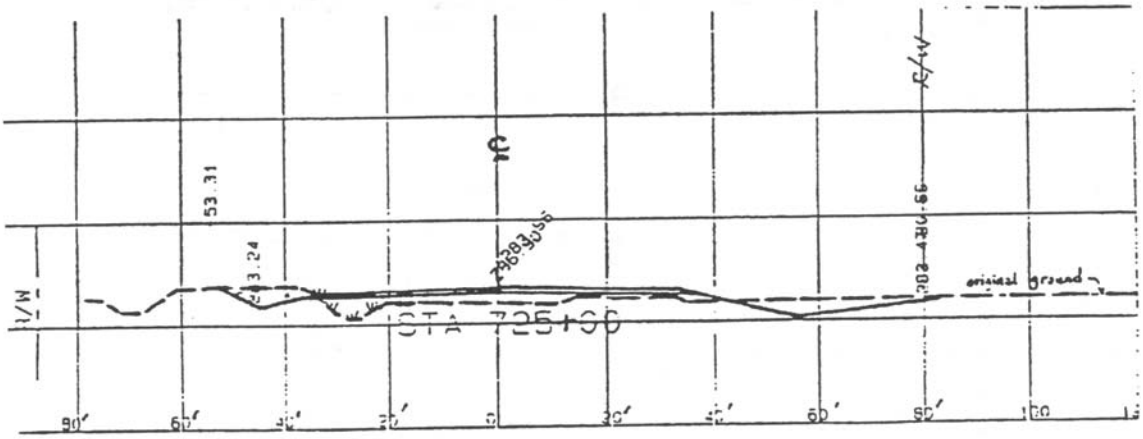
92-4-00509

144th Street to Battle Ground
OL-2563

In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 17 OF 27 Date: 3/12/93



Section B-1
(WW WETLAND LIMIT)
ON SHEET 4 OF 27



Section B-2
(WW WETLAND LIMIT
ON SHEET 6 OF 27)

92-4-00509

144th Street to Battle Ground
OL-8563

In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 100'
Sheet 17 OF 27 Date: 3/12/93

SR 503, N.E. 144th Street to Battle Ground, OL-8563
Wetland Losses

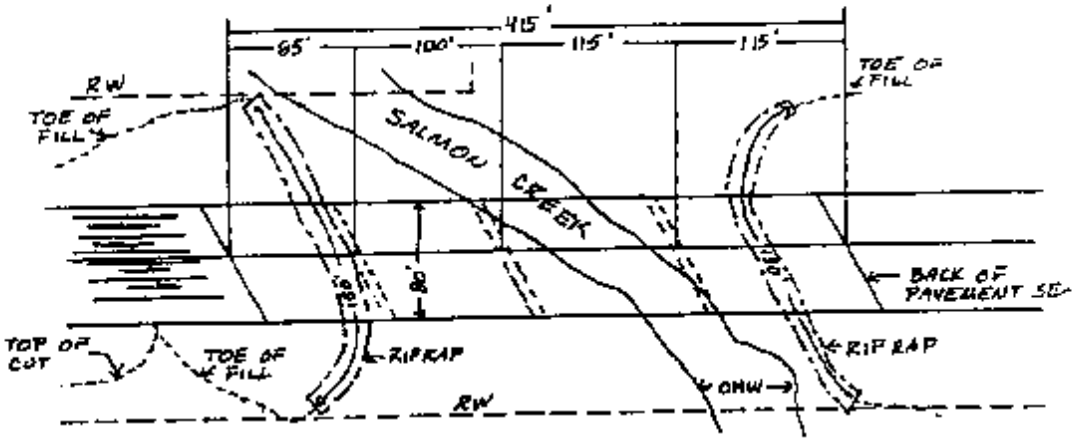
Wetland Area	Approximate Impacted Area	Impacted Acreage	C.Y. of Fill	
A1	200′ x 240′	1.1	42,500	
A2	196′ x 65′	0.3	8,500	
E1	110′ x 61′	0.15	0	(cut section)
E2	150′ x 40′	0.14	0	(cut section)
E3	290′ x 54′	0.36	0	(cut section)
E4	50′ x 50′	0.06	0	(cut section)
F	50′ x 60′	0.07	46	
N	25′ x 270′	0.16	300	
M	190′ x 20′	0.09	141	
L	550′ x 11′	0.14	410	
U1	300′ x 18′	0.12	225	
U2	115′ x 18′	0.05	85	
D	18′ x 3650′	1.51	8,200	
C	45′ x 4460′	4.61	16,600	
Y	830′ x 33′	0.63	2,500	
X	830′ x 21′	0.4	1,300	
TOTAL		**9.89 acres**	**80,807 c.y.**	

92-4-00509

144th Street to Battle Ground
OL-8563

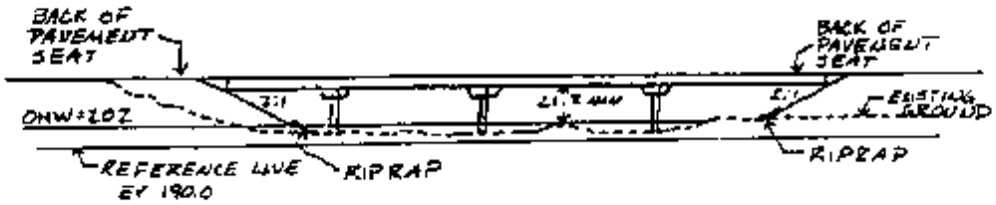
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4

Sheet 19 of 27 Date: 3/12/93

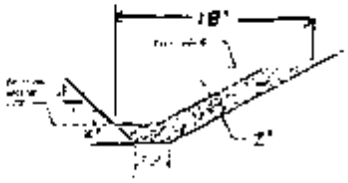


PLAN

NOTE: SEE SHEET 3 OF 27 FOR WETLANDS



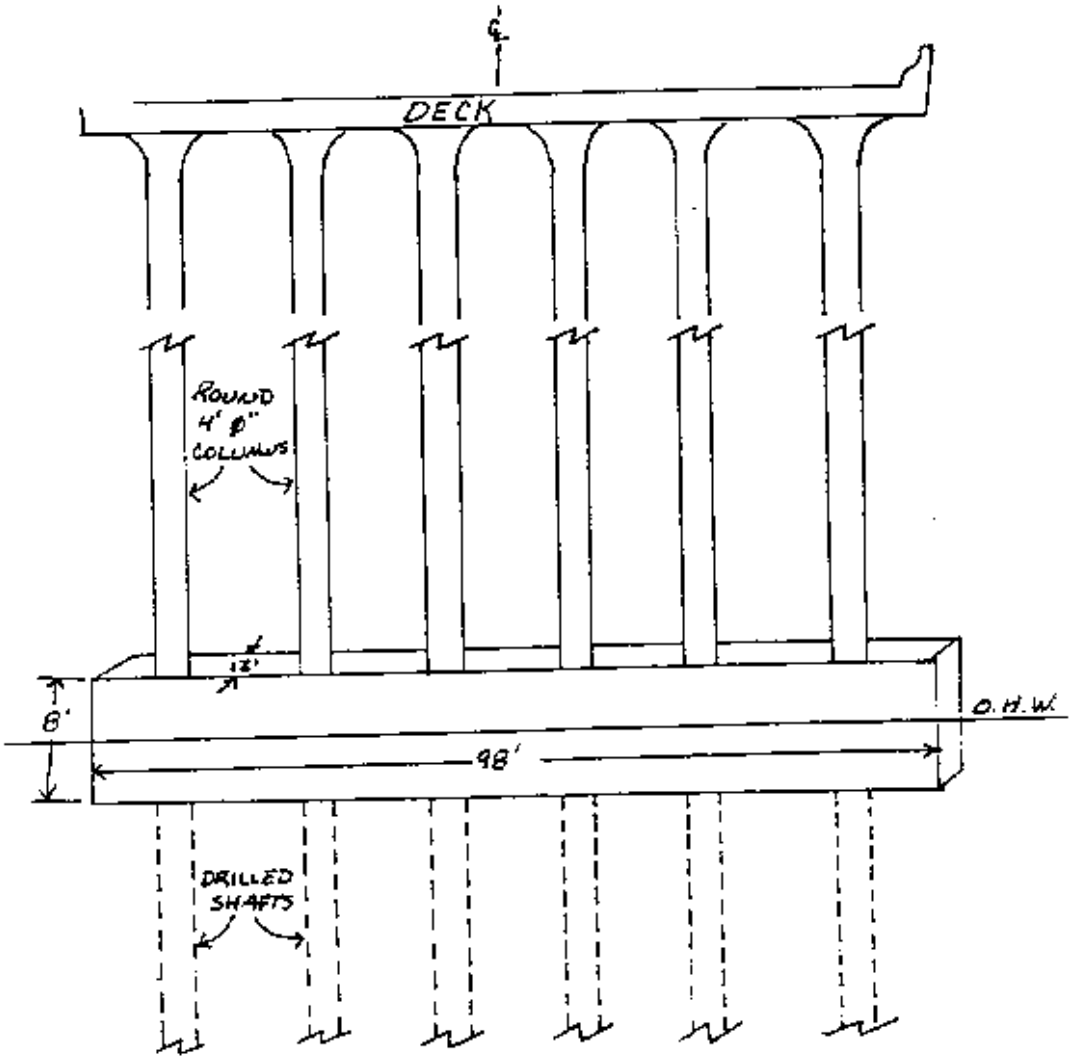
ELEVATION



RIPRAP DETAIL

144th Street to Battle Ground
OL-8563

In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT District 4
Scale: NTS
Sheet 10 of 27 Date 3-12-93



TYPICAL PIER + FOOTING 92-4-CC509

NOTE: FOOTINGS AUTHORIZED
BY NATIONWIDE PERMIT 25

144th Street to Battle Ground
OL-8563

In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: NTS
Sheet: 21 of 27 Date: 3 12:93

SR-503, N.E. 144th ST. TO BATTLE GROUND, OL-8563

WETLAND MITIGATION SUMMARY

Project Description:

The proposed project will reconstruct a 4.3 mile segment of SR-503 from two existing lanes to four, beginning south of the rural community of Brush Prairie and ending at the junction of SR-503 and SR-502 in the City of Battle Ground. The highway south of milepost 3.8 has previously been widened to four lanes, and this project will match into that section and extend the four lanes northward to Battle Ground. The southern two miles of this project will be built on a new alignment that bypasses the business district of Brush Prairie to the west and diverts highway traffic away from a narrow, winding section of existing SR-503 through Brush Prairie locally known as Caples Road. The "west alignment" begins at N.E. 149th St. and projects the new highway centerline approximately due north until it crosses Salmon Creek, then curves gradually east to match back up with the north-south segment of SR-503 that begins at approximately N.E. 180th St. From this point northward, SR-503 will follow the existing SR-503 centerline on a long north-south straightaway (tangent section) into Battle Ground. The additional widening for the two new lanes will be predominantly on the east side of the existing highway. Several major crossroad intersections will be reconstructed and improved in addition to the four-lane widening along SR-503 mainline.

Wetlands Impacted:

Traveling northward on the west alignment, the first wetland impacted is a forested riparian zone on the south bank of Salmon Creek (Wetland A-2). A swath of deciduous trees must be cut to accommodate the new Salmon Creek Bridge south approach. On the north bank of Salmon Creek, the north bridge approach fill impacts an emergent wetland (Wetland A-1) in a former pasture then proceeds northward out of the Salmon Creek valley. The next wetland encountered is a forested mosaic pattern of ponded areas and upland hummocks (Wetlands E-1 through E-4) that shows evidence of being man-made, in a failed attempt to drain the area. The next wetland impacted by the new alignment is a small, isolated ponded are in the middle of a large upland pasture (Wetland F). This small vernal pool also shows signs of having been man-made.

The remainder of the wetland impacts on the project are predominantly the result of filling in existing highway ditches containing emergent wetlands dominated by reed canarygrass (Wetlands N, M, L, U-1, U-2, C, D, X and Y). Two notable exceptions occur within Wetlands C and D, where long thin strips of deciduous forested and scrub-shrub wetlands will be cleared along the back of the existing ditches. These impacts occur between N.E. 199th St. and SR-502

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in Battle Ground and affect two remnant blocks of deciduous forest and scrub-shrub dominated by Oregon ash, willows and Oregon white oak, that at one time occupied much of what is now the southern portion of the City of Battle Ground.

The total project impacts 9.89 of wetland that contains 7.77 acres of emergent, approximately 2 acres of forested, and 0.12 acre of scrub-shrub wetlands.

Wetland Mitigation:

WSDOT has purchased approximately 22 acres of land within the Salmon Creek valley that consists of former pasture and hay land and remnant portions of the forested riparian zones along Salmon Creek and its tributary, Woodin Creek, near the confluence of the two streams. The new alignment of SR-503 crosses Salmon Creek near the west boundary of the mitigation site, and existing SR-503 (a.k.a. Caples Road) crosses both Salmon and Woodin Creeks near the midpoint of the mitigation site, functionally bisecting it, from north to south, into two sites, identified as Mitigation Site 1 east of Caples Road, and Mitigation Site 2 west of Caples Road.

The existing riparian zones along the two streams and an emergent soft rush marsh immediately east of the new SR-503 alignment will be preserved.

The remainder of the mitigation sites in the cleared and pastured areas will be excavated and recontoured to maximize habitat diversity and take advantage of existing topography. Several ponds fed by runoff, seeps and a high ground water table will be created, and emergent, scrub-shrub and forested areas will be planted in an effort to restore an entire segment of the Salmon Creek valley to native wetland vegetation as it most likely existed prior to Euro-American settlement of the valley in the mid-1800's. The mitigation sites will be held in public ownership and maintained as wetland and buffer in perpetuity, in accordance with the detailed mitigation plan for this project.

Table 1. Proposed Wetland Replacement Ratios

Wetland Impacts (acres)	Replacement Acreage	Ratio
2.90 forested	4.35 forested	1.5/1
0.09 scrub-shrub	4.16 scrub-shrub	46/1
6.88 emergent	6.80 emergent	1/1

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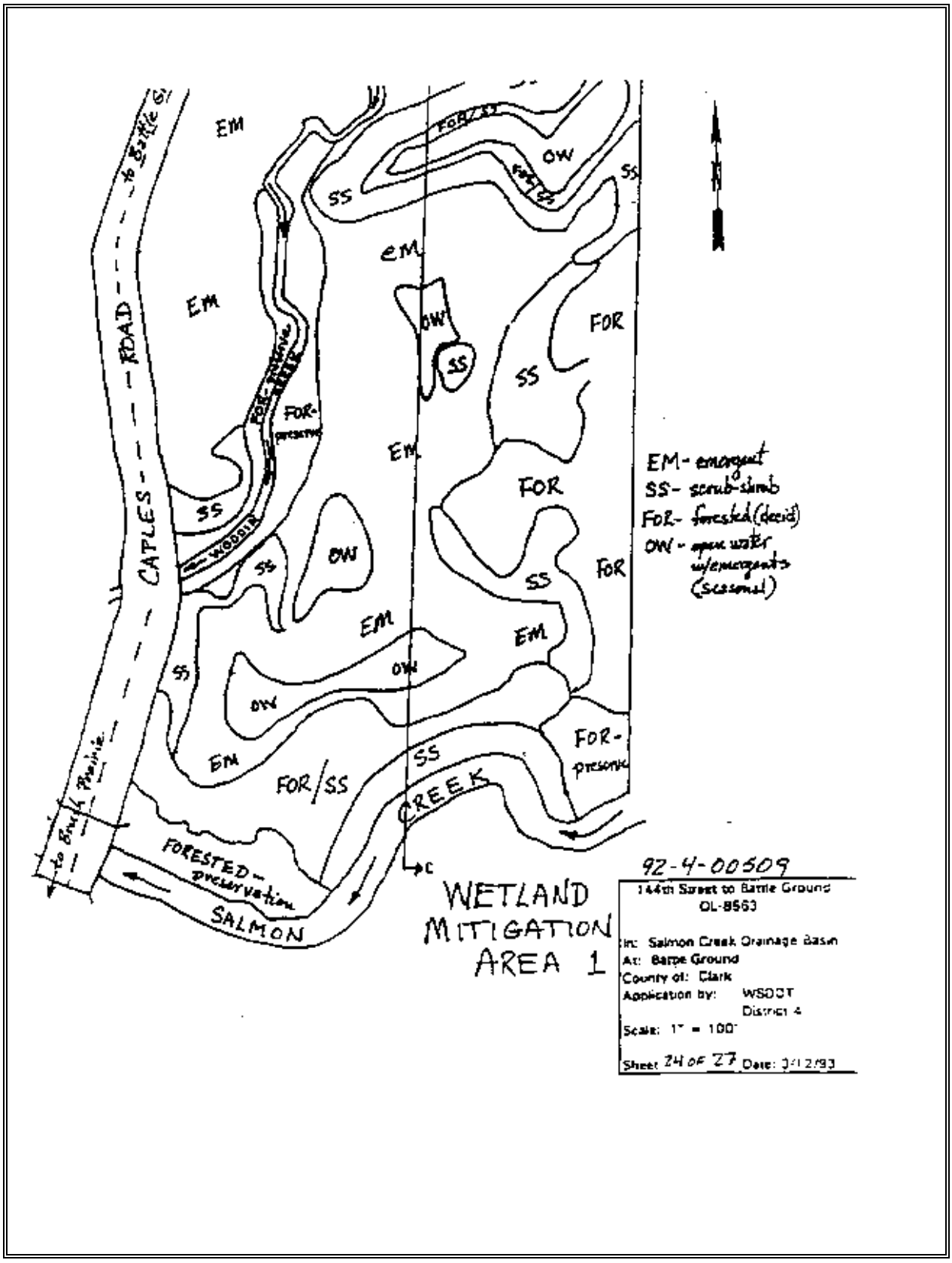
EM
SS
OW
FOR
FOR/SS
CATLES ROAD
to Battle Gr
to Brush Prairie
FOR-preserve
FOR-preserve
FOR-preserve
FORESTED-preservation
SALMON CREEK
C
EM- emergent
SS- scrub-shrub
FOR- forested (decid)
OW- open water w/emergents (seasonal)
WETLAND MITIGATION AREA 1
92-4-00509
144th Street to Battle Ground
OL-8563
In: Salmon Creek Drainage Basin
At: Barpe Ground
County of: Clark
Application by: WSDOT District 4
Scale: 1" = 100'
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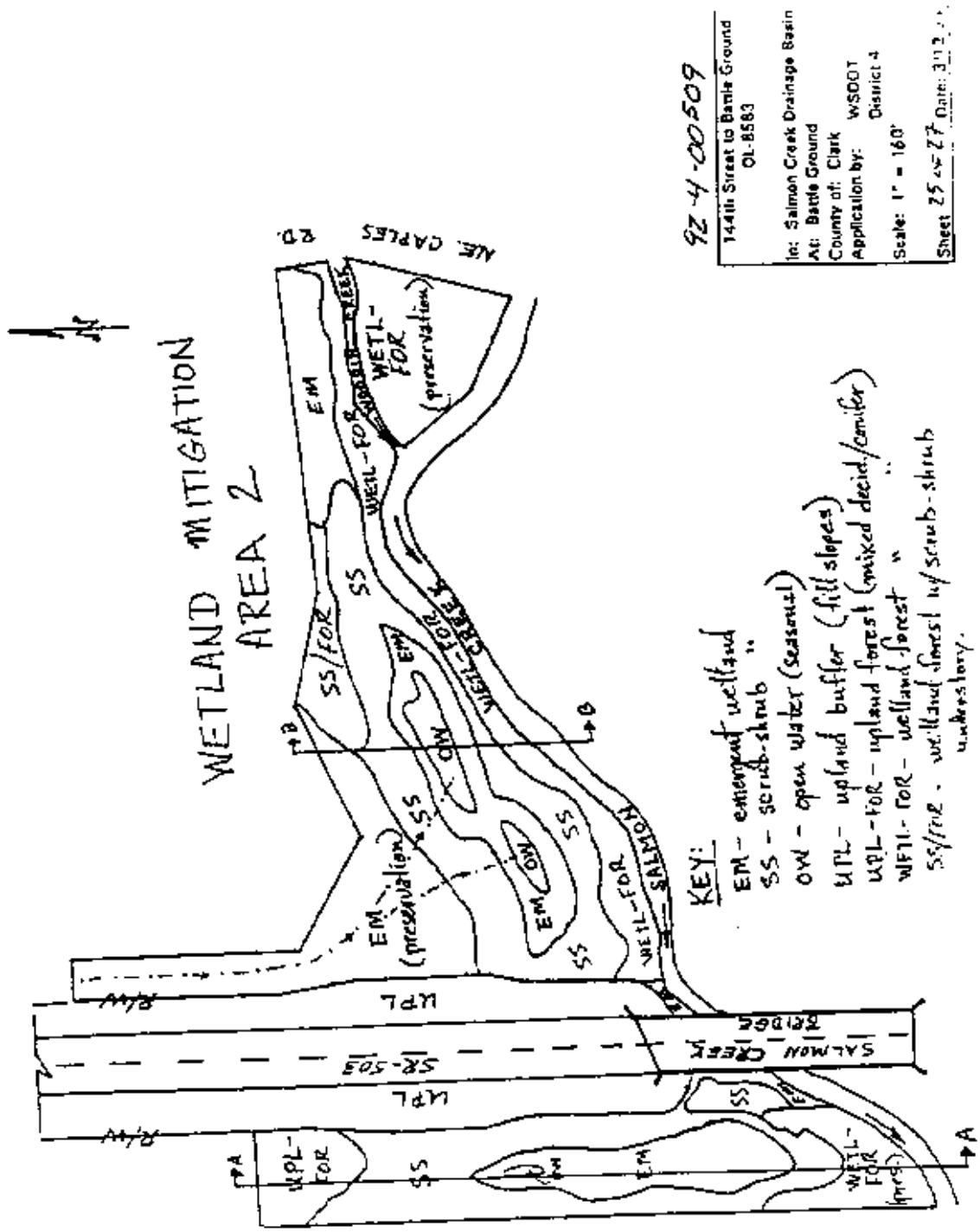
WETLAND MITIGATION
AREA 2
92-4-00509
144th Street to Battle Ground
OL-8583
In: Salmon Creek Drainage Basin
At: Battle Ground
County of: Clark
Application by: WSDOT
District 4
Scale: 1" = 160'
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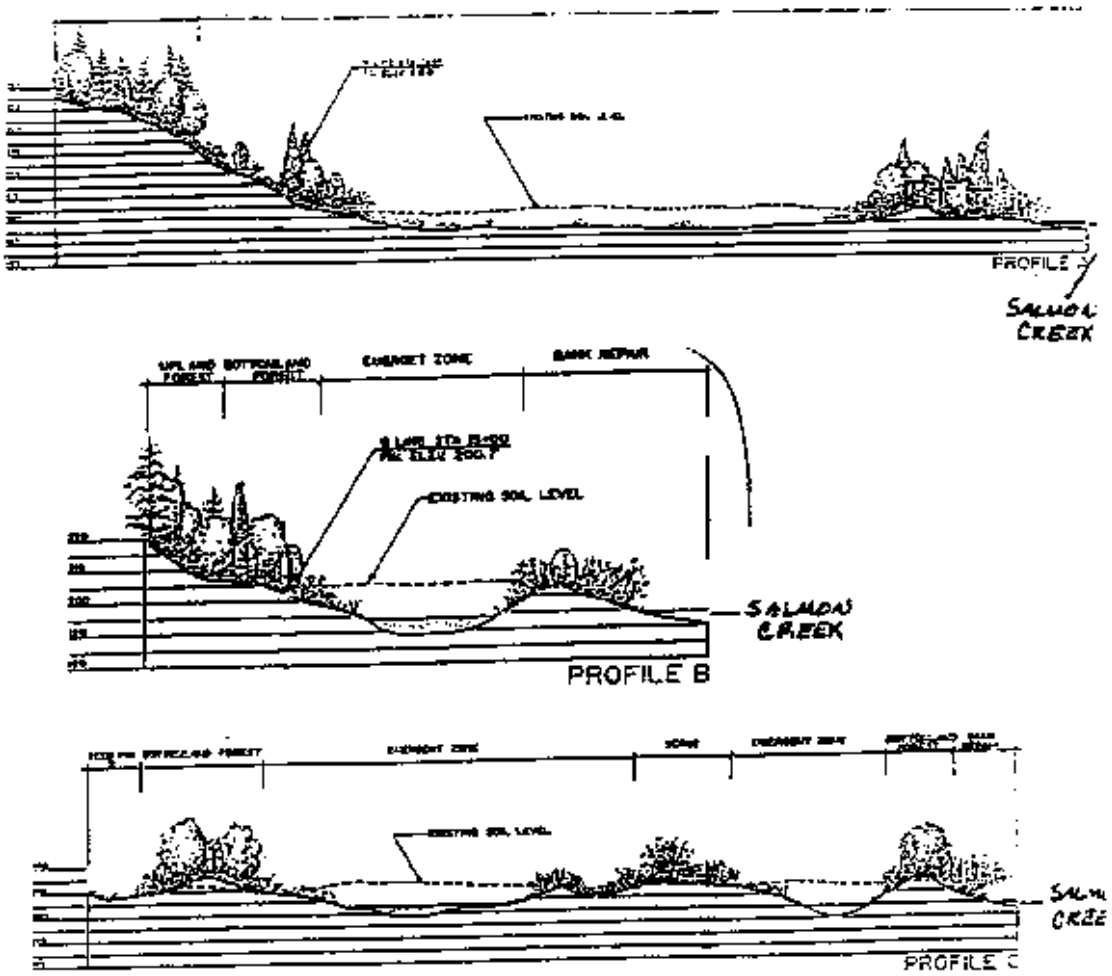
KEY:
EM - emergent wetland
SS - scrub-shrub "
OW - open water (seasonal)
UPL - upland buffer (fill slopes)
UPL-FOR - upland forest (mixed decid./conifer)
WETL-FOR - wetland forest "
SS/FOR - wetland forest w/scrub-shrub understory.
SR-503
UPL
SALMON CREEK
BRIDGE
WETL-FOR
SS
EM
OW
R/W
A
B



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PLANT LIST

UPLAND FOREST	
Alnus rubra	Red alder
Amelanchier alnifolia	Saskatoon Serviceberry
Prunus virginiana demissa	Western Choke Cherry
Pseudotsuga menziesii	Douglas Fir
WETLAND FOREST	
Fraxinus latifolia	Oregon Ash
Rhamnus purshiana	Cascara
Rubus spectabilis	Salmonberry
Thuja plicata	Western Red Cedar
WETLAND SCRUB SHRUB	
Comus stolonifera	Red Twig Dogwood
Physocarpus capitatus	Pacific Ninebark
Salix sitchensis	Sitka Willow
Spiraea douglasii	Douglas Spirea
WETLAND EMERGENT	
Carex obnupta	Slough Sedge
Eleocharis palustris	Creeping Spikerush
Juncus balticus	Baltic Rush
Oenanthe sarmentosa	Water Parsley
Sagittaria latifolia	Wapato
Scirpus microcarpus	Small Fruited Bullrush
OTHER	
Acer macrophyllum	Bigleaf Maple
Calocedrus decurrens	Incense Cedar
Fraxinus latifolia	Oregon Ash
Thuja plicata	Western Red Cedar
EXPERIMENTAL WETLAND EMERGENT	
Dulichinum arundinaceum	Three-way Sedge

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Appendix D

WSDOT Guidelines For Wetland Mitigation Plans

The Washington State Department of Transportation (WSDOT) has developed these guidelines to provide format and contents requirements for wetland mitigation plans (WMP) and reports. The guidelines apply in the preparation of mitigation plans associated with regulatory agency permit requirements.

Agencies responsible for project review and permit certifications are developing guidelines for wetland mitigation reports, plans, and monitoring. The Department of Ecology, the U.S. Army Corps of Engineers (Corps), and the Environmental Protection Agency mitigation plan guidelines were considered in the preparation of these guidelines. WSDOT Wetland Mitigation Plan Guidelines are intended to meet the requirements of each of these regulatory agencies.

If wetlands are encountered in a project, the following activities are normally required: 1) a wetland report is prepared, identifying the location and value of wetlands in the project vicinity; 2) alternatives that would reduce or eliminate impacts to wetlands by changes in location or design of the project are analyzed; 3) a mitigation site is selected that will satisfy requirements for acreage needed for unavoidable wetland impacts; and 4) a wetland mitigation plan is written.

The Preliminary Wetland Mitigation Plan is prepared as the first action in the process of developing a WMP, followed by internal review and resource agency review. The Final Wetland Mitigation Plan is provided to agencies as part of the permit process. These guidelines explain the elements of mitigation plans and detail the essential coordination required.

I. Develop Preliminary Wetland Mitigation Plan

The Preliminary Wetland Mitigation Plan is a draft document for use in early coordination with in-house and resource agency staff. In this document, the project is described, the measures that will be taken to avoid wetlands and reduce impacts are discussed, and the measures proposed to compensate for the impacts are described.

Following are the elements of the Preliminary Wetland Mitigation Plan:

A. Description of the Project

Provide a brief outline of the project proposal, including the following site information:

1. Project name, short description, and location.

2. Wetland information. Include who conducted the delineation (e.g., WSDOT biologist, consultant), which manual was used (1987 or 1989), methodology (routine, intermediate, problem, or disturbed), date(s) field work was performed, data sheets used to establish the wetland boundary and general findings.

3. Vicinity map. U.S. Geological Survey (USGS) Quadrangle (1:1200), National Wetlands Inventory Map (NWI), or other will suffice. Range, Township, and Section should be shown.

4. A large scale site map (not smaller than 1:400) and aerial photo if available.

B. Assessment of the Impacted Wetland

Description should be provided of the type and quantity of wetlands that would be impacted. Address vegetation (including canopy structure, indicator status, percent cover and wetland classes) hydrology (water depths, average seasonal flows and/or duration of saturation), soil characteristics, and functions and values. Impacted wetlands should also be rated according to the Department of Ecology's Washington State Wetlands Rating System, and include a qualitative description of how the wetland functions in the landscape.

This information is available in the Wetland Biology Report prepared for the project.

C. Evaluation of Mitigation Alternatives

The Preliminary Wetland Mitigation Plan should document all early project design changes made to avoid and minimize impacts to wetlands. This information is needed for both Preliminary and Final Wetland Mitigation Plans and demonstrates to reviewing agencies that WSDOT has avoided and minimized impacts to the extent practical. It should follow the mitigation sequence adopted by WSDOT and show how the development of the project design has:

1. Avoided the impact altogether by not taking a certain action or part of an action

2. Minimized impacts by limiting the degree or magnitude of the action and its implementation, using appropriate technology, or taking affirmative steps to avoid or reduce impacts

3. Rectified the impact by repairing, rehabilitating, or restoring the affected environment

4. Reduced or eliminated the impact over time by preservation and maintenance operations during the life of the project

5. Compensated for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation steps should be tracked and recorded throughout the project planning and design process. This information can then be incorporated into the Final Wetland Mitigation Plan.

D. Mitigation Project Goals, Objectives, and Performance Standards

Goals are broad statements that define the intent or purpose of the proposal.

Objectives are the direct actions necessary to achieve a specific goal. These should be measurable. Wetlands perform numerous important functions.

However, if an objective of the mitigation is to create a function it must be one that can be accurately measured in the field, such as percent cover of wetland vegetation. Water quality improvement is an example of wetland function that is difficult to use as a measurable performance standard.

Performance standards are specific criteria used to evaluate whether the goals and objectives have been met. These must be developed on a site-by-site basis. Performance standards should provide target criteria to be met each year, or every other year, based on reasonably paced progress toward measuring final success.

Describe the long-term goals of the mitigation project. Specifically, identify objectives in the following terms:

1. Size and classification of wetlands to be created, restored, enhanced or preserved

2. Functions and values to be created, restored, enhanced, or preserved

3. Number of years it is likely to take for the long-term establishment of the proposed functions and habitats

4. The measurable performance standards that will be used to determine if an objective has been met.

E. Description of the Proposed Wetland Mitigation Site

1. Describe pre-construction conditions existing at the proposed site, including vegetation, wildlife and wetlands. Provide a description of the plant community, its cover, classes and structure, and make special note of exotic species and other management concerns that may affect site viability. Wetlands present at the mitigation site must be delineated, assessed and their location indicated on the site map using the format described for a Wetland Report.

2. Explain how hydrology will be provided for the proposed wetland mitigation, including expected seasonal water level fluctuations, seasonal depth to groundwater, or surface water source and water quality.

3. Describe soil classification and series at the site and any soil testing that has been done. Describe amenities that may be needed to improve the soil conditions at the site.

4. Describe how the planned mitigation will fit in the landscape. Discuss the location of the site in relation to its position in the watershed or adjacent upland or wetland habitats or other water resources.

F. Proposed Site Plans

Prepare a general grading and revegetation plan, including:

1. The shape and contour of the mitigation project. Provide sufficient information so that water depths, open water areas, boundary areas, and other features can be visualized. Seasonal ground water and the sources of hydrology for the site should be evident.

2. A list of plants to be used and general planting plan to illustrate the planting concept for the site. Reviewers need to know what species will be planted, in what proportions, and their general locations.

3. Information on the construction sequence and schedule.

4. Steps to be used to minimize damage to surrounding buffers or wetlands during site construction.

5. Methods for controlling invasive species.

6. A description and map of the plant communities which make up the wetland buffer, if a buffer is included in the mitigation design.

G. Maintenance Plan

Describe planned maintenance activities including erosion control and protection of plant materials from herbivores, repairing vandalism, and other activities that may be required over time to ensure that the site viability is maintained.

H. Contingency Plan

A contingency plan is required and must outline the steps that will be taken if performance standards are not met.

I. Mitigation Site Monitoring

A monitoring plan collects the data necessary to measure the success of the mitigation in meeting goals and performance standards established for the site. In the Preliminary Wetland Mitigation Plan, state that monitoring will be conducted for a period of 5 years or longer, if necessary, and that an annual report will be issued by WSDOT to the U.S. Army Corps of Engineers, Department of Ecology, and other federal, state and local resource agencies. A monitoring program must include measures of vegetation, hydrology, water quality, soils, and wildlife over time. Headquarters Biology conducts the actual monitoring and issues the *WSDOT Wetland Mitigation Monitoring Report*, which is sent to regulatory agencies each year.

II. Coordination

The Preliminary Wetland Mitigation Plan is intended to be reviewed internally by WSDOT Districts, Headquarters Design, Maintenance, and Right of Way staff before circulating to outside agencies. WSDOT District Environmental Managers should coordinate the appropriate review within the District.

The outside agency review follows the internal review. Comments and suggestions made to the Preliminary Wetland Mitigation Plan by outside agencies should be considered in the preparation of the Final Wetland Mitigation Plan.

III. Final Wetland Mitigation Plan

The Final Wetland Mitigation Plan is completed after the Preliminary Wetland Mitigation Plan has been circulated to agencies. It incorporates comments from agencies and the public (and comments from draft environmental documents, if applicable). The Final Wetland Mitigation Plan is the document of record.

IV. As-Built Plans

Within a month of construction and planting completion, as-built plans should be sent to the lead agency, including an as-built topographic survey, plant species and quantities used, photographs of the site, and notes about any changes to the original approved plan. Also list the contractor's responsibility concerning plant replacement, fertilization and irrigation, protection from wildlife, and contingency plan requirements.

Examples of Goals and Standards of Success

The following are examples of possible goals, objectives, and performance standards that could be used in a mitigation report.

Example 1

Goals

The goal of this mitigation is to create 12 acres of wetland by converting existing pasture land to a productive, functional native wetland system. The wetland is intended to have the following functions: wildlife habitat, food chain support, flood storage, water quality improvement, and sediment and nutrient trapping.

The goal of the pond and emergent area is to provide food, open water, and nesting habitat for waterfowl and shorebirds, and habitat and food for aquatic-dependent and other species.

Objective #1:

Creation of a wetland system that has vegetation structure and species diversity similar to those found in natural wetland systems located in the vicinity.*

Performance Standards:

After 1 year:

Wetland has 35-50% survival of planted species. Recruitment of native species is expected and should increase the overall area coverage of wetland plants.

After 3 years:

Wetland has 75% survival of facultative or wetter species, or is replaced by a native, naturally colonizing plant community at 75% or greater cover. At least 75% of the species are the same as those found at the reference site.

After 5 years:

a. Wetland has about 35-50% scrub/shrub.

b. Wetland has about 25-35% emergent.

c. Wetland has about 10-20% riparian.

d. Shrub/scrub wetland is 90% native species.

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* Note: In this example the wetland systems located in the vicinity are being used as reference sites.

e. Emergent wetland has about 75% native species.

f. Emergent community must have at least 3 species with 20% coverage each.

g. Scrub/shrub community must have at least 2 species of 30% cover each.

h. Wetland has 90% vegetative coverage by predominantly native species.

i. At least 80% of the wetland plant species are the same as those found at the reference site.

Objective #2:

Provide wildlife support by increasing wildlife cover, forage availability, and vegetative class interspersion. The open water area will provide water/support for aquatic-dependent and other species.

Performance Standards:

After 3 years:

At least 3 wetland classes will be established (emergent, scrub/shrub, open water).

After 5 years:

Wildlife cover and forage species should be established equal to percentages listed for vegetative structural and species diversity. A quantitative increase in species diversity should be observed, based on visual estimates.

Example 2

Goals

The goal of the wetland mitigation project is to create a functional self sustaining forested wetland linked with the adjacent ecosystems that provides a continuous forested corridor along a side channel of the North Fork of the Stillaguamish River. In general, the created wetland system is expected to provide the following functions and values: fish and wildlife habitat, food chain support, flood storage and attenuation, and sediment and nutrient trapping.

Contour grading and vegetation establishment will alter the existing site conditions from predominantly wet pasture to a forest/scrub-shrub/emergent wetland system. The resulting change in habitat structure and increased complexity should result in habitat that can be utilized by forest and wetland dependent wildlife species. Reestablishing a forested connection with adjacent

habitats will extend a wildlife corridor through this area. The increase in edge habitat created between pasture land and forested wetland will benefit species that utilize the ecozone between habitat types.

Objectives/Performance Standards

Objective #1

Upgrade wildlife habitat by the addition of proposed native species plantings.

Objective #2

Increase habitat complexity and diversity as compared to existing agricultural land use by increasing vegetation structure and edge.

As the mitigation site vegetation matures, the conditions of the site will change from a system dominated by pasture grass to a complex scrub-shrub and forested wetland interspersed with the existing emergent wetland areas. It is expected that this type of habitat would support forest and wetland species. A wildlife corridor will be extended by completion of a forested link with the adjacent wetland systems which are associated with the Stillaguamish River.

Performance Standards:

After 3 years:

a. Woody vegetation will cover approximately 30% (±5%) of the site with 1/2 trees and 1/2 scrub-shrub.

b. Measurement of the cover of woody vegetation will be used as an indicator of an increase in habitat structure and complexity. It is expected that habitat structure will change from a single layer of vegetation to multiple layers over time, as trees and shrubs mature.

After 5 years:

a. Cover of trees will be 15%.

b. Cover of scrub/shrub will be 50%.

c. There will be at least 250 lineal feet of edge boundary between scrub/shrub and tree species.

d. The corridor to the Stillaguamish system will be 100' wide and show no human disturbance

MEMORANDUM OF UNDERSTANDING
Between the

WASHINGTON STATE DEPARTMENTS OF FISHERIES, WILDLIFE, AND TRANSPORTATION

Concerning Compliance with the Hydraulic Code

August 29, 1990

Revision of this MOU is under review as of January 22, 2001. When complete it may be inserted here as an exhibit or referenced online.

SURFACE Water Quality Discipline Report Technical guidance

A Water Quality Discipline Report is prepared during development of a new transportation project, and is intended to provide information required for EAs, EISs, and a variety of water quality permits, certificates, and approvals. The study must be thorough enough to provide data necessary to recognize and assess water quality impacts of a proposed project. The preparation of a Water Quality Discipline Report should begin with a review of the Water Quality Discipline Report Checklist (July 2003), Exhibit 431-4.

The following written explanation and associated checklist should serve as a tool to guide development of a Discipline Report. The checklist is meant to be fairly comprehensive. Not all of the elements listed in the checklist are required, which is why there is a checkbox for NA (Not Applicable). On the other hand, there may be issues that are not addressed in this checklist that are identified for a project. If issues arise that are not referenced in the list, consult with the Environmental Services Office Water Quality Program on how to best address those issues.

The requirements below are listed by report section headings. Some of the features discussed in the Water Quality Discipline Report refer to related discipline reports, and coordination with the authors of related reports is required to evaluate relevant data.

I. Introduction

This section should present the purpose and need for the project, as well as a succinct description of each of the alternatives under evaluation. The purpose of the project should include what the project entails and why the project is being conducted. It is critical that the project description, purpose and need, and alternative descriptions are consistent with other Discipline Reports. Detailed information and maps should be obtained from the Project Office. (Since these details can be expected to change over the course of a project, the Project Office should be contacted on a regular basis to verify details.) The scope of the project and final use of the discipline study (e.g., part of a project specific EIS) should also be presented. Relevant background information on the project should be included, along with an identification of entities with vested interests.

The project boundaries should be clearly defined and shown on a map(s) of the area encompassed by all of the alternatives. A description of each alternative under evaluation, including the no-action or no-build alternative, should be presented. The descriptions of the alternatives should include the proposed actions to be taken under the alternative, and the site-specific requirements and constraints associated with each action. A summary description of the major water quality concerns for the project and the general differences between alternatives as they relate to these concerns should also be included.

II. Studies, Coordination, Methods, and Regulations

The purpose of this section is to document the process, resources, and tools used to develop the Surface Water Quality Discipline Studies for use in the water quality section of EAs and EISs and build the framework with which impacts can be analyzed. This section should justify the approach taken in the analysis. The level of detail required for the discipline study will vary with the complexity and planning stage of the project. Generally, the process includes: acquiring reports, plans, and data, making contacts with agencies and stakeholders in the project area, reviewing applicable rules and regulations, and summarizing pertinent information.

The information source listing (Exhibit 431-5) provides an example of commonly used resources, but additional sources may also be required. All of the resources and contacts that were identified during this process should be listed in an appendix to the Discipline Report; while only those directly utilized for the analysis should be cited in the report and included in the References

section of the report. This section of the Discipline Report should contain a summary of which reports or data sets were relied upon for the analysis and why they were selected. For example, the analyst could elect to not use water quality data that is more than 20 years old when defining the existing environment. If this were the case this statement and its rationale would be included in this section of the Discipline Report.

The resources and reports identified should be used to obtain data for documenting baseline conditions as well as to summarize major concerns and recommendations related to surface water resources in the project area. (This summary of concerns and recommendations may be valuable for identifying possible mitigation opportunities, as described in Section V.) Applicable rules, regulations, plans and policies should also be summarized in sufficient detail to determine project compliance.

This section must identify the tools or methods used for technical evaluation of water quality data (e.g., hydrological methods and pollutant loading calculations). Since those methods described in Appendix A, have already been approved for use in Discipline Reports, this identification of methods may simply require listing which method was selected with a short narrative and a reference to the Appendix. The analyst is not constrained to selecting from one of the approved methods. However, if a quantification method is selected for use that has not already been described in Appendix A, a detailed description of the method and rationale for its use must be provided.

In some cases, additional baseline data may be required to document current water quality conditions. Determine early in the project scoping process whether additional data collection activities may be required. and notify the Project Office of budget and scheduling revision requirements. (Additional data collection will require development of a monitoring and quality assurance plan.) These efforts should also be coordinated with other disciplines.

If the project is complex or controversial, take steps to obtain informal approval for the analysis approach from the Project Office. If necessary, prepare a technical memo for submittal to the Project Office that describes the list of studies and reports that are to be relied upon for the analysis and a description of the quantification or estimation methods that will be used. The Project Office may choose to send this memo on to permitting agencies and other interested parties, for comment.

III. Affected Environment

The primary function of this section is to lay the framework against which the impacts can be compared. Generally, this framework is easier to write and understand if the analyst first describes the natural environment and then overlays the existing built environment. Consequently, discipline reports typically begin with descriptions of soils, topography, geology, and natural watershed and stream characteristics and sensitive areas or issues associated with them. The description of the existing built environment then should superimpose land use patterns, features associated with land use (e.g., stormwater outfalls, instream structures, impervious area, stream hydrology and morphology changes) and how they influence the natural framework.

There are two issues to consider when developing both the affected environment and impacted environment sections; the focus of the analysis and amount of detail required. A soil scientists' description of site soils might include information on plasticity, compressability, pore strength, color, and organic content as well as information on slope, drainage capacity and potential to erode. However, in terms of water quality impacts, it is slope, drainage, and erosion that are important and these characteristics should be the focus of the descriptions. Information provided outside of this focus will simply add to the length of the report without enhancing its value. The level of detail provided should be correlated to the importance of the item to the project or project area. For example, the description of soils and topography might simply be a few sentences describing a "flat to rolling topography with well-drained loamy soils". Or, if there are steep slopes coupled with poorly drained soils that cause special concerns related to erosion or site

drainage problems, then more detail and explanation and possibly a map showing problem areas is warranted. The level of detail required also changes with respect to the project phase. If it is the first phase in planning for a regional road network then most of the checklist items will be addressed with a broad brush when compared to the assessment detail required for comparison of specific road alignment and design alternatives.

By nature the Water Quality Discipline Report will be linked to the Groundwater, Floodplains, Wetlands, and Fisheries Discipline Studies. The Water Quality Discipline Report should be written to minimize redundancy while also insuring that there are no conflicts with the other reports. This requires coordination with authors of the appropriate discipline reports and inclusion of references to those reports. For example, in a project where a stream side-channel was going to be lost as a result of project construction, the water quality impact discussion might focus on increased flooding and changes in stream channel characteristics. Impacts to fisheries can be limited to a statement such as: "the potential impacts of Side-channel loss on Coho is evaluated in the Fisheries Discipline Report (WSDOT, 2003b)."

IV. Impacts

As described in the Existing Environment section, the focus and level of detail provided should be a reflection of the level of concern associated with the issue. Typically the impact evaluation for the first alternative is detailed. It contains information on why the issue is important, how it might affect water quality, and how it was evaluated. For example, in terms of clearing and grading, it would describe that there is a direct relationship between the number of acres that are cleared and graded and the potential for impact to surface water quality. This information might be further refined to identify those cleared and graded acres that are within 100 feet of surface water, or near steep slopes. The impacts associated with remaining alternatives can then be evaluated by comparing them to the first alternative, without reiterating the background information about why the issue is important etc. This minimizes redundancy and clarifies the comparison between alternatives. Typically short term project impacts (i.e., those that occur or have the potential to occur during project construction) are addressed separately from long-term impacts, for each of the project alternatives.

It is critical that all significant project impacts are clearly identified. It is not appropriate to provide a paragraph of text describing the potential for impact and how it will be avoided without providing the reader with a final statement about the impacts significance. Either a table or list that contains all of the potential impacts identified and their final evaluation result (i.e., significant, insignificant, discountable, minimal), or a one sentence summary statement are typical means of insuring the final impact has been identified.

Indirect Effects and Cumulative Impacts must also be addressed in this section. The following definitions should be used as a guide to defining these:

Indirect Effects are caused by the proposed project, but occur later in time and are further removed in distance than direct effects. An indirect effect of increased stormwater runoff that is directly attributable to the increased impervious surface associated with a project, would be the eventual changes in stream channel morphology as caused by the change in flow pattern.

Cumulative Impacts are those that result from incremental impacts of the proposed project when added to the other past, present, and reasonably foreseeable future actions. The cumulative environmental effects of the proposed actions associated with each alternative should be addressed on a watershed basis in the context of other actions in the surrounding environment. These impacts can result from individually minor but collectively significant actions taking place over a period of time. Direct and indirect impacts are a subset of the Cumulative Impacts. To use the example above, even if the increase in stormwater runoff was considered to be undetectable or insignificant, the project would still contribute to the cumulative impacts associated with increased impervious surface in the basin.

Two important factors to consider in determining the potential for cumulative impacts are; the potential for future development and the type of project. In areas experiencing little growth, an individual highway project will contribute negligibly to cumulative impacts because of the absence of other development activity. Conversely, in areas of rapid development, a highway improvement can add measurably to aggregated change leading to long-term impacts. In terms of the type of project, capacity improvements, additional interchanges, and construction in a new location generally have greater potential for cumulative impacts than upgrades of existing facilities.

V. Mitigation

Mitigation measures must be identified for all adverse impacts (both significant and non-significant). The analyst should use the following "mitigation sequence" recommended by FHWA when considering mitigation options. The sequence is; avoid → minimize → repair or restore→ reduce over time→ replace.

The analyst is expected to use professional knowledge and expertise to demonstrate mitigation strategies that are based on solving project specific impacts. Not all project impacts can be fully mitigated. If no mitigation options have been identified for a specific impact, this should be stated. All relevant, reasonable mitigation measures that could improve the project should be identified, even if they are outside the jurisdiction of WSDOT. The probability of successfully implementing a mitigation measure should also be addressed in an EIS to ensure that project effects are fairly assessed.

There is often confusion over what constitutes a true mitigation measure. For example, it is tempting to describe stormwater treatment facilities as a project mitigation measure for reducing stormwater impacts. Yet these facilities are not optional; they are a required part of the project design. Therefore, they can't also be listed as mitigation measures. In order to make this distinction clear, it can be an advantage to begin the mitigation section with a summary of "conservation measures" included in the project design to reduce impacts. This could easily segue into a simple summary or bulleted list of the impacts that remain after implementation of mitigation measures.

QUANTITATIVE PROCEDURES FOR WATER QUALITY IMPACT ASSESSMENTS

This guidance was developed for use by analysts who are tasked with producing Water Resource Discipline Studies to assess impacts from Washington State Department of Transportation (WSDOT) road and highway projects. It should function as a supplement to the Environmental Procedures Manual (WSDOT 2001), and be utilized for performing the quantitative assessments necessary for impact evaluations.

The methods described in this guidance include those that are appropriate for assessing construction period impacts (short-term impacts) and those for predicting long-term (operational) impacts. The long-term impacts assessment includes two sections; the first describes methods for predicting "gross" runoff quantity and pollutant loading generated from projects, and the second section describes the method for predicting the "net" runoff and loading after implementing stormwater treatment or best management practice (BMP) technologies.

Short Term Impacts: Construction Impacts Methods

Short-term or construction-related impacts from WSDOT projects are primarily associated with land disturbance and the potential for impacts resulting from erosion and sediment transport and in-water work. The potential for impact is directly related to the amount of land surface affected. Therefore, quantification of this impact begins with an estimate of the total number of acres affected by clearing and grading. This information (i.e., acres affected by construction) can be further refined by separating the affected land into different categories based on environmental sensitivity. Categories that might be considered include: (1) acres of wetland and or wetland buffer affected, (2) length of affected shoreline, (3) acres on moderate or steep slopes, (4) acreage within floodway or flood prone areas, and (5) acreage that lies within an erosion hazard zone. Other simple categories to consider for quantification and comparisons include: (1) whether or not there is in-water work, (2) whether work is occurring within a wellhead protection zone, (3) the number of stream crossings, and (4) flood storage displacement. Yet another way to categorize the information for potential water quality impact might be to define the impact by proximity to a water body. This might involve dividing the affected acreage into the amount that lies within 100 feet of shoreline area, 100 to 300 feet, and greater than 300 feet. The categories selected for definition and comparison should be based on the concerns specific to the project. In these cases a table depicting the different categories and estimates should be adequate to allow comparisons. Table 1 is provided as an example of a comparison summary to assess construction impacts.

Table 1. Example Comparison of Construction Impacts
WSDOT Water Resource Discipline Study Guidance

	Option #1	Option #2
Total acres of clearing and grading	28	42
Acres of wetland or buffer affected	5	10
Acres of floodplain impacted	5.3	13.6
Flood storage displacement (acre-feet)	62	87
Number of wellhead protection zones crossed	2	3
Length of shoreline affected (Linear-Feet)	1,200	2,800
New stream crossings	3	4
Existing crossings to be improved or removed	4	4
Total number of in-water work sites	6	8

After selecting the most appropriate categories for comparing impacts and quantifying those impacts as provided in the example table, the analyst should provide some text describing the major sources of differences between construction alternatives, and identifying which alternative(s) has the least impact.

In some instances, it may be desirable to quantify or estimate actual soil loss in addition to providing land disturbance estimates. The Revised Universal Soil Loss Equation (RUSLE) is commonly used to estimate soil loss and sediment yield from erosion. It can also be used to evaluate the effect of implementing some BMPs. In this equation, estimated soil loss is a function of the erosive properties of a given soil, which is then modified by ground surface conditions such as slope, rainfall characteristics, surface cover or vegetation type, and surface condition.

Although the RUSLE is fairly easy to use, it requires input of values taken from numerous nomographs and tables, and there are different methods for providing more site-specific input variables. Rather than replicating this information in written form, the computer model and documentation for its use is available on the following website: (http://www.sedlab.olemiss.edu/rusle/).

Long Term Impacts: Runoff and Pollutant Loading Methods

There are numerous models for estimating runoff quantities and pollutant loading impacts from stormwater runoff or land use changes. These models vary from fairly simple equations based on empirical relationships to computer simulation models. Cost, effort, and data requirements vary with model complexity. For the purpose of this guidance, and the analysis required for WSDOT planning level assessments and comparative evaluations, simpler models/equations that can be calculated by hand were selected. Generally, these models are most appropriate for developing planning level estimates of smaller drainages that are not overly complex in terms of variety of land uses and conditions.

The two aspects of long-term project impacts that are typically included in Water Resource Discipline Studies are the impacts to runoff quantities and pollutant loading. Guidance on methods for developing each of these sections of the analysis are described in the following sections.

Runoff Quantity Estimates

There are numerous methods for estimating runoff from project sites. They include methods that can be calculated by hand, such as the Rational Method and USGS Regression Equations; to computer models, such as Santa Barbara Urban Hydrograph (SBUH) and Stormwater Management Model (SWMM); to use of published flow records. These methods and their application are described in detail in the WSDOT Hydraulics Manual (WSDOT 1997), and therefore are not described here. Most often runoff estimates will be available through the Project Office or the Hydraulics Branch of the WSDOT Olympia Service Center (OSC). The following steps might be followed for collecting appropriate information for this part of the analysis:

Step 1: List site characteristics, including the following:

- Size of drainage area(s). A road project is likely to have multiple outfalls and treatment facilities and affect more than one natural stream basin. Each may need to be individually evaluated.
- List types of land cover and approximate percentage of each (existing and post project).
- Estimate percent impervious land cover.

Step 2: Select flow condition that will be used for the analysis. Typically for a Water Resource Discipline study, the average annual flow (and therefore average annual pollutant load) will be the basis for the analysis. Assessment of critical flow conditions such as affects to peak flows and flooding may also be required for a project, but are beyond the scope of this guidance.

Step 3: Contact the Project Office or the Hydraulics Branch of the OSC to determine whether runoff volumes have already been calculated. If so, request information on the method that was used in the calculation for detailing in the Methods section of the Discipline Study.

Step 4: If appropriate runoff volumes are not already available, then runoff can be estimated by using one of the methods described in the WSDOT Hydraulics Manual (WSDOT 1997).

Once the flow estimates have been made, the analysis can become comparative in nature. It often improves the clarity of the analysis to first describe pre-treatment conditions (i.e., assuming no stormwater control facilities are built). Example comparison analyses include:

- Is there a notable difference in volume of runoff generated by different alternatives?
- How does the amount of runoff generated compare to the existing condition?

The next step is to describe any stormwater facilities or control techniques that would affect the quantity or timing of generated runoff. This step could be quite complex and require assessment of multiple storm events and flood conditions. However, under most planning level assessments a more general approach will suffice that would include a general description of the facilities that might be used or reference the requirements that would apply from the Washington State Department of Ecology's Stormwater Management Manual for Western Washington (Ecology 2001). It is likely that at the planning stages of the construction project, when the Discipline Study is being prepared, specific stormwater management technologies and/or facilities will not have been selected or designed, necessitating this general approach. Again, the analysis can become comparative at this point. Example questions that might be considered for comparison include:

- Is more impervious surface runoff being captured and controlled than under the existing condition? This can be the case in redevelopment projects because of more stringent stormwater control requirements.
- How does the amount of runoff generated and released to the receiving water compare to expected flow conditions in the receiving water at that time? What percent of the receiving water flow does it represent?

Pollutant Loading Estimates

Pollutant load estimates can be calculated on a storm-specific basis or as an annual load. The pollutant load is a function of pollutant concentration and runoff volume. Most often it is the annual load that is calculated when preparing Discipline Studies and it is this value that is used to address cumulative impacts from a project.

There are numerous methods for estimating pollutant loads from a watershed, drainage basin, or project site. They range from selection of literature values of calculated loading rates, to simple equations that can be used with a calculator, to complex computer models. Three methods are described and summarized below, that are presented in order of increased complexity. However, each is easy to apply and requires only a hand calculator or a computer spreadsheet. These methods were selected because they are: (1) easy to apply, (2) specific to the Pacific Northwest, or (3) specific to evaluating highway impacts. All three methods are appropriate to use at the planning stage of a project or to compare between project alternatives. It is difficult to recommend the use of any particular method because they each have important advantages and disadvantages that need to be considered against project needs. The advantage of the first method (Literature Yield Estimates) in addition to it's being easiest to use, is that the source data was largely collected in the Pacific Northwest. Since pollutant concentrations can be generally lower here than elsewhere in the nation (Horner et al., 1994) this can be important. Also, the data was collected more recently than the data used for the other two methods (i.e., early 1980's versus early 1970's. A disadvantage of the method is that it does not allow for the use of site specific data or calculation of pollutant loads from selected storm event sizes. Also, the database used to develop the yield estimates was small and not as diverse as the database utilized for development of the other two methods.

The second and third methods (Simple and FHWA) were both developed from the same nationwide database of stormwater data collected in the 1970's. Therefore, the data does not reflect local conditions or necessarily reflect current stormwater characteristics. In fact, due to the shift to unleaded gasoline in the late 1960s, the lead concentrations from this database are inappropriate for use and have not been

included in the summary tables included in this report. The second method (Simple Method) can be easily modified to reflect site specific characteristics by simply using site specific or local Event Mean Concentrations (EMCs). This gives it an advantage over the FHWA method, if in fact site specific EMCs are available.

The greatest advantage of the FHWA method is that it was developed specifically for highway projects and there are follow-up equations provided in the manual (FHWA 1996) for completing stream and lake impact analyses. The greatest disadvantage, other than the age and origination of the source database, is that without statistical analysis of local precipitation data, this method is limited to areas with precipitation conditions similar to those experienced near Seattle.

An overview of the features, applications, and limitations of these three methods is provided in Table 2 below.

TABLE 2. DECISION MATRIX FOR EVALUATING APPROPRIATE POLLUTANT LOADING MODEL

WSDOT Water Resource Discipline Study Guidance

	Yield Estimates	Simple Method	FHWA
Can mean storm size be used?	No	Yes	Required
Can the design storm size be used?	No	Yes	No
Is it appropriate for use in calculating monthly pollutant loads?	No	Yes	No
Is it appropriate for use in calculating annual pollutant loads?	Yes	Yes	Yes
Can it handle multiple land use types or conversion of land use?	Yes	Yes	No
Can it be modified with site specific values?	No	Yes	No
Can it be applied to drainage areas greater than 1 square mile?	Yes	No	Yes

Method 1: Application of Literature Values. Shown in Table 3 below is a summary of the range in pollutant yields measured from sites in the Pacific Northwest (Horner 1992). Because the values reflect local rather than national data they may be more applicable than other data sources. Nonetheless, this represents a very general estimating method and should be noted as such in the methods and discussion sections of a Discipline Study.

Table 3. Pollutant Yield Estimates from Pacific Northwest Sites									
Land Use	**Yield Estimate Basis[1]**	**Total Suspended Solids**	**Total Phosphorus**	**Total Nitrogen**	**Lead[2]**	**Zinc**	**Copper**	**Fecal Coliform Bacteria**	**Chemical Oxygen Demand**
Road	Minimum	281	0.59	1.3	0.49	0.18	0.03	7.1E+07	112
	Maximum	723	1.50	3.5	1.10	0.45	0.09	2.8E+08	289
	Median	502	1.10	2.4	0.78	0.31	0.06	1.8E+08	201
Commercial	Minimum	242	0.69	1.6	1.60	1.70	1.10	1.7E+09	306
	Maximum	1,369	0.91	8.8	4.70	4.90	3.20	9.5E+09	1,728
	Median	805	0.80	5.2	3.10	3.30	2.10	5.6E+09	1,017
Single Family Low Density	Minimum	60	0.46	3.3	0.03	0.07	0.09	2.8E+09	NA
	Maximum	340	0.64	4.7	0.09	0.20	0.27	1.6E+10	NA
	Median	200	0.55	4.0	0.06	0.13	0.18	9.3E+09	NA
Single Family High Density	Minimum	97	0.54	4.0	0.05	0.11	0.15	4.5E+09	NA
	Maximum	547	0.76	5.6	0.15	0.33	0.45	2.6E+10	NA
	Median	322	0.65	5.8	0.10	0.22	0.30	1.5E+10	NA
Multifamily Residential	Minimum	133	0.59	4.7	0.35	0.17	0.17	6.3E+09	100
	Maximum	755	0.81	6.6	1.05	0.51	0.34	3.6E+10	566
	Median	444	0.70	5.6	0.70	0.34	0.51	2.1E+10	333
Forest	Minimum	26	0.10	1.1	0.01	0.01	0.02	1.2E+09	NA
	Maximum	146	0.13	2.8	0.03	0.03	0.03	6.8E+09	NA
	Median	86	0.11	2.0	0.02	0.02	0.03	4.0E+09	NA
Grass	Minimum	80	0.01	1.2	0.03	0.02	0.02	4.8E+09	NA
	Maximum	588	0.25	7.1	0.10	0.17	0.04	2.7E+10	NA
	Median	346	0.13	4.2	0.07	0.10	0.03	1.6E+10	NA
Pasture	Minimum	103	0.01	1.2	0.004	0.02	0.02	4.8E+09	NA
	Maximum	583	0.25	7.1	0.015	0.17	0.04	2.7E+10	NA
	Median	343	0.13	4.2	0.010	0.10	0.03	1.6E+10	NA

NA = Not Available.

[1] All units are in kilograms/hectare/year except fecal coliform bacteria which are in number/hectare/year.

[2] Since this data was collected in the early 1980s, it reflects a period when most vehicles would have used unleaded gasoline.

Reference: Horner 1992.

Another source of highway runoff pollutant yield data is currently being developed through WSDOT's Environmental Services Office (ESO) Water Quality Program based on site characterization monitoring at sites with varying average daily traffic (ADT) volumes.

This method is straightforward to apply. Simply estimate the number of hectares of land that will be contributing to the point of interest (e.g., a stormwater facility or receiving water) and multiply by the yield factor of the pollutant of interest. Either calculate the range in annual load based on the maximum and minimum yield values or use the median value to estimate the median annual load. Alternatively, the maximum value can be used to assess the worst case condition.

For example, the calculation for the median annual load of total suspended solids (TSS) from a 10 hectare site, is as follows:

- Median annual TSS Load = 502 kg/ha-yr * 10 = 5020 kg/yr

Method 2: Simple Method. The Simple Method (Schueler 1987) refers to an empirical equation developed for use in estimating pollutant loads from urban watersheds. Consequently, it is not specific for use in estimating road or highway impacts. However, one of the categories of runoff assessed was "National Urban Highway Runoff", so the constants developed for this category would be applicable to WSDOT analyses.

The fact that this model has input variables for different land use types can be an advantage. This means that, in addition to directly estimating runoff character of the highway, it can also be used for comparisons when the project involves a significant change in area land use. For example, when a new roadway

represents conversion from an existing suburban or urban area or from forest land. To estimate impacts from the conversion, the analyst would first calculate predicted pollutant loads under the existing land use scenario and then calculate the predicted load after conversion, and compare the difference.

The Simple Method was derived from the National Urban Runoff Pollutant (NURP) database developed in the 1970s. Flow-weighted mean concentrations for each of 14 constituents and for six different land use types (ranging from hardwood forest to central business districts, and urban highways) were derived from statistical analysis of the data. These values are provided in Table 4. The equation can be used to estimate pollutant loads from any time interval or storm size; thus a 24-hour storm load, 6-month storm size load, or annual load can be calculated. Unlike methods which specify derived coefficients, the reliance on flow-weighted mean concentrations in this equation means that it is easy to insert specific local data. Thus, the "C" values shown in Table 4 can be replaced by a flow-weighted value that is deemed more appropriate for a project or geographic area.

Table 4. Urban C Values for Use with the Simple Method

(All values in mg/L)

Pollutant	National Urban Highway Runoff	New Suburban NURP Sites (Wash., DC)	Older Urban Areas (Baltimore)	Central Business District (Wash., DC)	National NURP Study Average	Hardwood Forest (Northern Virginia)
Phosphorus						
Total	-	0.26	1.08	-	0.46	0.15
Ortho	-	0.12	0.26	1.01	-	0.02
Soluble	0.59	0.16	-	-	0.16	0.04
Organic	-	0.10	0.82	-	0.13	0.11
Nitrogen						
Total	-	2.00	13.6	2.17	3.31	0.78
Nitrate	-	0.48	8.9	0.84	0.96	0.17
Ammonia	-	0.26	1.1	-	-	0.07
Organic	-	1.25	-	-	-	0.54
TKN	2.72	1.51	7.2	1.49	2.35	0.61
COD	124.0	35.6	163	-	90.8	>40.0
BOD (5-day)	-	5.1	-	36	11.9	-
Metals						
Zinc	0.380	0.037	0.397	0.250	0.176	-
Copper	-	-	0.105	-	0.047	-

TKN = Total Kjeldahl nitrogen
COD = Chemical oxygen demand
BOD = Biochemical oxygen demand
Reference: Schueler 1987.

One of the main limitations of this method is that it is not applicable to drainage areas greater than 1 square mile (2.59 square kilometers) in area. Most often WSDOT road projects can be divided into relatively small drainage areas that reflect the land or road area draining to a specific stormwater facility or an outfall structure, and therefore this limitation is avoided.

This method may be most useful in predicting impacts when major land use change is planned, or when there are multiple land use types that require comparison. Also, it begins with an estimation of runoff, and; therefore, provides an additional means of calculating runoff if it is not provided by some other method. If runoff quantities have already been estimated, the analysis can begin with Step 3. Average annual precipitation values for a number of cities and towns in Washington State for use with this method are included in Appendix A, and are provided in Ecology's Stormwater Management Manual (Ecology 2001).

Step 1: Calculate runoff depth:

$R = (H \times P_j \times R_v)/12 \times (A)$

Where:

R_v = 0.05 + 0.009 (I)

R = Runoff depth (acre-feet) over the defined time interval

H = Rainfall amount over time interval or for defined storm event (inches). (Use the average annual precipitation when calculating annual loads.)

P_j = Percentage of storms over time interval that produce runoff

R_v = Runoff Coefficient (Ratio of runoff to rainfall)

12 = Conversion factor (inches to feet)

A = Drainage area (acres)

I = Percent Impervious

For this method the runoff coefficient is calculated from the impervious area. The most troublesome part of this equation is often the Pj value. This parameter provides a means of correcting for those rainfall events that do not produce runoff. A reasonable conservative assumption can be made for this value. A value of 0.9 is recommended for seasonal or annual calculations (Schueler 1987). In the case of a highway that is entirely impervious and a discipline study where the analyst may want to err on the conservative side, a value of 1.0 could also be justified. If the equation is used to estimate runoff for a single storm event, that is larger than 0.5 inches in size, Pj should also equal 1.0.

Step 2: Runoff depth can be converted to discharge:

$Q = (R)\ (0.504)$

Where:

Q = Discharge (ft^3/sec/day)

0.504 = Conversion factor

Step 3: Calculate the pollutant load:

$L=(Q)\ (C) \times 5.39$

Where:

L = Mass load over time interval (pounds)

C = Flow-weighted mean concentration of the pollutant in the runoff (mg/L) (refer to Table 4)

5.39 = Conversion factor

If runoff depth and discharge are not required, these equations can be simplified to one equation for pollutant load:

$L=((H \times P_j \times R_v)/12) \times (C)*2.72$

To convert to metric units use the following conversions:

Q (ft^3/sec) * 0.028 = Q (m^3/sec)

L (pounds) * 0.454 = L (kg)

Method 3: FHWA. This model was developed specifically for assessment of impacts from roadway projects, and as a consequence may be the most appropriate model for conducting discipline studies for WSDOT roadway related projects. The model was based on data collected between 1975 and 1985, from almost 1,000 storm events, at 31 highway runoff sites in 11 states (Driscoll 1990). This database was

used to calculate Site Median Concentrations (SMC) for specific pollutants and the coefficient of variation for each pollutant. The SMC should not be confused with the more commonly used Event Mean Concentration (EMC). The SMC is defined from the probability distribution of the EMC for a site; it is the EMC for the median runoff event.

SMC's are provided for two roadway use classifications; less than 30,000 ADT and greater than 30,000 ADT. Differences between predicted concentrations and loads are driven by differences in rainfall characteristics and the ADT distinction. This model can be used to calculate runoff rate and volume and pollutant mass loading. However, the developed coefficients and constants were based on the "mean storm event" and therefore can not be directly related to any other defined storm event (e.g., the 6-month storm event).

The model requires some less commonly available rainfall characteristics data (e.g., mean storm volume, interval between storms, number of storms per year). Input values for the Seattle area were calculated and included in the FHWA manual (FHWA 1996). These values are included with the equations below. Unfortunately, no values are available for the remainder of the State of Washington. It is possible that these statistics can be provided by the Project Office if hydrologic modeling is required for other elements of the project. Otherwise, this model is probably most appropriate for use in or near the Seattle area. It can be used outside this area if the purpose of the analysis is only comparative in nature. For example, where the primary purpose is to compare relative impacts between alternatives, but not necessarily to derive an accurate prediction for pollutant loading.

The primary advantage to this model is that it was developed for use in conducting highway impact assessments, and includes additional steps for assessing impacts to streams and lakes. It is also easy to use and is described in even greater detail in the FHWA publication (FHWA, 1996). The main disadvantage to its use is the limit in its applicability outside of the Seattle area without the availability of supplemental hydrologic data specific to the project area, as described above. Another disadvantage is that it is based on the mean storm event and can not easily be used to derive loadings from a specific design storm. However, annual loads can be estimated.

In the following equation, the concentration (C) can be obtained directly from the information contained in Table 5. Most often the values for the median (50th percentile) site are most appropriate for use. Use of higher or lower percentile concentrations may be justified by the analyst based on local factors. For example, sites in dry semi-arid areas (e.g., eastern Washington) appeared to tend toward higher concentrations of pollutants compared with sites in more humid regions (Driscoll et al. 1990). The analyst may also want to consider land use when selecting the most appropriate SMC. In a rural setting with a high ADT, the best pollutant concentration estimate may be represented by the lower percentiles of the high ADT table. Furthermore, if there is a local condition, such as a metal smelting facility that can be expected to cause elevated concentrations of metals, then higher median concentrations should be used for the prediction. It is also possible to use local site median concentration data in the predictions. However, if these are based on a limited sampling effort, then they may represent a poor estimate of site characteristics and reliance on the FHWA's extensive dataset may be more appropriate.

The following discussion outlines the process for estimating annual pollutant loading using the FHWA Method:

Step 1: Convert SMC to average event mean concentration:

$$C_m = C_{med} * (1+CV^2)^{0.5}$$

Where:

C_m = Average Event Mean Concentration

C_{med} = Site Median Pollutant Concentration (From Table 5)

CV = Coefficient of Variation of Event Mean Concentration (See Note.)

(Note: According to FHWA (1996), a CV value of 0.75 is generally a good estimate for all highway sites and all pollutants. A value of 0.71 may be used for urban highways, while a value of 0.84 may be used for rural locations.)

Step 2: Calculate site runoff volume:

$$V_{ms} = Rv \times H_{ms} \times A \times 10$$

Where:

V_{ms} = Volume of runoff for mean storm event (m^3)

Rv = Runoff coefficient, which is equal to 0.007 x I + 0.10, where I is the percent impervious area

H_{ms} = Rainfall volume for mean storm event (mm), forr the Seattle area this value is 11.7 mm

A = Area (hectares)

Step 3: Calculate the mean event mass pollutant load:

$$L_m = C_m \times (V_{ms} / 1000)$$

Where:

L_m = Mean pollutant mass loading (Kg per event)

C_m = Average Event Mean pollutant concentration (mg/L)

V_{ms} = Volume of rainfall for mean storm event (m^3)

Step 4: Calculate the annual load:

$$L_a = L_m \times N_s$$

Where:

L_m = Mass load for mean event (Kg per event)

N_s = Number of storms per year (For the Seattle area this value is 86.7)

L_a = Annual mass loading of pollutant (kg/yr)

Table 5. Site Median Concentration (C_{med})of Pollutants in Highway Runoff

(all values in mg/L)

Pollutant	Percent of sites having a median EMC less than indicated concentration				
	10% of Sites	20% of Sites	50% of Sites	80% of Sites	90% of Sites
Urban (>30,000 ADT)					
TSS	68	88	142	230	295
TKN	1.06	1.27	1.83	2.62	3.17
PO4-P	0.15	0.21	0.40	0.76	1.06
Copper	0.025	0.032	0.054	0.091	0.119
Zinc	0.192	0.231	0.329	0.469	0.564
Rural (<30,000 ADT)					
TSS	12	19	41	90	135
TKN	0.34	0.47	0.87	1.59	2.19
PO4-P	0.06	0.08	0.16	0.33	0.48
Copper	0.010	0.013	0.022	0.038	0.050
Zinc	0.035	0.046	0.080	0.139	0.185

Reference: Driscoll et al. 1990.

Assessment of Post-Treatment Impacts

The best solution to mitigate the potential impacts to water resources created by highway runoff is the application of BMP technologies to address quality and/or quantity considerations. Detailed guidance on BMP selection protocols and alternatives is provided in Ecology's Stormwater Management Manual for Western Washington (Ecology 2001) and the WSDOT Highway Runoff Manual (WSDOT 1995). When BMPs are correctly applied to a project location, the impacts of the change in land use can be minimized. BMP selection is dependent on a wide range of site-specific considerations, and often any one of a number of options could be utilized to accomplish the same result. Information pertaining to proposed BMPs for a project site may be available from the Project Office or the OSC Hydraulics Branch, depending upon the stage of the project and extent of availability of conceptual design information. Alternatively, a BMP technology or class of treatment options may be selected for application with justification for the basis and assumptions outlined in the discipline study document.

A comparison of the pollutant removal efficiencies for various BMP designs is presented in Table 6. Following selection of a treatment technology, reductions in pollutant loading are calculated directly through application of the anticipated removal efficiency to the loading rates calculated as described above. If loading rates have been determined based on event mean concentration values or a storm-specific basis, comparisons can then be made to relevant water quality criteria and standards (e.g., acute or chronic surface water standards, drinking water standards). Where pollutant loading estimates have been derived for annual loads, comparisons may then be made between alternatives and treatment methods based on annual reductions in pollutant loads.

Table 6. Pollutant Removal Efficiencies for Various Urban BMP Designs

BMP/Design		Pollutant Removal Efficiency (percent)						
		Suspended Sediment	Total Phosphorus	Total Nitrogen	Oxygen Demand	Trace Metals	Bacteria	Overall Removal Capability
Extended Detention Pond	Design 1	60-80	20-40	20-40	20-40	40-60	Unknown	Moderate
	Design 2	80-100	40-60	20-40	40-60	60-80	Unknown	Moderate
	Design 3	80-100	60-80	40-60	40-60	60-80	Unknown	High
Wet Pond	Design 4	60-80	40-60	20-40	20-40	20-40	Unknown	Moderate
	Design 5	60-80	40-60	20-40	20-40	60-80	Unknown	Moderate
	Design 6	80-100	60-80	40-60	40-60	60-80	Unknown	High
Infiltration Trench	Design 7	60-80	40-60	40-60	60-80	60-80	60-80	Moderate
	Design 8	80-100	40-60	40-60	60-80	80-100	60-80	High
	Design 9	80-100	60-80	60-80	80-100	80-100	80-100	High
Infiltration Basin	Design 7	60-80	40-60	40-60	60-80	40-60	60-80	Moderate
	Design 8	80-100	40-60	40-60	60-80	80-100	60-80	High
	Design 9	80-100	60-80	60-80	80-100	80-100	80-100	High
Porous Pavement	Design 7	40-60	60-80	40-60	60-80	40-60	60-80	Moderate
	Design 8	80-100	60-80	60-80	60-80	80-100	60-80	High
	Design 9	80-100	60-80	60-80	80-100	80-100	80-100	High
Water Quality Inlet	Design 10	0-20	Unknown	Unknown	Unknown	Unknown	Unknown	Low
Filter Strip	Design 11	20-40	0-20	0-20	0-20	20-40	Unknown	Low
	Design 12	80-100	40-60	40-60	40-60	80-100	Unknown	Moderate
Grassed Swale	Design 13	0-20	0-20	0-20	0-20	0-20	Unknown	Low
	Design 14	20-40	20-40	20-40	20-40	0-20	Unknown	Low

Design 1: First-flush runoff volume detained for 6-12 hours. Design 2: Runoff volume produced by 25 mm (1.0 in) detained 24 hours. Design 3: As in Design 2, but with shallow marsh in bottom stage. Design 4: Permanent pool equal to 13 mm (0.5 in) storage per impervious acre. Design 5: Permanent pool equal to 2.5 (Vr); where Vr = mean storm runoff. Design 6: Permanent pool equal to 4.0 (Vr); approximately 2-week retention. Design 7: Facility exfiltrates first-flush; 13 mm (0.5 in) runoff/impervious acre. Design 8: Facility exfiltrates 25 mm (1 in) runoff volume per impervious acre. Design 9: Facility exfiltrates all runoff, up to the 2-yr design storm. Design 10: 11 m3 (400 ft3) wet storage per impervious acre. Design 11: 6 m (20 ft) wide turf strip. Design 12: 30 m (100 feet) wide forested strip, with level spreader. Design 13: High-slope swales with no check dams. Design 14: Low-gradient swales with check dams. Reference: Shuler, 1987.

Information Sources and Baseline Reference Materials

The Environmental Procedures Manual – Volume 1 (WSDOT 2001) is a comprehensive source of information on federal, state, and regional agency regulations, policies, and guidance related to water quality. It also contains references and websites for obtaining specific water quality and impacts data. Exhibit 431-5 is an especially useful aid since it summarizes these information sources.

The WSDOT Environmental GIS Workbench is a custom geographic information system (GIS) application build to assist staff in accessing over 100 layers of environmental or natural resource management data. This information resource has been developed to maintain a collection of the best available data for state-wide environmental analysis. Additional information on the availability of supplemental guidance is provided in the following sections.

Receiving Water Data

Probably the best first step for gathering information on receiving waters is Ecology's watershed website (www.ecy.wa.gov/watershed/index.html). This website contains water resource information organized by Watershed Resource Inventory Area (WRIA). The WRIA website provides links to; Ecology publications, water quality summaries from selected publications, watershed assessments or plans, water quality data from Ecology's ambient monitoring program, 303(d) listings and maps, total maximum daily load (TMDL) efforts, and outside links. The outside links will include USGS water quality station maps and data, EPA (Surf Your Watershed), and others. The EPA website provides links to data on water sources, water discharges, toxic release, hazardous waste, river corridor and wetland restoration efforts, and stream flow data. The USEPA STORET database (www.epa.gov/STORET/) should also be perused for data. This information is organized by county. The STORET database is likely to contain a mix of data sources including data from Ecology's ambient monitoring program, USGS gaging and precipitation data and other sources.

Another important qualitative information source is the Habitat Limiting Factors Reports done by the Washington Conservation Commission. Although these reports focus on fish requirements, since these requirements are often water quality related the information can be useful in an analysis of existing conditions. This information is accessible at: http://salmon.scc.wa.gov.index.html

While the Washington State and Federal websites are an excellent source of data for larger systems, there may be little representation of smaller streams or lake systems. Even in the case of larger rivers and streams, local governments and tribes may have more extensive, project specific, or site specific information. Therefore, the next step is to expand the search to local information sources.

Unfortunately there is little consistency in how local governments are organized. As a consequence, water quality data can be located in many different departments. The following is a list of potential sources for water quality data.

- Local Tribes
- Public Utility Districts (Including, sewer, water, and energy)
- County Departments: Health, Stormwater Management, Environmental Protection, Public Works, Sewer and Water, Planning and Development
- Natural Resource Conservation Service (NRCS) District offices
- City Departments: Public Works, Planning, Sewer and Water, Water Resources.

Stormwater Data

The main references used in this document are excellent sources of information on stormwater quality, quantitative assessment methods, treatment facility effectiveness, and more. Another excellent source of information on recent research, much of which is specific to the Pacific Northwest, is the database and catalogue maintained by the Center for Urban Water Resource Management, which can be accessed at: (http://depts.washington.edu/cuwrm).

References

Driscoll, E., P.E. Shelley, and E.W. Strecker, 1990. Pollutant Loadings and Impacts from Highway Stormwater Runoff, Volume III: Analytical Investigations and Research Report. FHWA RD-88-008. Federal Highway Administration, Woodward-Clyde Consultants, Oakland, California.

Federal Highway Administration. 1996. Evaluation and Management of Highway Runoff Water Quality. Office of Environment and Planning. Publication No. FHWA-PD-96-032. June 1996.

Horner, R.R. 1992. Water quality criteria/pollutant loading estimation/treatment effectiveness estimation. *In* R.W. Beck and Associates. Covington Master Drainage Plan. King County Surface Water Management Division., Seattle, Washington.

Horner, R.R., J. Skupien, E.H. Livingston and H.E. Shaver. 1994. Water Quality Impacts of Urban Land Use. In; *Fundamentals of Urban Runoff Management: Technical and Institiutional Issues. Terrene Institute. Washington, DC.*

Shuler, T.R. 1987. Controlling Urban Runoff: A Practical Manual For Planning and Designing Urban BMP's. Metropolitan Council of Governments, Washington, DC.

Washington State Department of Ecology (Ecology). 2001. Stormwater Management Manual for Western Washington. Washington State Department of Ecology Water Quality Program. Publication Numbers 99-11 through 99-15.

Washington State Department of Transportation (WSDOT). 1995. Washington State Department of Transportation Highway Runoff Manual No. M 31-16. Prepared by Washington State Department of Transportation Environmental and Engineering Service Center. February 1995.

Washington State Department of Transportation. 2001. Environmental Procedures Manual. Publication Number M 31-11. Prepared by Washington State Department of Transportation Environmental and Engineering Service Center, Environmental Services Office. July 2001.

Winer, Rebecca. 2000. National Pollutant Removal Performance Database for Stormwater Treatment Practices. 2nd Edition. Prepared by Center for Watershed Protection, Ellicott City, Maryland. Prepared for U.S. EPA Office of Science and Technology in association with Tetra Tech, Inc., Fairfax, Virginia. June 2000.

Washington State Department of Transportation

Discipline Report Checklist
Water Quality

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Project purpose and need. Summary of major water quality concerns or issues.
❒	❒	❒		B.	Summary of differences between alternatives (as they relate to surface water resources).
❒	❒	❒		C.	Map of area with project boundaries.
❒	❒	❒		D.	Map(s) or figure(s) showing alternatives.

II. Studies, Coordination, Methods, and Regulations

The purpose of this section is to provide adequate evidence of the background work and resources used to justify the analysis approach taken. This includes a review of rules and regulations and the proposed projects compliance.

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Summarize Baseline Documentation
❒	❒	❒	❒		1. List all potentially affected surface water resources in the project area
❒	❒	❒	❒		2. List all reports and data sources acquired and contacts made during project development.
❒	❒	❒	❒		3. Summarize those data sets or reports most pertinent to the project and how they will be used for the analysis.

SAT	INC	MIS	N/A	
❒	❒	❒		B. Describe Methodology and Data Used
❒	❒	❒		C. Identify the rules and regulations that are relevant to the project and how they relate to stormwater and future stormwater conditions:
❒	❒	❒	❒	1. WSDOT Plans, Programs, and Policies.
❒	❒	❒	❒	2. Growth Management Act and Comprehensive land use plans (review GMA restrictions limiting development).
❒	❒	❒	❒	3. Local basin plans, watershed protection plans, watershed analysis, etc.
❒	❒	❒	❒	4. Critical areas ordinances.
❒	❒	❒	❒	5. Wellhead/aquifer protection plans. (Refer to groundwater discipline study.)
❒	❒	❒	❒	6. Combined sewer outfall reduction plans.
❒	❒	❒	❒	7. Total Maximum Daily Loads (TMDLs).
❒	❒	❒	❒	8. Limiting Factors Analysis, Habitat Conservation Plans, 4D rules, or relevant biological assessments.
❒	❒	❒	❒	9. Local Shoreline Plans and Ordinances.
❒	❒	❒	❒	10. Shellfish Closure Response Plans

III. Affected Environment

This section establishes the natural environment and overlaying built environment from which impacts will be evaluated and compared. The detail and focus should be commensurate with the level of impacts anticipated.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Description of natural framework to surface water quality.
❒	❒	❒	❒	1. Description of general topography and soils. Geologic setting, slopes, hazardous areas, soil types, soil drainage, waterholding characteristics and erodability. (Refer to geology discipline report, if available).
❒	❒	❒	❒	2. Description of climate.
❒	❒	❒		B. Description of surface Water Resources.
❒	❒	❒	❒	1. Identify basin, sub-basin, and project boundaries.

SAT	INC	MIS	N/A	
❒	❒	❒	❒	2. Identify WRIA(s).
❒	❒	❒	❒	3. Summary of available sampling data and assessment of its adequacy.
❒	❒	❒	❒	4. Stream locations and typing.
❒	❒	❒	❒	5. Water quality classifications standards and beneficial uses.
❒	❒	❒	❒	6. CWA 305 (d) listed waters. Identify the phase of Ecology listing, i.e., is there a TMDL plan in place, under development, or in the implementation phase?
❒	❒	❒	❒	7. Source identification for existing and/or historical water quality problems (point and nonpoint source pollutants).
❒	❒	❒	❒	8. Stream channel features (width, depth, riparian vegetation, bank condition, flood storage capacity, off-channel habitat, existing bridges, piers, etc.).
❒	❒	❒	❒	9. Identify existing drainage pathways and wastewater/ stormwater outfall locations. Quantify existing impervious surface.
❒	❒	❒	❒	10. Identification of water quality factors that are limiting factors to local fisheries.
❒	❒	❒	❒	11. Surface water hydrologic features (discharge rates, minimum instream flows or other limits).
❒	❒	❒	❒	12. Lakes (water quality characterization; sediment toxicity, limiting factors; existing management strategies, restoration efforts, etc.).
❒	❒	❒	❒	13. Marine waters (tidal and current patterns, flushing rates for estuarine systems, etc.).
❒	❒	❒	❒	14. Aquatic ESA issues.
❒	❒	❒	❒	15. Description of existing sediment quality and contamination.
❒	❒	❒	❒	16. Antidegradation analysis, as specified in the Antidegradation Policy (40 CFR 131.12).
❒	❒	❒	❒	17. Reference to wetland report and possible summary of key related issues.
❒	❒	❒	❒	18. Reference to groundwater report and possible summary of key related issues.
❒	❒	❒	❒	19. Reference to floodplain report and possible summary of key related issues.

SAT	INC	MIS	N/A	
❒	❒	❒	❒	20. Reference to fisheries report and possible summary of key related issues.
❒	❒	❒	❒	C. Other issues and constraints.
❒	❒	❒	❒	1. Describe public and private water supply sources.
❒	❒	❒	❒	2. Describe project area wastewater removal systems.
❒	❒	❒	❒	3. Spill data (historical record of major spills, locations, extent, etc.).
❒	❒	❒	❒	4. Wellhead protection areas (in relation to project boundaries) and identified aquifer recharge areas.
❒	❒	❒	❒	5. Groundwater contamination and remediation actions.

IV. Impacts (for all alternatives)

The focus and level of detail for this evaluation should be commensurate with the level of concern. The assessment should consider construction, operational, and indirect impacts from project development. The cumulative environmental effects of the proposed actions, in the context of other actions in the surrounding environments, should be addressed on a watershed basis. A summary statement should be included for all significant impacts.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Evaluate construction impacts for each alternative, considering:
❒	❒	❒	❒	1. Erosion and sedimentation potential and predicted impact on water quality and seasonal aspects of the potential affect (e.g., turbidity, suspended solids, nutrients).
❒	❒	❒	❒	2. Describe all in-water, over-water or near-water work. Describe the Temporary Exceedances of water quality standards and mixing zone limits.
❒	❒	❒	❒	3. Work near identified sensitive areas (e.g. steep slopes, shoreline, erosion hazard zone, etc.).
❒	❒	❒	❒	4. Availability of short-term water right permits for construction activities in areas subject to low flow conditions restrictions.
❒	❒	❒	❒	5. Seasonal conditions and impacts on water quality (low dissolved oxygen levels, high temperatures, algae blooms, reduced flows, etc.).
❒	❒	❒	❒	6. Clearing and grading impacts.
❒	❒	❒	❒	7. Potential impacts associated with project staging areas.

SAT	INC	MIS	N/A		
❒	❒	❒	❒		8. Risks to municipal sewer and water supply lines.
❒	❒	❒	❒		9. Refer to Groundwater study for potential impact to groundwater quality and sole source aquifers from contaminant sources.
❒	❒	❒	❒		10. Refer to Hazardous Materials study for information on sediment quality and contamination sources.
❒	❒	❒	❒		11. Spill potential and spill control response BMPs.
❒	❒	❒		B.	Evaluate operational impacts for each alternative, considering:
❒	❒	❒	❒		1. Impacts of projected average daily traffic (typical highway runoff pollutants, projected loadings, impacts to receiving water bodies, etc.).
❒	❒	❒	❒		2. Maintenance activity impacts (pesticide application, vactor waste disposal, mowing practices, accessibility to maintain BMPs, etc.).
❒	❒	❒	❒		3. Effects of impervious surface additions and alterations to surface hydrology (quantify for ESA requirements).
❒	❒	❒	❒		4. Seasonal conditions and impacts on water quality (low dissolved oxygen levels, high temperatures, algae blooms, reduced flows, etc.).
❒	❒	❒	❒		5. Stormwater sediments as a potential contaminant source.
❒	❒	❒	❒		6. Review and refer to the Fisheries study and impacts on biological organisms, including seasonal closures of shellfish harvest areas and impacts to fish habitat and stream structure.
❒	❒	❒	❒		7. Potential spillage pathways identified from WSDOT stormwater outfall inventory data (i.e., locations where WSDOT drainage is tightlined to waterbodies, locations where off-site drainage may be tributary to WSDOT systems.
❒	❒	❒	❒		8. Reference to groundwater, floodplain, fisheries and wetland impacts reports.
❒	❒	❒		D.	Evaluate indirect impacts for each alternative, considering:
❒	❒	❒	❒		1. Nonpoint source problems.
❒	❒	❒	❒		2. Water quantity concerns.
❒	❒	❒	❒		3. Hydrologic impacts due to long-term streamflow impairment and changes in stormwater quantities.

SAT	INC	MIS	N/A		
❒	❒	❒	❒		4. Changes in land use patterns along transportation corridor.
❒	❒	❒		E.	Evaluate cumulative impacts
❒	❒	❒	❒		1. Evaluate direct impacts on a watershed scale (e.g. pollutant loading and 303(d) listings, impervious surface increases and stormwater runoff, permanent stream crossings, loss of properly functioning riparian zone).
❒	❒	❒	❒		2. Evaluate indirect impacts on a watershed scale, especially considering the impacts of future development (e.g. changes in stream flow pattern and morphology and overall pollutant loads from land use pattern change indirectly resulting from the project).
❒	❒	❒		F.	Include a summary of all impacts identified as significant for each alternative.

V. Mitigation: Avoidance, Minimization, and Compensation

Mitigation measures, commitments, and monitoring procedures should be identified for each impact addressed in the previous section. Consider measures to avoid, minimize, restore, reduce over time, or replace environmental resources. Mitigation measures should be evaluated for site-specific problems and for cumulative impacts related to overall watershed development. Off-site mitigation or restoration options within the watershed should also be considered.

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Summarize project elements that reduce impacts or the potential for impact from construction activities.
❒	❒	❒	❒		1. Temporary erosion and sedimentation controls (structural BMPs and stabilization BMPs).
❒	❒	❒	❒		2. Permit requirements.
❒	❒	❒	❒		3. Prevention plan to control pollutants other than sediments in project staging areas.
❒	❒	❒	❒		4. BMPs to protect groundwater and the public drinking water supply.
❒	❒	❒	❒		5. Protection measures for sewer lines.
❒	❒	❒	❒		6. Potential stormwater BMP retrofit opportunities.

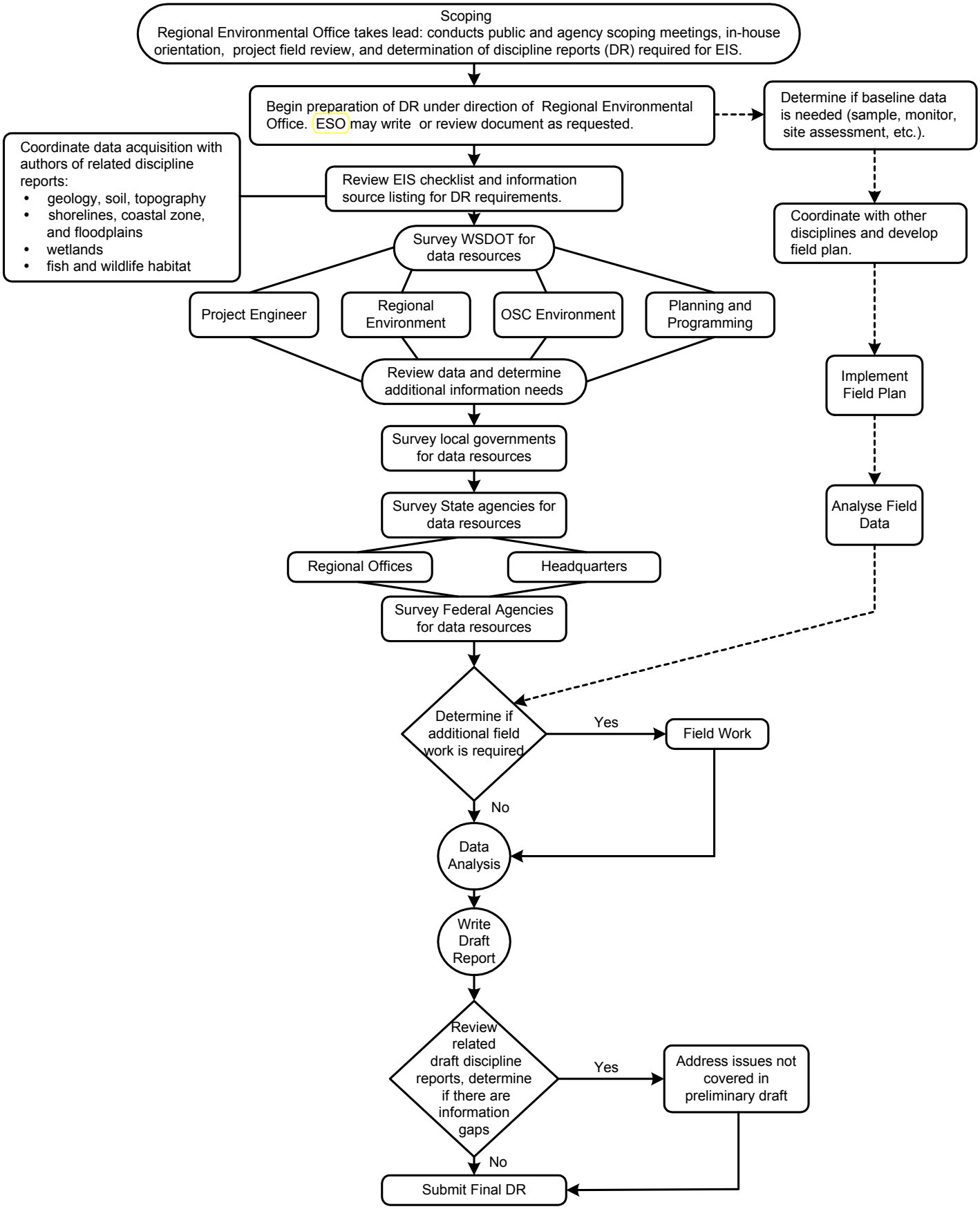
SAT	INC	MIS	N/A		
❒	❒	❒		B.	Summarize project elements that reduce impact or the potential for impact from operations.
❒	❒	❒	❒	1.	Approximate locations for water quality/quantity BMPs for highway runoff.
❒	❒	❒	❒	2.	Stormwater management requirements (i.e. Puget Sound Stormwater Management Manual, Highway Runoff Manual requirements, NPDES permits, state water quality standards, local basin plan requirements, Section 6217 of the Federal Coastal Zone Management Act).
❒	❒	❒	❒	3.	BMPs for maintenance practices.
❒	❒	❒	❒	4.	BMPs to protect groundwater and the public drinking water supply.
❒	❒	❒	❒	5.	Discussion of monitoring activities and feedback mechanisms to adjust operating procedures, monitoring intensity, and protocol at first detection of adverse impacts.
❒	❒	❒		C.	Identify mitigation for all significant adverse direct, indirect and cumulative impacts for each alternative. Mitigation strategies include off-site mitigation or restoration options or plans, opportunities for utilizing special/newly researched BMPs, off-site supplemental treatment BMPs, assistance with watershed priorities (set through watershed planning, Low Flow Frequency Analysis, etc.), dovetailing with NPDES research needs, and potential joint projects (such as the 1996 interagency Memorandum of Understanding concerning work in watercourses).
❒	❒	❒		D.	Identify means of committing to the mitigation measures and probability of their implementation.

General Comments: _____

_____

_____

Water Quality Discipline Report Checklist



February 1999

Information Source Listing for WSDOT Water Quality Discipline Reports

Overview

The following is a source listing for information used to develop a water quality discipline report. The listing is organized by the following subject categories (column one): water quality, water quantity, aquatic biology, coastal environments, resource management, soils/geology, groundwater, hazardous waste/spill data, wetland, land use management, or land use/topography. Column two identifies the type of information that can be obtained for each subject category (i.e., maps, aerial photos, databases, digital geographic data (GIS), reports, or information contact). Column three identifies the name of the entity providing the information, and column four lists a contact number for the source, if available.

Additional References

The information listing provides a general overview of available data sources, and should not be considered inclusive of all resources potentially available for a major project. Discipline reports prepared for related areas of environmental impact should be reviewed to reduce duplication of data gathering and to ensure water quality issues are adequately addressed for project conditions. A flow chart identifying the process for developing a discipline report is provided with the information source listing.

Universities, colleges, and Tribal environmental departments are also excellent contacts for environmental data. Several sources included in this listing were obtained from a document entitled, *"Guidance for Conducting Water Quality Assessments and Watershed Characterizations Under the Nonpoint Rule (Chapter 400-12 WAC)*, published by Washington State Department of Ecology (Publication No. 95-307, February 1995), available from Ecology's Publications Distributions Office (360) 407-7472. Ecology's publication contains a more detailed description of several of these data sources, as well as additional information on water quality assessment methods.

SUBJECT	MATERIAL TYPE	SOURCE	CONTACT
Water Quality	Contact	local sewer & water districts	consult local directory
Water Quality	Contact	local health departments	consult local directory
Water Quality	Contact	DOH (shellfish, bacterial & red tide data)	Shellfish Programs (360) 236-3320
Water Quality	Contact	WDFW (Water Quality impact on fisheries)	Habitat Division (360) 902-2622
Water Quality	Contact	Ecology (ambient monitoring information)	PSWQA (360) 407-7300
Water Quality	Contact	Conservation Districts	consult local directory
Water Quality	Contact	local public works departments (stormwater)	consult local directory
Water Quality	Contact	WSDOT	Olympia Service Center Water Quality Unit (360) 570-6648
Water Quality	WSDOT Highway Runoff Manual	WSDOT	Stormwater Environmental Services (360) 570-6657 (Pub. No. M31-16)
Water Quality	Statewide Water Quality Assessment 305(b)	Ecology	Water Quality 509-329-3590
Water Quality	report: 303(d) List1 (1994). 1995 available Fall '95.	Ecology	Water Quality (360) 738-6245 and 509-329-3590
Water Quality	Water Quality Modeling	Ecology	(360) 407-6485
Water Quality	drinking water data system - FRDS	EPA	Drinking Water Program Section (206) 553-1893
Water Quantity	contact & database info for basin characteristics, peak flows, water quality data, etc.	USGS	consult local directory
Water Quantity	Contact	Ecology	(306) 407-6557
Water Quantity	Contact	local public works departments (stormwater & flood control)	consult local directory
Water Quantity	Contact	utility districts	consult local directory
Water Quantity	Contact	Drainage and Irrigation Districts	consult local directory
Water Quantity	Basin Plans, Drainage Manuals, Comprehensive Drainage Plans	local public works departments (stormwater & flood control)	consult local directory

SUBJECT	MATERIAL TYPE	SOURCE	CONTACT
Resource Management	contact: permit assistance, site searches, identify key contacts at govt. agencies	Ecology	Permit Assistance Center (360) 407-7037
Soils/Geology	Contact	Local Developers (soil percolation tests)	consult local directory
Soils/Geology	maps: slope stability maps	DNR	Geology/Earth Resources (306) 902-1450
Soils/Geology	report: Local Geology	DNR	Geology/Earth Resources (360) 902-1450
Soils/Geology	report: Soils Surveys	Conservation Districts & USDA NRCS	consult local directory
Groundwater	report: WA State Wellhead Protection Program	WDOH	Wellhead Protection Program (206) 586-9041
Groundwater	Contact	USGS	Water Resources Division (206) 593-6510
Groundwater	Contact	Ecology	Water Quality (360) 407-6423
Groundwater	Contact	local health departments, city & county planning/ environmental departments	consult local directory
Hazardous Waste/Spill Data	Contact	Ecology, & NOAA Hazardous Material Branch (for marine environment)	Ecology Spill Mgt (360) 407-6900 NOAA Hazmat (206) 526-6317
Hazardous Waste/Spill Data	Contact	WSDOT (highway spill/accident reports)	Transportation Data Office (360) 570-2493
Hazardous Waste/Spill Data	Contaminated soils maps and underground storage tank locations	WSDOT	(360) 570-6658
Wetland	Contact	Ecology (wetland inventories)	Shorelands (360) 407-6547
Wetland	Contact	COE (Section 10 & 404 Permits, water bodies dredge & disposal permit info.)	General Info (206) 764-3742
Wetland	Contact	City and county planning & zoning departments	consult local directory
Land Use Management	FEMA Maps	local planning departments	consult local directory
Land Use Management	Contact	county assessor/planning/or environmental health offices	consult local directory
Land Use Management	report/maps: Comprehensive Land Use Plans	City and county planning & zoning departments	consult local directory

SUBJECT	MATERIAL TYPE	SOURCE	CONTACT
Land Use Management	Contact	Conservation Districts	consult local directory
Land Use Management	Contact	Puget Sound Regional Council of Governments	(206) 464-7090
Land Use/ Topography	aerial photographs	WSDOT	Geographic Services (360) 753-2162
Land Use/ Topography	aerial photographs: Historical photos, 1950's	USDA, ASCS	Aerial Photography Field Office - Sales Branch (801) 975-3532
Land Use/ Topography	aerial photographs: Puget Sound Waterways & Columbia Basin	COE, Seattle District Office, Survey Branch (206) 764-3552	General Info (206) 764-3742
Land Use/ Topography	Satellite Imagery (Landsat Data)	EOSAT	(818) 596-2388

ACRONYMS

COE	U.S. Army Corps of Engineers	DNR	WA Dept. of Natural Resources
EAP	Environmental Assessment Program	EPA	Environmental Protection Agency
FWS	U.S. Dept. of Interior, Fish and Wildlife Service	NRCS	Natural Resources Conservation Service
NOAA	National Oceanic and Atmospheric Administration	PSWQA	Puget Sound Water Quality Authority
USDA	U.S. Dept. of Agriculture	USGS	U.S. Dept. of Interior, Geological Survey
WDFW	WA Dept. of Fish and Wildlife	Ecology	WA Dept. of Ecology

Please forward any corrections or updates to: Richard Tveten, WSDOT Environmental Affairs Office, Water Quality Team at Tvetenr@wsdot .wa.gov

WSDOT Stormwater Site Plan Checklist

In accordance with the Highway Runoff Manual (HRM), Stormwater Site Plans (SSP) are required for all projects that involve the addition of over 5,000 square feet (465 meters) of impervious surface. If a project is adding less than 5,000 square feet of additional impervious surface, then there is no requirement for submission of a Stormwater Site Plan (SSP). However, a Temporary Erosion and Sediment Control (TESC) Plan is required for any project design which includes clearing and grubbing, embankment work, or other earth work. If a project requires a SSP, then a TESC Plan is included as part of the SSP document. If a SSP is not required, then a TESC Plan is submitted as a separate document in place of the SSP. A NPDES/Baseline General Permit will also be required if the project involves more than five acres of land disturbance. The TESC Plan, in combination with the contractor's addendum to the plan, will satisfy NPDES requirements.

The SSP must contain six items: (1) a project overview, (2) TESC Plan, (3) a BMP Selection Form, (4) a project specific Maintenance and Operations Schedule, (5) a Vegetation Management Plan, and (6) a Downstream Analysis Report. The Hydraulic Report and Explanation of Non-Practicability should also be included in the SSP if they are developed for the project.

The following checklist identifies specific elements that must be included in each item of the SSP. The checklist is intended to be used as a tool to assist those preparing SSPs and TESC Plans. The checklist represents the minimum requirements for a complete SSP. Depending on the complexity of individual projects and site characteristics, additional elements may be needed to adequately address stormwater management issues.

Project Overview	
The project overview provides a general description of the site and the proposed construction activities. The project overview should include (1) a site description, and (2) a site map.	**Y/N**
Site Description • Location of the project • Description of the proposed construction activity • Intended sequence of major construction activities • Total area of the site • Total area of the site expected to undergo excavation • Total area of pervious and nonpervious surface under existing conditions • Total area of pervious and nonpervious surface under built-out conditions • Location of known illicit connections or discharges	

Project Overview (continued)	
Site Map • Right of way limits • Existing roadways • Proposed roadways • Significant structures • Drainage basins • Elevation contours • Receiving bodies of water (extend to off-site analysis boundary) • Location of nearby or adjacent construction activities • Effected Utilities • Environmentally sensitive lands (ex. wetlands, streams, etc.)	

Temporary Erosion and Sediment Control	
TESC Plans describe stabilization and structural practices to minimize erosion and the transport of sediment. There are 13 minimum ESC requirements that must be met for a TESC. Some of the requirements apply only to the Puget Sound region. **All projects that involve land disturbance during construction require a TESC Plan. The TESC Plan, in combination with the contractors addendum to address pollutants other than sediment, will satisfy the requirements of the NPDES/Baseline General Permit. Guidelines for selecting appropriate BMPs for site conditions are located in WSDOT erosion control course materials. This checklist is intended to ensure all required elements of a TESC Plan are included in the final document. TESC Plans should include a narrative section and a set of site plans, and meet 13 minimum requirements for erosion and sedimentation control. The TESC should be submitted with the Hydraulic Report as a separate but related document.**	**Y/N**
Narrative Section • Construction schedule • Concise information for on-site conditions • Explanation of the BMP elements, including description of how temporary BMPs have been coordinated with the development of permanent BMPs • Site-specific BMP implementation schedule	
Site Plan • BMPs (clearly labeled and easy to read) • Environmentally sensitive lands (steep slopes, wetlands, streams, etc.) • Significant structures • Topography • Receiving bodies of water *(note: The TESC plan sheets do not have to be separate from the construction plan sheets as long as the sheets that make up the TESC plan, and the BMPs themselves, are clearly identified.)*	

Addendum plan to control pollutants other than sediments	
Temporary Erosion and Sediment Control (continued)	
Sequencing is planned, where possible	
Water quality sampling plan is developed if likely to be required by permits (grading, water quality modification, HPA, etc.)	
Minimum Requirement #1: Stabilization & Sediment Trapping	
Exposed and unworked soils are stabilized	
Runoff leaving the site passes through an appropriate BMP	
Puget Sound Condition • October 1 to April 30: Stabilization or erosion control BMPs are applied to unstabilized soils within 2 days • May 1 to September 30: Stabilization or erosion control BMPs are applied to unstabilized soils within 7 days	
Minimum Requirement #2: Delineate Clearing & Easements Limits	
Existing vegetation is preserved where possible	
Setbacks, drainage courses, easements, & sensitive/critical areas identified	
Minimum Requirement #3: Protection of Adjacent Properties	
Adjacent properties are adequately protected	
Minimum Requirement #4: Timing & Stabilization of Sediment Trapping Measures	
BMPs designed to trap sediment on-site are in place and functional before land disturbing activities begin (i.e., sediment ponds, traps, filter fences, perimeter dikes, sediment barriers are provided)	
Sediment control structures are stabilized (i.e., dams, dikes, and diversions)	
Puget Sound Condition • October 1 to April 30: Earthen structures used for sediment control are stabilized (seeded & mulched) within 2 days • May 1 to September 30: Earthen structures used for sediment control are stabilized (seeded & mulched) within 7 days	
Minimum Requirement #5: Cut & Fill Slopes	
Cut and fill slopes are designed and constructed in a manner to minimize erosion	
Minimum Requirement #6: Controlling Off-Site Erosion	
Properties, waterbodies, and other environmentally sensitive areas downstream are protected from construction site runoff (includes increases in volume, velocity, & peak flow rates)	

Temporary Erosion and Sediment Control (continued)	
Minimum Requirement #7: Stabilization of Temporary Conveyance Channels & Outlets	
Outlets of conveyance systems and adjacent stream banks are protected	
Puget Sound Condition • Temporary on-site conveyance channels are designed and stabilized to prevent erosion from a 2-year storm for developed conditions	
Minimum Requirement #8: Storm Drain Protection	
On-site sediment is prevented from entering storm sewer inlets	
Minimum Requirement #9: Underground Utility Construction *(Puget Sound Condition Only)*	
No more than 500 feet of trench is opened at one time	
If possible, excavated material is placed on the uphill side of trenches	
Trench dewatering devices discharge into sediment traps or sediment ponds	
Minimum Requirement #10: Construction Access Routes	
The transport of mud and sediment onto paved surfaces (either by wind or construction equipment traffic) is minimized (street washing should only be considered a last resort)	
Puget Sound Condition • Paved road surface are cleaned at the end of the day. Acceptable cleaning methods include shoveling or sweeping. Sediment is transported to a controlled sediment disposal area.	
Minimum Requirement #11: Removal of Temporary BMPs	
Temporary ESC BMPs are removed within 30 days of final site stabilization	
Trapped sediment are stabilized on-site when TESC BMPs are removed	
Disturbed soil areas resulting from the removal of temporary ESC BMPs are permanently stabilized	
Minimum Requirement #12: Dewatering Construction Sites *(Puget Sound Condition Only)*	
Dewatering devices discharge into a sediment trap or sediment pond	
Minimum Requirement #13: Maintenance	
Inspection schedule for temporary BMPs is provided	
Maintenance plan for temporary BMPs is provided	
Analysis of potential impacts on downstream habitat. (Refer to EPM **Section 436.05**, Wildlife, Fish, and Vegetation.)	

BMP Selection Form	
The BMP Selection Form (pg. 4-6, HRM) must be included with the SSP. For projects that only require earthwork, the BMP Selection Form should be included with the TESC Plan to show that the project was evaluated for the need of a permanent stormwater BMP.	**Y/N**
BMP Selection Form is included in the SSP or TESC Plan	

Maintenance and Operation Schedule	
The SSP must contain a description of the maintenance procedures for permanent BMPs used in the project. A discussion for maintenance activities related to temporary BMPs should be included in the TESC (see minimum requirement #13).	**Y/N**
A maintenance schedule for all permanent BMPs includes: • type of work to be done on each BMP • frequency of planned BMP maintenance	
The maintenance department is aware of the proposed schedule and has been provided an opportunity to comment on the proposed plan	

Vegetation Management Plan	
A SSP requires that a plan be developed to address the management of vegetation for the site.	**Y/N**
The SSP includes a Vegetation Management Plan	

Downstream Analysis	
A downstream analysis must be completed for any project requiring a SSP. The analysis will show what impacts, if any, the project will have on the hydraulic conveyance systems downstream of the project site.	**Y/N**

Resources are reviewed to adequately characterize the project site and downstream areas (ex. resources: basin plans, EISs, nonpoint action watershed plans, wetland inventories, stream & habitat surveys, local Sensitive Area Ordinances, etc.)	
Downstream Analysis (continued)	
The downstream analysis should include the following: • Site inspection for on- site and downstream areas • Analysis of downstream effects (flooding, channel destruction, aquatic habitat loss, wetland hydroperiod/water level fluctuations, etc.) • Mitigation measures for impacted areas	

ADDITIONAL ITEMS THAT MAY ALSO BE REQUIRED IN A SSP

Hydraulic Report	
A Hydraulic Report is required for any project that deals with drainage structures. The Hydraulic Report must be written as a stand alone document, but may be submitted as part of the SSP. The Hydraulic Report will provide the technical background and design parameters used for the design of all drainage structures. In addition, the hydraulic report should include the following:	**Y/N**
All materials required by Chapter 1 of the WSDOT *Hydraulics Manual*	
An adequate description of existing and future site conditions	
An analysis to determine the feasibility of treating both new and existing impervious surfaces	

Explanation of Non-Practicability	
If the requirements for stormwater BMPs can not be met, a document must be prepared which states why it is not practicable to include adequate treatment.	**Y/N**
Explanations for why BMPs could not be installed are clearly stated	
The "explanation of nonpracticability " identifies areas that can be treated for stormwater runoff	

WSDOT Temporary Erosion and Sediment Control Plan Checklist

TESC Plans describe stabilization and structural practices to minimize erosion and the transport of sediment. There are 13 minimum ESC requirements that must be met for a TESC. Some of the requirements apply only to the Puget Sound region.

All projects that involve land disturbance during construction require a TESC Plan. The TESC Plan, in combination with the contractors addendum to address pollutants other than sediment, will satisfy the requirements of the NPDES/Baseline General Permit. Guidelines for selecting appropriate BMPs for site conditions are located in WSDOT erosion control course materials. This checklist is intended to ensure all required elements of a TESC Plan are included in the final document. TESC Plans should include two parts: (1) a narrative section, and (2) a set of site plans. The TESC should be submitted with the Hydraulic Report as a separate but related document.

	Y/N
Narrative Section • Construction schedule • Concise information for on-site conditions • Explanation of the BMP elements, including description of how temporary BMPs have been coordinated with the development of permanent BMPs • Site-specific BMP implementation schedule	
Site Plan • BMPs (clearly labeled and easy to read) • Environmentally sensitive lands (steep slopes, wetlands, streams, etc.) • Significant structures • Topography • Receiving bodies of water *(note: The TESC plan sheets do not have to be separate from the construction plan sheets as long as the sheets that make up the TESC plan, and the BMPs themselves, are clearly identified.)*	
Addendum plan to control pollutants other than sediments	
Sequencing is planned, where possible	
Water quality sampling plan is developed if likely to be required by permits (grading, water quality modification, HPA, etc.)	
Minimum Requirement #1: Stabilization & Sediment Trapping	
Exposed and unworked soils are stabilized	
Runoff leaving the site passes through an appropriate BMP	

	Y/N
Puget Sound Condition • October 1 to April 30: Stabilization or erosion control BMPs are applied to unstabilized soils within 2 days • May 1 to September 30: Stabilization or erosion control BMPs are applied to unstabilized soils within 7 days	
Minimum Requirement #2: Delineate Clearing & Easements Limits	
Existing vegetation is preserved where possible	
Setbacks, drainage courses, easements, & sensitive/critical areas identified	
Minimum Requirement #3: Protection of Adjacent Properties	
Adjacent properties are adequately protected	
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BMPs designed to trap sediment on-site are in place and functional before land disturbing activities begin (i.e., sediment ponds, traps, filter fences, perimeter dikes, sediment barriers are provided)	
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Minimum Requirement #7: Stabilization of Temporary Conveyance Channels & Outlets	
Outlets of conveyance systems and adjacent stream banks are protected	
Puget Sound Condition • Temporary on-site conveyance channels are designed and stabilized to prevent erosion from a 2-year storm for developed conditions	

	Y/N
Minimum Requirement #8: Storm Drain Protection	
On-site sediment is prevented from entering storm sewer inlets	
Minimum Requirement #9: Underground Utility Construction ***(Puget Sound Condition Only)***	
No more than 500 feet of trench is opened at one time	
If possible, excavated material is placed on the uphill side of trenches	
Trench dewatering devices discharge into sediment traps or sediment ponds	
Minimum Requirement #10: Construction Access Routes	
The transport of mud and sediment onto paved surfaces is minimized (street washing should only be considered a last resort)	
Puget Sound Condition • Paved road surface are cleaned at the end of the day. Acceptable cleaning methods include shoveling or sweeping. Sediment is transported to a controlled sediment disposal area.	
Minimum Requirement #11: Removal of Temporary BMPs	
Temporary ESC BMPs are removed within 30 days of final site stabilization	
Trapped sediment are stabilized on-site when TESC BMPs are removed	
Disturbed soil areas resulting from the removal of temporary ESC BMPs are permanently stabilized	
Minimum Requirement #12: Dewatering Construction Sites ***(Puget Sound Condition Only)***	
Dewatering devices discharge into a sediment trap or sediment pond	
Minimum Requirement #13: Maintenance	
Inspection schedule for temporary BMPs is provided	
Maintenance plan for temporary BMPs is provided	

Section 303(d) — Tribal/State/Federal Coordination

What is Section 303(d) of the Clean Water Act?

Section 303(d) of the Clean Water Act requires and outlines a process to identify waters that do not meet state and/or tribal standards. It also sets priorities and requires quantitative analysis of water quality problems and contributing pollution sources.

The benefits of tribal, state, and federal coordination on Clean Water Act Section 303(d) activities include:

- Improving the 303(d) listing process in Washington State to include government-to-government processes with Indian tribes;
- Cooperating to address water quality problems on a watershed basis, recognizing areas where tribes have retained rights under treaties;
- Forming working relationships to solve water quality problems;
- Addressing cross-government jurisdiction water quality problems by watershed through a step-by-step process;
- Preserving state and tribal legal and administrative options and jurisdictions;
- Providing opportunities for tribes and the U.S. Environmental Protection Agency (EPA) to work together to meet requirements of the Clean Water Act on reservations;
- Coordinating funding for water quality improvement projects; and
- Pulling together state, tribal, and federal water quality decision-making.

The limitations of Section 303(d) include:

- Requirements of Section 303(d) can be staff, time, and money intensive processes for Washington State Department of Ecology, tribal natural resources programs, and EPA, and
- Lack of concrete guidance in the Clean Water Act about controlling pollution sources such as those resulting from forest and agricultural practices.

What would coordinating Section 303(d) efforts mean?

Tribal, Ecology, and EPA technical and/or policy staff would meet at specific points during the 303(d) process to identify concerns and arrive at solutions. The primary focus would be on specific watersheds and take place at the staff level. If agreements could not be reached on an important issue, a formal mediation could take place. Neither the tribe, Ecology, nor EPA would give up its decision-making authority, so final decisions would rest with the government vested with the decision-making responsibility.

Specific opportunities for cooperative involvement rest with the needs and resources of each tribe, Ecology, and EPA. Possible activities include joint monitoring, report writing, grant requests, policy development, local community involvement, data review, on-the-ground cleanup activities, and site inspections.

Agreements specifying the nature of the desired working relationships among the tribe, Ecology, and EPA could be formalized through memorandums of understanding, or less formal approaches could be taken.

Where can I find more information?

If you would like more detailed information about 303(d) coordination or have special accommodation needs, please call Paul Kraman, Northwest Indian Fisheries Commission at (360) 438-1180; Chris Maynard, Washington Department of Ecology at (360) 407-6484 (voice), or (360) 407-6006 (Telecommunication Device for the Deaf); Alan Henning at the Environmental Protection Agency at (206) 553-8293.

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Summary of Water Permits, Certificates, and Approvals

(listed in order of federal, state, local)

Permit, Certificate or Approval	Responsible Agency	Regulated Activities and Requirements	Statutory Authority
Joint Aquatic Resource Permits Application (JARPA) [Note: JARPA is an application form, not a permit.]	COE, Coast Guard, EPA, WDFW, Ecology, DNR, and local governments.	The JARPA form is used to apply for COE permits, Coast Guard Bridge Permits, Hydraulic Project Approvals (HPA's), Shoreline Permits from local governments, Approvals for Exceedance of Water Quality Standards from Ecology, Water Quality Certificates (Section 401) from Ecology, and DNR's Aquatic Resources Use Authorization.	Please refer to the specific permits, certificates, or approvals listed in this table
Corps of Engineers Section 10 Permit	COE	Any obstruction, alteration, or improvement of any navigable water, including rechanneling, piers, wharfs, dolphins, bulkheads, and buoys.	Section 10 of the Rivers and Harbors Act; 33 USC 401; 33 CFR 330.5 and 330.6
Corps of Engineers Section 404 Individual Permits	COE	Any discharging, dredging or placing of fill material in waters of the U.S. and adjacent wetlands	Section 404 of the CWA; 33 USC 1344, 33 CFR 330.5 and 330.6
Corps of Engineers Section 404 Nationwide Permits (NWP)	COE	NWP information is presented in a 1997 joint special public notice issued by the COE, EPA, Puyallup Tribe, and Ecology. A total of 40 NWPs for a range of activities in waters of the US are described in the public notice.	Section 404 of the CWA; 33 USC 1344, 33 CFR 330.5 and 330.6
Coast Guard Section 9 Bridge Permit	US Coast Guard	Any work on bridges and causeways in navigable waters or waters that are susceptible to improvement for transporting interstate or foreign commerce, or waters that are used by boats 21 feet or more in length.	Section 9 of CWA; 33 USC 401; 33 CFR 114 and 115; Federal Aid Highway Act of 1987. Section 123(b)
Coastal Zone Management (CZM) Certification	Ecology Headquarters, Shorelands and Environmental Assistance Program	Any activity requiring a federal permit/license must certify that the activity will comply with the State's Coastal Zone Management Program (Shoreline Management Act).	16 USC 1456, 33 CPR 320.3, 15 CFR, RCW 90.58 Parts 923-930
Water Quality 401 Certification	Ecology Headquarters, Shorelands and Environmental Assistance Program, Coordination Section; USEPA on Tribal and Federal land.	Any activity requiring a federal permit for discharging into waters must receive certification from the state that the discharge complies with that state's water quality standards.	33 US 1341, 33 CFR 320.4; RCW 90.48, WAC 173-225
National Pollutant Discharge Elimination System (NPDES)	Ecology; USEPA on Tribal and Federal land.	Any activity discharging pollutants from a point source into surface waters or groundwaters of the state. Individual and general permits are issued by Ecology.	33 USC 1342 RCW 90.48 WAC 173-220

Permit, Certificate or Approval	Responsible Agency	Regulated Activities and Requirements	Statutory Authority
NPDES Municipal Stormwater Discharge General Permit	Ecology	WSDOT projects that discharge stormwater. There are three geographical areas covered by separate general permits that are based on watershed boundaries: Island, Snohomish, South Puget Sound, and Cedar/Green.	RCW 90.48, WAC 173-226
NPDES Stormwater Construction Permit	Ecology	WSDOT construction activities disturbing more than 5 acres.	RCW 90.48, WAC 173-226
NPDES Sand and Gravel General Permit	Ecology	Discharges of process water and stormwater associated with sand and gravel operations and rock quarries.	RCW 90.48; WAC 173-226
NPDES Stormwater Industrial Permit	Ecology	Ferry related activities that discharge stormwater to waters of the state.	RCW 90.48; WAC 173-226
Hydraulic Project Approval (HPA)	WDFW	Any project that will use, cross, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state. Regulated activities include culvert work, stream realignment, and bridge replacement.	RCW 75.20.100; WAC 220-110; SSB 2879
Water Quality Permit. Use of Herbicides to Control Noxious Weeds on WSDOT Properties and Projects within the State of Washington	Ecology, Environmental Coordination Section, Federal Permit Manager for WSDOT	Application of herbicides to waters of the state at WSDOT-owned or –managed sites to control noxious weeds.	RCW 90.48.445, and WAC 173-201A-110
Administrative Order # DE99WQ-003. WSDOT Use of Herbicides to Control Non-noxious Weeds on WSDOT Properties and Projects within the State of Washington	Ecology, Environmental Coordination Section, Federal Permit Manager for WSDOT	Approved methods of application must be followed and careful record keeping must be documented. WDFW must be consulted for identification of salmonid bearing waters and special seasonal timing restrictions. Restrictions and public notice requirements are placed on herbicide application within 0.5 mile of areas of potential public use.	Chapter 90.48 RCW, and WAC 173-201A-110
Water Right Permit	Ecology, Water Resources Program	Any withdrawal of surface or groundwater for a WSDOT activity or project.	RCW 90.03; 90.44; 90.54
Water System Project Approvals	Washington State Department of Health or county or city Department of Health	Any project in which there are two or more water service connections for human consumption and domestic use.	RCW 43.20A; WAC 246-290 through 293
State Waste Discharge (SWD) Permit	Ecology	Any activity that will discharge or dispose of municipal and industrial wastewater into groundwaters of the state, or discharge industrial wastewater to a NPDES-permitted wastewater treatment plant. SWD permits are different from NPDES permits because NPDES permits regulate discharges directly to water or stormwater systems.	RCW 90.48; WAC 173-226

Permit, Certificate or Approval	Responsible Agency	Regulated Activities and Requirements	Statutory Authority
Easements	DNR	Any activity that fills, crosses over, bridges, or is on the beds of navigable waters of the state.	RCW 47.12
Critical Areas Ordinance	Counties and Cities	Any activity involving critical areas as regulated by the local jurisdiction. Critical areas include wetlands, critical recharge areas to aquifers, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas.	RCW 36.70A
Shoreline Substantial Development Permit	Counties or Cities	Qualified activities within shoreline jurisdiction – lakes/reservoirs 20 acres or greater, streams with 20 cfs annual flow, marine water, and all areas landward for 200 feet of OHWM.	RCW 90.48, WAC 173-10 through 173-28
Flood Plain Development Permit	Counties or Cities	Any structure or activity that may adversely affect the flood regime of a stream within the flood zone.	RCW 86.16; WAC 173-158

Acronyms

401 Certification: Clean Water Act Section 401 Water Quality Certification
COE: U.S. Army Corps of Engineers
CWA: Clean Water Act
CZM: Coastal Zone Management
DNR: Washington State Department of Natural Resources
Ecology: Washington State Department of Ecology
HPA: Hydraulic Project Approval
JARPA: Joint Aquatic Resource Permits Application
NPDES: National Pollutant Discharge Elimination System
NWP: Nationwide Permit
SWD: State Waste Discharge
WDFW: Washington State Department of Fish and Wildlife
WSDOT: Washington State Department of Transportation

Water Quality Permit
Use of Herbicides to Control Noxious Weeds

DEPARTMENT OF ECOLOGY

IN THE MATTER OF THE REQUEST BY	)	WATER QUALITY
WASHINGTON STATE DEPARTMENT OF	)	PERMIT # DE99WQ-002
TRANSPORTATION (WSDOT)	)	
FOR A WATER QUALITY PERMIT	)	
FOR THE USE OF HERBICIDES TO CONTROL	)	
NOXIOUS WEEDS ON WSDOT PROPERTIES AND	)	
PROJECTS WITHIN THE STATE OF WASHINGTON	)	

The Washington State Department of Transportation (WSDOT) submitted a request to the Department of Ecology (Ecology) for the purpose of applying herbicides to waters of the state at the following WSDOT owned or managed sites to control noxious weeds (as listed in the State Noxious Weed list Chapter 16-750 WAC as amended in 1998):

- Construction sites;
- Wetland mitigation sites;
- Right-of-ways; and
- Other WSDOT properties.

This Water Quality Permit (WQP) is issued under the provision of Chapter 90.48.445 Revised Code of Washington (RCW) and Washington Administrative Code (WAC) 173-201A-110.

WSDOT and WSDOT Contractors, herein called the applicator(s), shall comply with the following conditions during any application of Rodeo® (glyphosate), registered surfactant(s) and/or 2,4-D to waters of the state.

A. GENERAL REQUIREMENTS

1. This WQP is valid for a period of not more than one year after the signature date on the last page of this permit.

2. Applicator(s) operating under this permit must comply with all herbicide label instructions. If application conditions within this WQP differ from the label, there must be compliance with the more stringent of the requirements. However, no condition in this WQP or any amendment to the WQP, shall reduce the requirements on the herbicide label.

3. Applicator(s) must keep a copy of this WQP in their possession during all herbicide applications.

4. Failure to comply with the legal requirements referred to in this WQP, resulting in loss of critical, emergent vegetation, will require compensation by the applicator. This may include replanting and monitoring of planting success.

5. If there are any questions or problems regarding this WQP call one of the following contacts within Ecology:

Allen Moore	(360) 407-6563	FAX (360) 407-6426
Lorlee' Randall	(360) 407-6068	FAX (360) 407-6904

B. DEFINITIONS

1. **Applicator(s)** – WSDOT employee, WSDOT contractor or whomever WSDOT has given authorization to treat their site under this authorization.

2. **Non-targeted Plant(s)** – Plant(s) located outside of the treatment area or those not intermixed with plant species to be controlled.

3. **Normal entry point** – The area where a walkway or pathway enters the property and is used to access or cross over a site.

4. **Publicly Accessible Areas** – Known public access points or areas that the applicator(s) knows that the public uses, along right-of-ways and any beach or access point to water.

5. **Treatment Area** – The physical location of the herbicide application (including anticipated movement of the herbicide in lakes, ponds, streams, and wetlands) to control the targeted plant species.

6. **Wetlands** – means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, marshes, bogs and similar areas. This includes wetlands created, restored, enhanced or preserved as part of a mitigation procedure action. This does not include constructed wetlands for the following surface waters of the state intentionally constructed from non-wetland sites; irrigation and drainage ditches; grass-lined swales; detention facilities; canals; agricultural detention facilities; farm ponds; sewage treatment lagoons; and landscape amenities.

   However, wetlands, as permitted by the appropriate authority, may include those artificial wetlands intentionally created from non-wetlands areas to mitigate loss of wetlands. These artificial wetlands created for mitigation are not considered wetlands of the state until excavation is completed and water is allowed to freely occupy the site. At that point, it is assumed that the hydrology is in place and will support the wetland functions and values intended by a wetland mitigation plan.

C. REPORTING & RECORD-KEEPING REQUIREMENTS FOR THE APPLICATOR

1. At least 24 hours prior to treatment, the applicator(s) shall provide the appropriate Ecology regional office (numbers below) a reasonable estimate of the time, the exact location of treatment, and an emergency telephone number where the applicator(s) can be reached. A message by voice mail or FAX will suffice for this condition. If the applicator(s) determines that the spraying must occur and that the 24-hour notice requirement will not be met, the applicator(s) may request a verbal variance from the appropriate Ecology Regional office.

Central Regional Office, Yakima	(509) 575-2490	FAX (509) 575-2809
Eastern Regional Office, Spokane	(509) 456-2926	FAX (509) 456-6175
Northwest Regional Office, Bellevue	(425) 649-7000	FAX (425) 649-7098
Southwest Regional Office, Lacey	(360) 407-6300	FAX (360) 407-6305

2. The applicator(s) must immediately notify the appropriate Ecology regional office (see numbers in C.1) if any of the following concerns or issues arise following a herbicide treatment:

   - An authorized discharge of pesticide into state waters, or onto land with a potential for entry into state waters;
   - Learns of any person(s) who exhibits or indicates any toxic and/or allergic response as a result of the treatment;
   - Learns of any fish or fauna that exhibit stress conditions or die within or downstream of the treatment area; or
   - Non-targeted plants outside the treatment area that exhibit stress conditions or die following a herbicide treatment.

3. In the event of an unauthorized discharge of pesticide into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include legal disposal of any spilled material and used cleanup material.

4. The applicator(s) must keep complete application records using WSDOT Pesticide Application Records (see Appendix A). These forms also fulfill the Washington Department of Agriculture's (WSDA) reporting requirements. These application records must be completed the same day Rodeo® (glyphosate) and surfactants, and/or 2,4-D are applied and supplied to Ecology and/or WSDA immediately upon request.

D. CHEMICAL REQUIREMENTS

1. Aerial spraying is allowed only where logistical constraints prevent the use of a hand-held or vehicle mounted spray apparatus.

2. Only the following chemicals are approved for use in the spray mix under this WQP:

   a. Rodeo® (glyphosate), and the surfactant(s) LI-700®, R-11 and X77 or other registered surfactants within the two chemical families; or

   b. 2,4-D, although not recommended, may be used only in the dimethyl amine formulation with the following conditions:

      1) Along irrigation ditches and wasteways, no closer than 400 feet from any outfall into a natural stream, river, lake, reservoir or wetland and where treated water can be contained for the duration of the label use restrictions;

      2) Where buffers are sufficient to prevent 2,4-D from entering flowing, natural surface waters. The EIS recommends widths of 0 feet for wick applications, 10 feet for backpack sprayers, 25 feet for power sprayers, and 400 feet for aerial boom sprayers;

      3) No closer than 200 feet from public access sites; and

      4) WSDA has established additional restrictions on the use of 2,4-D pertaining to weather conditions, location and time of year. Consult WSDA prior to using 2,4-D.

   c. Blue spray pattern indicator (HI-LIGHT™) is approved for wicking, back-pack and hand-held power sprayers when applying the herbicides allowed under this WQP with the following provisos:

      1) HI-LIGHT™ shall be applied at the lowest mix rate practical; and

      2) Other indicator dyes may be used provided that toxicity test information has been provided to Ecology for review and approval that demonstrates an equivalent or lower toxicity than HI-LIGHT™.

E. <u>TIMING REQUIREMENTS</u>

1. The application of HI-LIGHT™, and/or Rodeo® (glyphosate) and surfactant(s), and/or 2,4 D is limited to periods of time that will not adversely impact salmonids. Consult the Washington Department of Fish and Wildlife (WSDF&W) for identification of salmonid bearing waters and special seasonal timing restrictions.

2. Apply the herbicide at times so as to minimize public water use restrictions during weekends and avoid public water use restrictions during the opening of fishing season, Memorial Day weekend, Independence Day weekend and Labor Day weekend.

3. Treatment within a 1/2 mile of areas of potential public use (boat launches, marinas, swim beaches, parks or other public accessible areas) is limited to weekdays. However situations may arise due to weather or other variables that may make it necessary to treat on high use days. If this is the case, the applicator(s) shall obtain a letter of concurrence from the local health department. If the local entity is not willing to take on this responsibility contact the appropriate Ecology Regional office (see C.1).

F. PUBLIC NOTICE REQUIREMENTS FOR THE APPLICATOR(s)

Anytime a portion of the treated area contains a publicly accessible area the following notification procedures must be complied with:

1. Public Notice – Applicator(s) must complete the Herbicide Application – Public Notice Form and deliver a copy to all adjacent properties at least seven (7) days before the initial treatment. The notification may include the schedule for the whole season to avoid duplication. (Public Notice form is provided in Appendix B or it can also be obtained from the Ecology Permit Assistance Center, (360) 407-7037). This same information can also be provided through a letter, flyer or telephone conversation to either the property owner or the renter/lessee.

    a. Expand the notification area to 1/2 mile along the shoreline of the treatment area where there are likely to be potable water withdrawals downstream.

    b. Copies of the notice, letter and a list of names and addresses where they were delivered or documentation of the telephone conversation, person contacted, date, time and any other pertinent information to provide proof of this notification must be retained for seven years.

2. Legal Notice – A legal notice must be published in the legal notices section of a local newspaper of general circulation (or nearest regional paper if a local paper does not exist) for all herbicide applications expected during the time the permit is in effect.

    a. Publish this notice 1 – 10 days prior to the first herbicide application of the season. The notice must include the:

        - Approximate date(s) of treatment;
        - Approximate location(s) to be treated;
        - Herbicide(s) to be used;
        - Posting procedure; and
        - Names and phone numbers of the WSDOT contact person and the appropriate Ecology regional office.

b. Obtain an original affidavit of the notice from the legal department of the newspaper prior to treatment and retain it for seven years.

G. POSTING REQUIREMENTS FOR THE APPLICATOR(s)

1. Post signs no more than 24 hours prior to an application. Use Ecology's 8 1/2 X 1-inch templates provided in Appendix C as models for the signs for Rodeo® (glyphosate) and 2,4-D. The sizes of the signs and the sizes of the letters must be duplicates of or correspond to the templates. To obtain larger templates (24 X 36 inches) contact the Ecology at (360) 407-6563.

   a. If no portion of the treatment site contains a publicly accessible area, signs shall be posted at normal entry points and/or gates into the treatment site.

   b. If a portion of the treatment area contains a publicly accessible area, then place signs within 25 feet of the shoreline facing both egress and entrance of any boat launch on the waterbody that is within 1/2 mile of any treatment site. Boat launches also include sites commonly used as put-ins and take-outs for small, non-trailered watercraft. Check the Washington State Parks and Recreation Commission publication "Public Boating Facilities in Washington State," 2nd edition, 1988, to identify public accesses. Reference copies of this publication are available through the Washington State Library, King County Library, Gonzaga University Library and Washington State University Library.

2. The applicator(s) shall use good faith and reasonable effort to ensure that posted signs are secured and remain in place. Signs shall be posted so they are secure from the normal effects of weather and water currents but cause no damage to private or public property. The applicator is responsible for removal of all signs at the end of the treatment season.

3. Post signs in English, and the language, if other than English, commonly spoken by the community that uses the area.

H. ADMINISTRATIVE REQUIREMENTS

1. The applicator(s) is responsible for complying with all herbicide label directions and restrictions. All persons applying pesticides under this permit should be aware of the following regulations:

   - The pesticide applicator regulations as required by WSDA (RCW 17.21, RCW 15.58, WAC 16-228, and WAC 16-230;

   - Public access policy and Hydraulics Code regulations as required by WSDF&W (RCW 75.20.100, WAC 220-110);

- Shorelines regulations as required by the local city or county (RCW 90.58); and

- All other applicable regulations of the other agencies and local ordinances.

2. If the applicator(s) wishes to vary any of the conditions within this WQP due to site specific issues the applicator shall obtain in advance, written permission from the appropriate Ecology regional office (see C.1).

3. Ecology retains continuing jurisdiction to make modifications hereto through supplemental actions if it appears necessary to protect the public interest. This includes protection of wildlife, aquatic, and wetland resources.

4. Failure to comply with the conditions of this WQP may result in civil penalties or other actions, whether administrative or judicial, to enforce the terms of this WQP.

This WQP may be appealed. The appeal must be filed with the Pollution Control Hearings Board, PO Box 40903, Olympia, Washington, 98504-0903 within thirty (30) days of receiving it. At the same time, the appeal must be sent to Ecology c/o Enforcement Officer, PO Box 47600, Olympia, Washington 98504-7600 and the appropriate Ecology Regional office (see B.1).

The appeal alone will not stay the effectiveness of this Permit. Stay requests must be submitted in accordance with RCW 43.21B.320.

Dated this __23__ day of __March__ 1999 at Olympia, Washington

_____

Megan White, P.E., Manager
Water Quality Program
Department of Ecology

Washington State Department of Transportation

Pesticide Application Record

Reference (RCW 17.21) A new form shall be filled out each day or each time the Sign Route is changed.
This Record Must be Retained for 7 Years. This form must be completed on day of application.
WSDOT, Roadside Management Branch, P.O. Box 47358, Olympia, WA 98504-7358. Phone (360) 706-7853.

Org. Code	County	Date of Application	Start_____ □ AM □ PM Finish_____ □ AM □ PM	ICP	Stores Issue Ticket Number(s)

Area
SR _____ MP _____ to MP _____ and MP _____ to MP _____ and MP _____ to MP _____ and MP _____ to MP _____

Check Appropriate Boxes
□ NB □ EB □ Roadside □ Landscaped Area □ Interchange □ Yard/Stockpile □ Spot Spray □ Aquatic
□ SB □ WB □ Shoulder □ Rest Area □ Bridge □ Blanket Spray □ Wetlands
□ Median □ Park'n'Ride □ Ramp □ Banded Width

□ Weeds □ Noxious Weeds □ Disease □ Seed
□ Brush □ Insects □ Other List Pests: _____

Start Weather Conditions
Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Finish Weather Conditions
Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product Per Acre (hectare	Unit	Total Daily Usage	Unit
		Oil (As Carrier)	Units: Ozd = Ounces Dry Lb= Pound g= gram kg = kilogram Ozl = Ounces Liquid Ga = Gallon ml = Milliliter L = Liter Pt = Pint Qt = Quart					
		Water Source						

Total _____ Acres (hectares) Treated at _____ gallons (liters) of spray per acre (hectare).

Equipment Number	Tank Size	Calibration Date	Vehicle Speed	Nozzle Pressure	Width of Spray Pattern
	2 _____ 4 _____ 1____ 3 _____ 5 _____		mph (km/h)	PSI (kPa)	Feet (meter)

□ Handspreader □ Handgun □ Boom □ Tank Mix (Conv.) □ Injection
□ Backpack □ Fixed Nozzle □ Other (specify) _____ □ Invert

Operator Name	Operator Pesticide License No.	Operator Signature	Driver Name

Remarks

Buffer Truck Driver's Name

Pesticide Sensitivity Registration

Applies: □ Yes □ No

Contacts
_____
_____
_____

Division of Emergency Management (1-800-258-5990)

DOT Form 540-508 EF Revised 3/96 Distribution: OSC Maint. Operator Region File
Send OSC Copy Within 5 days

Washington State Department of Transportation

Commercial Pesticide Application Record

Remember Backflow Protection

Reference (RCW 17.21) A new form shall be filled out each day or each time the pesticide tank mixture is modified during the day or each time the Sign Route or county is changed. This Record Must be Retained for 7 Years. This form must be completed on day of application.
WSDOT, Roadside Management Branch, P.O. Box 47358, Olympia, WA 98504-7358. Phone (360) 706-7853.

Contract Number	County	Date of Application	Day of Week	Start_____ □ AM □ PM Finish_____ □ AM □ PM

SR	Description of Area Treated	Station to Station

Check Appropriate Boxes

□ NB □ EB □ Median □ Roadside □ Interchange □ Spot Spray □ Aquatic
□ SB □ WB □ Landscaped Area □ Rest Area □ Bridge □ Blanket Spray □ Wetlands
□ Shoulder □ Park'n'Ride □ Ramp □ Banded Width

□ Weeds □ Noxious Weeds □ Disease □ Seed
□ Brush □ Insects □ Other List Pest(s):

Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Material Name	Manufacturer	EPA Reg. No.	Lot Number	Product Per Acre (hectare	Active Ingredient per Acre (hectare)	Unit	Total Daily Usage	Unit
	Oil (As Carrier)	Units: Ozd = Ounces Dry Lb= Pound g= gram kg = kilogram Ozl = Ounces Liquid Ga = Gallon ml = Milliliter L = Liter Pt = Pint Qt = Quart						
	Water Source							

No. of Tanks per Day _____ Tank Size _____ Gallons (liters).
Total _____ Acres (hectares) Treated at _____ gallons (liters) of spray per acre (hectare)

Equipment Information	Apparatus Number	Calibration Date	Vehicle Speed mph (km/h)	□ Boom □ Other (specify)

□ Handspreader □ Belly Grinder□ Backpack □ Handgun □ Manifold □ Tank Mix (Conv.) □ Invert
□ Fixed Nozzle □ Nozzle Cluster □ Injection

Nozzle Information	Model Number	Pressure PSI (kPa)	Number of Nozzles	Width of Spray Pattern Feet (meter)

Business Name	Phone

Address	City	State	Zip Code

Applicator/Operator Name	Commercial Pesticide Lic. No.	Commercial Operator Signature

Prime Contractor	Subcontractor	Inspector Name	Phone

Remarks	Pesticide Sensitivity Registration Applies: □ Yes □ No Contacts _____ _____ _____

Division of Emergency Management (1-800 258-5990)

DOT Form 540-508 EF Revised 3/96 Distribution: OSC Maint. Operator Region File
Send OSC Copy Within 5 days

Appendix B

Herbicide Application – Public Notice

_____ will be treated with aquatic herbicide(s) on/or between _____. Attached is a map of the area(s) to receive treatment.

Notices will be posted at the shoreline and on buoys next to the treatment area(s). They will also be posted at all boat launches on the waterbody within 1.5 miles of the herbicide treatment area. Notices of copper treatments will be posted at public access areas.

The herbicide(s) and active ingredient(s) to be used are:

Please obey the following use restrictions within the marked treatment areas:

If this is your only source of domestic or irrigation water, notify the applicator and Ecology by calling the phone numbers listed below.

Herbicides to be used, their water use restrictions, and the dates and locations of treatment(s) scheduled for the remainder of the season are:

For more information contact the applicator at:

This herbicide treatment is regulated under permits issued by the State Department of Ecology Water Quality Program, *[list regional phone # - see condition G-3]*. These herbicides have been approved for this purpose by EPA and the State Department of Agriculture.

CAUTION

Glyphosate (Rodeo) will be applied under permit to these waters on _____ to control aquatic vegetation.

NO WATER USE RESTRICTIONS ARE IN PLACE

Treated water may be used for Swimming, Fish Consumption, and Irrigation immediately after treatment.

The herbicide in use is Glyphosate (Rodeo).

For more information contact the Applicator:

Phone:

or Department of Ecology:

Please do not remove this sign until 2 days after application.

DANGER

2, 4-D will be applied under permit to these waters on _____ to control aquatic vegetation.

For your safety, please obey the following restrictions in this area marked with signs:

1. **Do not consume fish from these waters.**
2. **Do not forage or graze treated fields within _____ days.**
3. **Do not harvest hay for 30 days.**
4. **Do not enter the water for _____ days.**

wade or swim?

The herbicide in use is 2, 4-D

For more information contact the Applicator:

Phone:

or Department of Ecology:

Please do not remove this sign until 2 days after application.

Administrative Order
Use of Herbicides to Control Non-Noxious Weeds

DEPARTMENT OF ECOLOGY

IN THE MATTER OF THE REQUEST BY	)	ADMINISTRATIVE
WASHINGTON STATE DEPARTMENT OF	)	ORDER # DE99WQ-003
TRANSPORTATION (WSDOT)	)	
FOR THE USE OF HERBICIDES TO	)	
CONTROL NON-NOXIOUS WEEDS ON WSDOT	)	
PROPERTIES AND PROJECTS WITHIN	)	
THE STATE OF WASHINGTON	)	

The Washington State Department of Transportation (WSDOT) submitted a request to the Department of Ecology (Ecology) for the purpose of applying herbicides to waters of the state at the following WSDOT owned or managed sites to control non-noxious weeds at:

- Construction sites;
- Wetland mitigation sites;
- Right-of-ways; and
- Other WSDOT properties.

This Administrative Order (Order) is issued under the provision of Chapter 90.48 Revised Code of Washington (RCW) and Washington Administrative Code (WAC) 173-201A-110.

WSDOT and WSDOT Contractors, herein called the applicator(s), shall comply with the following conditions during any application of Rodeo® (glyphosate), registered surfactant(s) to waters of the state.

A. GENERAL REQUIREMENTS

1. This Order is valid for a period of not more than one year after the signature date on the last page of this Order.

2. Applicator(s) operating under this Order must comply with all herbicide label instructions. If application conditions in this Order differ from the label, there must be compliance with the more stringent of the requirements. However, no condition in this Order or any amendment to the Order, shall reduce the requirements on the herbicide label.

3. Applicator(s) must keep a copy of this Order in their possession during all herbicide applications.

4. Failure to comply with the legal requirements referred to in this Order, resulting in loss of critical, emergent vegetation, will require compensation by the applicator. This may include replanting and monitoring of planting success.

5. If there are any questions or problems regarding this Order call one of the following contacts within Ecology:

Allen Moore	(360) 407-6563	FAX (360) 407-6426
Lorlee' Randall	(360) 407-6068	FAX (360) 407-6904

B. DEFINITIONS

1. **Applicator(s)** – WSDOT employee, WSDOT contractor or whomever WSDOT has given authorization to treat their site under this authorization.

2. **Non-targeted Plant(s)** – Plant(s) located outside of the treatment area or those not intermixed with plant species to be controlled.

3. **Normal entry point** – The area where a walkway or pathway enters the property and is used to access or cross over a site.

4. **Publicly Accessible Areas** – Known public access points or areas that the applicator(s) knows that the public uses, along right-of-ways and any beach or access point to water.

5. **Treatment Area** – The physical location of the herbicide application (including anticipated movement of the herbicide in lakes, ponds, streams, and wetlands) to control the targeted plant species.

6. **Wetlands** – means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, marshes, bogs and similar areas. This includes wetlands created, restored, enhanced or preserved as part of a mitigation procedure action. This does not include constructed wetlands for the following surface waters of the state intentionally constructed from non-wetland sites; irrigation and drainage ditches; grass-lined swales; detention facilities; canals; agricultural detention facilities; farm ponds; sewage treatment lagoons; and landscape amenities.

   However, wetlands, as permitted by the appropriate authority, may include those artificial wetlands intentionally created from non-wetlands areas to mitigate loss of wetlands. These artificial wetlands created for mitigation are not considered wetlands of the state until excavation is completed and water is allowed to freely occupy the site. At that point, it is assumed that the hydrology is in place and will support the wetland functions and values intended by a wetland mitigation plan.

C. REPORTING & RECORD-KEEPING REQUIREMENTS FOR THE APPLICATOR

1. At least 24 hours prior to treatment, the applicator(s) shall provide the appropriate Ecology regional office (numbers below) a reasonable estimate of the time, the exact location of treatment, and an emergency telephone number where the

applicator(s) can be reached. A message by voice mail or FAX will suffice for this condition. If the applicator(s) determines that the spraying must occur and that the 24-hour notice requirement will not be met, the applicator(s) may request a verbal variance from the appropriate Ecology Regional office.

Central Regional Office, Yakima	(509) 575-2490	FAX (509) 575-2809
Eastern Regional Office, Spokane	(509) 456-2926	FAX (509) 456-6175
Northwest Regional Office, Bellevue	(425) 649-7000	FAX (425) 649-7098
Southwest Regional Office, Lacey	(360) 407-6300	FAX (360) 407-6305

2. The applicator(s) must immediately notify the appropriate Ecology regional office (see numbers in C.1) if any of the following concerns or issues arise following a herbicide treatment:

   - An authorized discharge of pesticide into state waters, or onto land with a potential for entry into state waters;
   - Learns of any person(s) who exhibits or indicates any toxic and/or allergic response as a result of the treatment;
   - Learns of any fish or fauna that exhibit stress conditions or die within or downstream of the treatment area; or
   - Non-targeted plants outside the treatment area that exhibit stress conditions or die following a herbicide treatment.

3. In the event of an unauthorized discharge of pesticide into state waters, or onto land with a potential for entry into state waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include legal disposal of any spilled material and used cleanup material.

4. The applicator(s) must keep complete application records using WSDOT Pesticide Application Records (see Appendix A). These forms also fulfill the Washington Department of Agriculture's (WSDA) reporting requirements. These application records must be completed the same day Rodeo® (glyphosate) and surfactants are applied and supplied to Ecology and/or WSDA immediately upon request.

D. CHEMICAL REQUIREMENTS

1. Only hand-held and vehicle mounted sprayers but not aerial sprayers are allowed under this Order.

2. Only the following chemicals are approved for use in the spray mix under this Order:

   a. Rodeo® (Glyphosate), the surfactant LI-700®; and

b. Blue spray pattern indicator (HI-LIGHT™) is approved for wicking, back-pack and hand-held power sprayers when applying the herbicide allowed under this order with the following provisos:

1) HI-LIGHT™ shall be applied at the lowest mix rate practical; and

2) Other indicator dyes may be used provided that toxicity test information has been provided to Ecology for review and approval that demonstrates an equivalent or lower toxicity than HI-LIGHT™.

E. TIMING REQUIREMENTS

1. The application of HI-LIGHT™, and/or Rodeo® (Glyphosate) and surfactant(s) is limited to periods of time that will not adversely impact salmonids. Consult the Washington Department of Fish and Wildlife (WSDF&W) for identification of salmonid bearing waters and special seasonal timing restrictions.

2. Apply the herbicide at times so as to minimize public water use restrictions during weekends and avoid public water use restrictions during the opening of fishing season, Memorial Day weekend, Independence Day weekend and Labor Day weekend.

3. Treatment within a 1/2 mile of areas of potential public use (boat launches, marinas, swim beaches, parks or other public accessible areas) is limited to weekdays. However situations may arise due to weather or other variables that may make it necessary to treat on high use days. If this is the case, the applicator(s) shall obtain a letter of concurrence from the local health department. If the local entity is not willing to take on this responsibility contact the appropriate Ecology Regional office (see C.1).

F. PUBLIC NOTICE REQUIREMENTS FOR THE APPLICATOR(s)

Anytime a portion of the treated area contains a publicly accessible area the following notification procedures must be complied with:

1. Public Notice – Applicator(s) must complete the Herbicide Application – Public Notice Form and deliver a copy to all adjacent properties at least seven (7) days before the initial treatment. The notification may include the schedule for the whole season to avoid duplication. (Public Notice form is provided in Appendix B or it can also be obtained from the Ecology Permit Assistance Center, (360) 407-7037). This same information can also be provided through a letter, flyer or telephone conversation to either the property owner or the renter/lessee.

   a. Expand the notification area to 1/2 mile along the shoreline of the treatment area where there are likely to be potable water withdrawals downstream.

b. Copies of the notice, letter and a list of names and addresses where they were delivered or documentation of the telephone conversation, person contacted, date, time and any other pertinent information to provide proof of this notification must be retained for seven years.

2. Legal Notice – A legal notice must be published in the legal notices section of a local newspaper of general circulation (or nearest regional paper if a local paper does not exist) for all herbicide applications expected during the time the Order is in effect.

a. Publish this notice 1 – 10 days prior to the first herbicide application of the season. The notice must include the:

- Approximate date(s) of treatment;
- Approximate location(s) to be treated;
- Herbicide(s) to be used;
- Posting procedure; and
- Names and phone numbers of the WSDOT contact person and the appropriate Ecology regional office.

b. Obtain an original affidavit of the notice from the legal department of the newspaper prior to treatment and retain it for seven years.

G. POSTING REQUIREMENTS FOR THE APPLICATOR(s)

1. Post signs no more than 24 hours prior to an application. Use Ecology's 8 1/2 X 1-inch templates provided in Appendix C as models for the signs for Rodeo® (Glyphosate) and 2,4-D. The sizes of the signs and the sizes of the letters must be duplicates of or correspond to the templates. To obtain larger templates (24 X 36 inches) contact the Ecology at (360) 407-6563.

a. If no portion of the treatment site contains a publicly accessible area, signs shall be posted at normal entry points and/or gates into the treatment site.

b. If a portion of the treatment area contains a publicly accessible area, then place signs within 25 feet of the shoreline facing both egress and entrance of any boat launch on the waterbody that is within 1/2 mile of any treatment site. Boat launches also include sites commonly used as put-ins and take-outs for small, non-trailered watercraft. Check the Washington State Parks and Recreation Commission publication "Public Boating Facilities in Washington State," 2nd edition, 1988, to identify public accesses. Reference copies of this publication are available through the Washington State Library, King County Library, Gonzaga University Library and Washington State University Library.

2. The applicator(s) shall use good faith and reasonable effort to ensure that posted signs are secured and remain in place. Signs shall be posted so they are secure from the normal effects of weather and water currents but cause no damage to private or public property. The applicator is responsible for removal of all signs at the end of the treatment season.

3. Post signs in English, and the language, if other than English, commonly spoken by the community that uses the area.

H. ADMINISTRATIVE REQUIREMENTS

1. The applicator(s) is responsible for complying with all herbicide label directions and restrictions. All persons applying pesticides under this Order should be aware of the following regulations:

   - The pesticide applicator regulations as required by WSDA (RCW 17.21, RCW 15.58, WAC 16-228, and WAC 16-230;
   - Public access policy and Hydraulics Code regulations as required by WSDF&W (RCW 75.20.100, WAC 220-110);
   - Shorelines regulations as required by the local city or county (RCW 90.58); and
   - All other applicable regulations of the other agencies and local ordinances.

2. If the applicator(s) wishes to vary any of the conditions within this Order due to site specific issues the applicator shall obtain in advance, written permission from the appropriate Ecology regional office (see C.1).

3. Ecology retains continuing jurisdiction to make modifications hereto through supplemental actions if it appears necessary to protect the public interest. This includes protection of wildlife, aquatic, and wetland resources.

4. Failure to comply with the conditions of this Order may result in civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

This Order may be appealed. The appeal must be filed with the Pollution Control Hearings Board, PO Box 40903, Olympia, Washington, 98504-0903 within thirty (30) days of receiving it. At the same time, the appeal must be sent to Ecology c/o Enforcement Officer, PO Box 47600, Olympia, Washington 98504-7600 and the appropriate Ecology Regional office (see C.1).

The appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

DATED this __23__ day of __March__ 1999 at Olympia, Washington

_____

Megan White, P.E., Manager
Water Quality Program
Department of Ecology

Washington State Department of Transportation

Pesticide Application Record

Reference (RCW 17.21) A new form shall be filled out each day or each time the Sign Route is changed.
This Record Must be Retained for 7 Years. This form must be completed on day of application.
WSDOT, Roadside Management Branch, P.O. Box 47358, Olympia, WA 98504-7358. Phone (360) 706-7853.

Org. Code	County	Date of Application	Start_____ □ AM □ PM Finish_____ □ AM □ PM	ICP	Stores Issue Ticket Number(s)

Area
SR _____ MP _____ to MP _____ and MP _____ to MP _____ and MP _____ to MP _____ and MP _____ to MP _____

Check Appropriate Boxes
□ NB □ EB □ Roadside □ Landscaped Area □ Interchange □ Yard/Stockpile □ Spot Spray □ Aquatic
□ SB □ WB □ Shoulder □ Rest Area □ Bridge □ Blanket Spray □ Wetlands
□ Median □ Park'n'Ride □ Ramp □ Banded Width

□ Weeds □ Noxious Weeds □ Disease □ Seed
□ Brush □ Insects □ Other List Pests: _____

Start Weather Conditions
Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Finish Weather Conditions
Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Tank No.	Material Name	Material Type	EPA Reg. No.	Lot Number	Product Per Acre (hectare	Unit	Total Daily Usage	Unit
		Oil (As Carrier)	Units: Ozd = Ounces Dry Lb= Pound g= gram kg = kilogram Ozl = Ounces Liquid Ga = Gallon ml = Milliliter L = Liter Pt = Pint Qt = Quart					
		Water Source						

Total _____ Acres (hectares) Treated at _____ gallons (liters) of spray per acre (hectare).

Equipment Number	Tank Size	Calibration Date	Vehicle Speed	Nozzle Pressure	Width of Spray Pattern
	2 _____ 4 _____ 1____ 3 _____ 5 _____		mph (km/h)	PSI (kPa)	Feet (meter)

□ Handspreader □ Handgun □ Boom □ Tank Mix (Conv.) □ Injection
□ Backpack □ Fixed Nozzle □ Other (specify) _____ □ Invert

Operator Name	Operator Pesticide License No.	Operator Signature	Driver Name

Remarks

Buffer Truck Driver's Name

Pesticide Sensitivity Registration

Applies: □ Yes □ No

Contacts
_____
_____
_____

Division of Emergency Management (1-800-258-5990)

DOT Form 540-508 EF Revised 3/96 Distribution: OSC Maint. Operator Region File
Send OSC Copy Within 5 days

Washington State Department of Transportation

Commercial Pesticide Application Record

Remember Backflow Protection

Reference (RCW 17.21) A new form shall be filled out each day or each time the pesticide tank mixture is modified during the day or each time the Sign Route or county is changed. This Record Must be Retained for 7 Years. This form must be completed on day of application.
WSDOT, Roadside Management Branch, P.O. Box 47358, Olympia, WA 98504-7358. Phone (360) 706-7853.

Contract Number	County	Date of Application	Day of Week	Start_____ □ AM □ PM Finish_____ □ AM □ PM

SR	Description of Area Treated	Station to Station

Check Appropriate Boxes

□ NB □ EB □ Median □ Roadside □ Interchange □ Spot Spray □ Aquatic
□ SB □ WB □ Landscaped Area □ Rest Area □ Bridge □ Blanket Spray □ Wetlands
□ Shoulder □ Park'n'Ride □ Ramp □ Banded Width

□ Weeds □ Noxious Weeds □ Disease □ Seed
□ Brush □ Insects □ Other List Pest(s):

Temperature _____ F° (C°) Wind (Direction From) _____ Wind (Range) _____mph (km/h)
□ Sunny □ Broken □ Overcast, No Rain □ Light, Scattered Showers □ Hard Showers

Material Name	Manufacturer	EPA Reg. No.	Lot Number	Product Per Acre (hectare	Active Ingredient per Acre (hectare)	Unit	Total Daily Usage	Unit
	Oil (As Carrier)	Units: Ozd = Ounces Dry Lb= Pound g= gram kg = kilogram Ozl = Ounces Liquid Ga = Gallon ml = Milliliter L = Liter Pt = Pint Qt = Quart						
	Water Source							

No. of Tanks per Day _____ Tank Size _____ Gallons (liters).
Total _____ Acres (hectares) Treated at _____ gallons (liters) of spray per acre (hectare)

Equipment Information	Apparatus Number	Calibration Date	Vehicle Speed mph (km/h)	□ Boom □ Other (specify)

□ Handspreader □ Belly Grinder□ Backpack □ Handgun □ Manifold □ Tank Mix (Conv.) □ Invert
□ Fixed Nozzle □ Nozzle Cluster □ Injection

Nozzle Information	Model Number	Pressure PSI (kPa)	Number of Nozzles	Width of Spray Pattern Feet (meter)

Business Name	Phone

Address	City	State	Zip Code

Applicator/Operator Name	Commercial Pesticide Lic. No.	Commercial Operator Signature

Prime Contractor	Subcontractor	Inspector Name	Phone

Remarks	Pesticide Sensitivity Registration Applies: □ Yes □ No Contacts _____ _____ _____

Division of Emergency Management (1-800 258-5990)

DOT Form 540-508 EF Revised 3/96 Distribution: OSC Maint. Operator Region File
Send OSC Copy Within 5 days

Appendix B

Herbicide Application – Public Notice

_____ will be treated with aquatic herbicide(s) on/or between _____. Attached is a map of the area(s) to receive treatment.

Notices will be posted at the shoreline and on buoys next to the treatment area(s). They will also be posted at all boat launches on the waterbody within 1.5 miles of the herbicide treatment area. Notices of copper treatments will be posted at public access areas.

The herbicide(s) and active ingredient(s) to be used are:

Please obey the following use restrictions within the marked treatment areas:

If this is your only source of domestic or irrigation water, notify the applicator and Ecology by calling the phone numbers listed below.

Herbicides to be used, their water use restrictions, and the dates and locations of treatment(s) scheduled for the remainder of the season are:

For more information contact the applicator at:

This herbicide treatment is regulated under permits issued by the State Department of Ecology Water Quality Program*, [list regional phone # - see condition G-3]*. These herbicides have been approved for this purpose by EPA and the State Department of Agriculture.

CAUTION

Glyphosate (Rodeo) will be applied under permit to these waters on _____ to control aquatic vegetation.

NO WATER USE RESTRICTIONS ARE IN PLACE

Treated water may be used for Swimming, Fish Consumption, and Irrigation immediately after treatment.

The herbicide in use is Glyphosate (Rodeo).

For more information contact the Applicator:

Phone:

or Department of Ecology:

Please do not remove this sign until 2 days after application.

DANGER

2, 4-D will be applied under permit to these waters on _____ to control aquatic vegetation.

For your safety, please obey the following restrictions in this area marked with signs:

1. **Do not consume fish from these waters.**
2. **Do not forage or graze treated fields within _____ days.**
3. **Do not harvest hay for 30 days.**
4. **Do not enter the water for _____ days.**

wade or swim?

The herbicide in use is 2, 4-D

For more information contact the Applicator:

Phone:

or Department of Ecology:

Please do not remove this sign until 2 days after application.

432.01 Introduction
432.02 Applicable Statues and Regulations
432.03 Policy Guidance
432.04 MOUs, MOAs, and IAs
432.05 Technical Guidance
432.06 Permits and Approvals
432.07 Non-Road Project Requirements
432.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.

432.01 Introduction

This section includes information pertaining to WSDOT projects that impact floodplains. The section focuses mainly on road projects. If applicable, the policies, procedures, and permit requirements specific to ferries, airports, rail, and non-motorized transport are listed in **Section 432.07**.

(1) Summary of Requirements

The WSDOT Floodplain Discipline Report Checklist (**Exhibit 432-1**) provides the basis for identifying floodplain issues and sources of information. Other references, documents, MOUs, Interagency Agreements, and permits included in this section add relevant details.

The 1998 FHWA Environmental Flow Chart on Floodplains (**Exhibit 432-2**) gives a general overview of procedures required for floodplain analysis. The flow chart, which can be used to supplement the Floodplain Discipline Report, provides information and guidelines for discussing floodplain impacts with regulators.

Maintenance supervisors should be contacted during the project development phase to obtain input on existing flood hazards.

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

BFE	Base Flood Evaluation
CMZ	Channel Migration Zone
FAPG	Federal Aid Policy Guide
FCAAP	Flood Control Assistance Account Program
FEMA	Federal Emergency Management Agency

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

FIRM Flood Insurance Rate Map

NFIP National Flood Insurance Program

(3) Glossary

Flood – A general and temporary condition of partial or complete inundation of normally dry land areas from one of the following four sources:

- Overflow of inland or tidal waters.
- Unusual and rapid accumulation or runoff of surface waters from any source.
- Mudslides or mudflows that are like a river of liquid mud on the surface of normally dry land area, as when earth is carried by a current of water and deposited along the path of the current.
- Collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water.

Floodplain – Any land area susceptible to being inundated by flood waters from any source; usually the flat or nearly flat land on the bottom of a stream valley or tidal area that is covered by water during floods.

Floodplain Boundaries – Lines on flood hazard maps that show the limits of the 100- and 500-year floodplains.

Floodway – The channel of a river or watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively raising the water surface elevation more that a designated height. Normally, the base flood is defined as the 1 percent chance flood and the designated height is 1 foot above the pre-floodway condition.

Special Flood Hazard Area – An area with a one percent chance of being flooded in any given year; hence the property is in the 100-year floodplain.

432.02 Applicable Statutes and Regulations

This section lists the primary federal and state statutes applicable to floodplain issues. Implementation of is described under **Section 432.06**, Permits and Approvals.

(1) National Environmental Policy Act/State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision-making. For work in floodplains that requires permit approval, environmental documentation must explain the impacts the project will have on these areas, and on the resources within those areas. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) Floodplain Management

Floodplain Management, Presidential Executive Order 11988 (May 24, 1977) directs federal agencies to avoid to the extent possible adverse impacts associated with floodplains and to avoid direct or indirect support of floodplain development.

The Executive Order can be viewed at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Floodplains.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch6.htm

(3) Flood Control Zone Act

The Flood Control Management Act of 1935, RCW 89, is the primary statutory authority regulating state flood control jurisdictions, which include flood control districts, counties, and zone districts. The act also regulates flood control management, flood control contributions, cooperation with federal agencies on flood control, and state participation in flood control maintenance. The 1937 RCW 86.09, Flood Control Districts, is the section of the act most relevant to WSDOT projects. For online reference, see:

http://slc.leg.wa.gov/

Click on RCW, then Title 86 – Flood Control, then Section 86.09, Flood Control Districts.

Or by direct link:

http://www.leg.wa.gov/pub/rcw/rcw 86 TITLE/rcw 86 TITLE/rcw 86 TITLE.htm

432.03 Policy Guidance

None identified.

432.04 MOUs, MOAs, and IAs

The Memorandum of Agreement (MOA) on work in state waters, described in **Section 431.04**, established procedures to prevent habitat loss through damage by flooding and future land development. It is currently under revision. Participating agencies desire to participate in joint projects to restore fish and wildlife habitat loss due to past flooding, land development activities, or public transportation facilities. The MOU outlines permit requirements and WSDOT's responsibility to contact WDFW and Ecology during emergencies. The MOA also defines what constitutes an emergency under the regulations, how the emergent situation must be declared, and the ability to get verbal notice and approval from WDFW to do work during emergencies. The MOA also includes methods for reducing flood hazard, both by project design and by retrofitting undersized or below standard stormwater conveyances. Implementation of the MOA is intended to facilitate cooperation and dialogue between the signatory agencies.

MOA between Washington State Department of Fish and Wildlife, Washington State Military Department Emergency Management Division, Washington State Association of Counties, Association of Washington Cities, Washington State Department of Ecology, and Washington State Department of Transportation: Concerning Work in State waters, June, 2002 (**Exhibit 431-1** in **Section 431**).

432.05 Technical Guidance

(1) WSDOT Discipline Report

This checklist (**Exhibit 432-1**) provides a basis for ensuring that floodplain issues are considered in projects. The information identified in the discipline report should provide the information required for floodplain permits and also for inclusion in EISs.

The checklist includes these sections: (1) introduction and preliminary drainage survey, (2) affected environment, shown mainly by mapping, (3) studies and coordination including flood history and identification of permits required, and (4) summary. The summary should include enough detail so it can be included in an EIS with only minor modification.

(2) FHWA Environmental Flow Chart

The 1998 FHWA Environmental Flow Chart on Floodplains (**Exhibit 432-2**) provides an overview of floodplain issues.

(3) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically the section on floodplains. For example, an EIS should identify whether proposed alternatives would encroach on 100-year floodplains, preferably demarcated by NFIP maps. Coordination with the Federal Emergency Management Agency (FEMA) and appropriate State and local government agencies should be undertaken for each floodway encroachment. If a floodway revision is necessary, an EIS should included evidence from FEMA and State or local agencies indicating that such revision would be acceptable.

The NFIP Flood Insurance Rate Maps (FIRMs) are designed for insurance purposes. As such, most are not accurate enough to rely upon for engineering design or land use decision-making. The NFIP maps tend to underestimate both the extent and depth of inundation, and this tendency should be taken into account. Some of the drawbacks of the FIRM maps are:

- Many do not have calculated Base Flood Elevations (BFEs) at all.
- Many are based on outdated hydrographic and channel cross-section data.
- Many are based on inadequate topographic data.
- The delineation of channel migration zones (CMZs) and the relationship between the CMZs and the 100 year floodplain are not well established on the FIRM maps, yet these are extremely important considerations with regard to planning transportation projects in the vicinity of floodplains, particularly those located near the larger, more dynamic rivers.

At a minimum, floodplain maps should contain topographic information accurate to two-foot contours or better.

Floodplains should be modeled using current and accurate hydrographic data using current cross-sectional data and properly calibrated modeling tools.

In addition to floodplain delineation and base flood elevation calculation, the CMZs should be mapped and overlaid in order to assess the possibility of channel migration or avulsion affecting project survivability.

The floodplain discipline report is structured to meet the requirements of the FHWA Technical Advisory. However, WSDOT should ensure that all requirements of the FHWA are met by carefully reading the Technical Advisory, which can be located under floodplain impacts on FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy memorandums, then FHWA Technical Advisories. Check on Floodplain Impacts under T66400.8a.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(4) *FHWA Environmental Guidebook*

FHWA's online Environmental Guidebook contains several floodplain-related documents including guidance for the evaluation of encroachments on floodplains (February 22, 1982). Available via FHWA's web site:

http://www.fhwa.dot.gov/

Click on Programs, then Environment, then Environmental Guidebook, then Floodplains.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch6.htm

(5) *FHWA Federal Aid Policy Guide on Floodplains*

The Federal Aid Policy Guide (FAPG) of December 7, 1994, contains the FHWA's current policies, regulations, and non-regulatory procedural guidance information related to the federal aid highway program. (The FAPG replaced the *Federal Aid Highway Program Manual* on December 9, 1991.) Regulatory authority for this guidance is found in 23 CFR 650 Subpart A; 42U.S.C. 4001 *et seq*.; Public Law 92-234, 87 Stat. 975.

The FAPG includes policies and procedures for the location and hydraulic design of highway encroachments on floodplains. These policies and procedures can be viewed via the FHWA home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then Title 23, CFR (and Non-Regulatory Supplements) Table of Contents, then Subchapter G – Engineering and Traffic Operations, then Part 650 – Bridges, Structures, and Hydraulics, then Subpart A – Location and Hydraulic Design of Encroachments on Floodplains.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0650a.htm

(6) *Flood Emergency Procedures*

ESO is coordinating with the WSDOT Maintenance Division to develop guidance for response to flooding and other emergencies. The document will include the definition of "emergency," outline the appropriate environmental procedures for responding to emergency and imminent threat situations, provide an emergency response checklist, and list regulatory agency personnel to phone during emergency repair projects. See also the MOU on work in watercourses, **Section 432.04** and **Exhibit 431-1,** and WSDOT's Disaster Plan Manual (M 54-11).

Further development of regional emergency project implementation guidance is needed, similar to the strategic plan for emergency flood repair on the Methow, Okanagon, Similkameen, Entiat, and Nooksack Rivers, prepared in May 1999 by Herrara and Associates, Inc.

(7) *WSDOT Environmental Workbench*

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. This data can be accessed

WSDOT's on-line GIS capabilities can be accessed to obtain FEMA data and other information necessary to write the floodplain reports. Local jurisdictions can be contacted to find out whether additional local floodplain mapping is available, on GIS or hard copy. WSDOT's GIS staff process requests for this information. FEMA flood data can be viewed as GIS data at WSDOT's internal site for GIS users. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(8) Flood Control Assistance Account Program (FCAAP)

The Flood Control Assistance Account Program (FCAAP) is a statewide financial assistance program, established by the legislature in 1984 to help local jurisdictions reduce flood hazards and flood damages. Matching grants are available to counties, cities, towns, special districts, and eligible tribes for comprehensive flood hazard management plans, specific projects or studies, and emergency flood-related activities. The program is administered by the Washington Department of Ecology (Ecology). Applicants must participate in the National Flood Insurance Program (NFIP). The Ecology web site below includes a general introduction to FCAAP grants, guidelines on how to apply for grants, an application form to download, sample grant agreements, invoice forms for grant recipients, progress report forms, and contacts at Ecology for more information and help in preparing or implementing grant agreements.

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then Floodplain Management, Flood Control Assistance Account Program (FCAAP) grants.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/grants/fcaap/intro.html

Statutory Authority – Chapter 86.26 RCW – State Participation in Flood Control Maintenance, and Chapter 173-145 WAC – Flood Control Assistance Account Program.

(9) Comprehensive Flood Hazard Management Plans

Comprehensive flood hazard management plans are described in Ecology's *Comprehensive Planning for Flood Hazard Management* (Ecology Publication #91-44). Approved plans must meet federal and state requirements for local hazard mitigation plans. Copies may be ordered online using information located on the Ecology web page:

http://www.ecy.wa.gov/

Click on Publications, then Order Publications.

Or by direct link at:

http://www.ecy.wa.gov/biblio/rporder.html

432.06 Permits and Approvals

(1) Water Quality Permits

Shoreline permits are required for work in floodplains. All water quality permits discussed in **Section 431** may also apply. See the summary of water-related permits in **Exhibit 431-9**. In particular, the Joint Aquatic Resources Permit Application (JARPA) form includes a check box for floodplain management.

Applications for a nationwide permit to work in the 100-year floodplain are required by Ecology to demonstrate that there will be no loss of flood storage or function. Also, prior to any work in the 100-year floodplain, notice must be given to the Corps of Engineers.

(2) Floodplain Development Permit

In addition to the permits already listed under water quality, the floodplain development permit applies specifically to floodplains.

Agency Responsible – Local city or county.

Regulated Activities – A permit is required for any structure or activity that may adversely affect the flood regime of a stream within the flood zone.

Requirements – Local governments participating in the NFIP are required to review proposed construction projects to determine if they are in identified floodplains. If a project is located in a mapped floodplain, the local government must require that a development permit be obtained prior to construction. It is recommended that WSDOT review local flood plans during the project development phase.

State law requires local entities to have a local floodplain ordinance that meets or exceeds NFIP requirements. Ecology has approval authority for these ordinances.

Statutory Authority – RCW 86.16; WAC 173-158.

432.07 Non-Road Project Requirements

Ferry, rail, aviation and non-motorized transport systems are subject to the same policies, procedures, or permits that apply to road systems for work in a floodplain.

432.08 Exhibits

Exhibit 432-1 – Floodplain Discipline Report Checklist.

Exhibit 432-2 – FHWA Environmental Flow Chart on Floodplains.

Washington State Department of Transportation

Discipline Report Checklist
Floodplain

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction and Preliminary Drainage Survey

Studies shall contain:

- an analysis of design alternatives with consideration given to capital costs and risks; and
- the magnitude, approximate probability of exceedance and the water surface elevation associated with the overtopping flood.

Discipline reports need to include:

Investigation of potential problems, such as:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Flood hazard.
❒	❒	❒		B.	Channel stability.
❒	❒	❒		C.	Effects on the environment - fish and wildlife, domestic water supplies, recreation.
❒	❒	❒		D.	Debris.
❒	❒	❒		E.	Skew of crossing.

II. Affected Environment

Site data:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Vicinity map.
❒	❒	❒		B.	Site map showing location of proposed and existing encroachment/structures, cross-section of the stream, alignment of piers, skew of crossing.
❒	❒	❒		C.	Limits of 100-year floodplain.

III. Studies and Coordination

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Is proposed action consistent with existing watershed and floodplain?
❒	❒	❒		B.	Permits required.
❒	❒	❒		C.	Current/proposed water resource projects.

Report must describe:

❒	❒	❒		D.	Flood history including:
❒	❒	❒			1. High water marks (with date and elevation).
❒	❒	❒			2. Nature of flooding.
❒	❒	❒	❒	E.	Existing structures including:
❒	❒	❒	❒		1. Type.
❒	❒	❒	❒	F.	Foundation type.
❒	❒	❒	❒	G.	Scour history.
❒	❒	❒	❒	H.	X-Section beneath structure.
❒	❒	❒		I.	Drainage area above encroachment.
❒	❒	❒		J.	Evaluation of potential for changes in watershed characteristics which may change magnitude of flood peaks.

Determination of flow patterns for the 100-year event in the natural channel for existing conditions.

IV. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.

The summary should include:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	The objectives of the project.
❒	❒	❒		B.	Current floodplain use.

SAT	INC	MIS	N/A		
❒	❒	❒		C.	Impacts of all alternatives including the no-build alternative.
❒	❒	❒		D.	Recommended mitigation.
❒	❒	❒		E.	Comparison of alternatives based on impacts and cost effectiveness of mitigation.

General Comments: _____

_____

_____

_____

FHWA Environmental Flowchart on Floodplains

Determine whether or not the proposed action will encroach upon the base (100-year) floodplain.

Identify the geographic area of the floodplain.

- Federal Insurance Administration (FIA) maps and studies, including Flood insurance Rate Maps (FIRM) and Flood Hazard Boundary Maps (FHBM), must be used, if available.*
- Other maps, US Geological Survey (USGS), Corps of Engineers, Natural Resources Conservation Service (NRCS), Bureau of Land Management, Tennessee Valley Authority (TVA), Forest Service, etc., may be used.
- Approximate maps may be developed by State highway agencies.

Is the proposed action located within the limits of the base floodplain, or would the action support base floodplain development?

No

Document the action taken to support the determination that there is no encroachment.

End

Yes

The study of project alternatives with encroachments, or support of base floodplain development, must include an exhibit which displays alternatives, floodplains, and some discussion of the following, commensurate with the level of impact:

- Risk to, or resulting from, the proposed action.
- Impacts on natural and beneficial floodplain values.
- Degree to which the action provides direct or indirect support for incompatible development in the base floodplain; i.e., the development which is not consistent with the communities' floodplain development plan.
- Measures to minimize floodplain impacts associated with each alternative.
- Measures to restore and preserve the natural and beneficial floodplain values that are impacted.

In addition, if a particular alternative encroaches upon a regulatory floodway, the following questions must be addressed: (This usually requires some design studies.)

- Can the highway encroachment be located, designed and/or constructed so that it is consistent with regulatory floodway (RFW)?
- Can the RFW be revised to accommodate the proposed project?; i.e., does the RFW , though moved or changed, still meet NFIP standards?
- Can the RFW elevation be exceeded; i.e., is it cost effective to mitigate flood damages associated with a floodway of greater than 1-foot rise?

Yes

If the preferred alternative encroaches or supports substantial incompatible floodplain development, or requires commitment to a particular structure size or type, the project record should include an evaluation of practicable alternatives to avoid or eliminate such involvements or commitments.

No

Does the preferred alternative include a significant encroachment or significant incompatible floodplain development?

- Is there significant potential for flood-related property loss or hazard to human life?
- Is there significant adverse impact on natural and beneficial floodplain values?
- Is there significant potential for interruption or termination of the communities' only evacuation route or facility needed for emergency vehicles?

Yes

The project may not be approved unless the responsible official makes a written finding that the encroachment is the only practicable alternative. The "Only Practicable Alternative Finding" must be supported by:

- The reasons why the proposed action must be located in the floodplain,
- The alternatives considered, and why they were not practicable,
- A statement indicating whether the action conform to applicable State or local floodplain protection standards.

End

No

Documentation of the floodplain assessment should be included in the appropriate environmental document or the project file.

End

* If the project is not in a Federal Emergency Management Agency (FEMA) identified flood hazard area, FIA maps will not be available and other sources should be used.

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Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

433.01 Introduction

This section includes information and requirements related to groundwater issues, which include potential impacts on public water supplies. Other relevant information may be found in **Section 431**. The section focuses mainly on road projects. If applicable, the policies, procedures, and permit requirements specific to ferries, airports, rail, and non-motorized transport are described in **Section 433.07.**

(1) Summary of Requirements

WSDOT's requirements for assessing potential impacts on groundwater resources are summarized in the Water Quality Discipline Report Checklist (**Exhibit 431-4**) as part of the analysis of all water quality issues. Details on statutes, permits, and other references specific to groundwater are described in this section. In general, transportation projects must be designed to avoid impacts on groundwater resources, particularly sole source aquifers, wellhead protection areas, and Critical Aquifer Recharge Areas (CARAs), and to mitigate potential impacts through use of Best Management Practices (BMPs).

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

AKART	All known, available, and reasonable methods of prevention, control, and treatment
BMPs	Best Management Practices
CARA	Critical Aquifer Recharge Area
DOH	Washington State Department of Health
GIS	Geographical Information System

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

GMA	Growth Management Act
NPDES	National Pollutant Discharge Elimination System
OSS	On-site Sewer
SDWA	Safe Drinking Water Act
SSA	Sole Source Aquifer
SSP	Stormwater Site Plan
SWAP	Source Water Assessment and Protection
SWD	State Waste Discharge
UIC	Underground Injection Control

(3) Glossary

Terms described in this section are listed below and also included in the master glossary in the appendix.

Critical Aquifer Recharge Area (CARA) – Area designed by a city or county for protection under the Growth Management Act.

Injection Well **–** Any disposal system designed to place fluids, including highway runoff and treated wastewater from onsite sewage disposal systems, into the subsurface. Such systems include bored, drilled, or dug holes; for example dry wells, French drains, and drainfields.

Sole Source Aquifer (SSA) **–** Any aquifer which (1) is so designated by USEPA, (2) supplies 50 percent or more of the drinking water to the population living over the aquifer, (3) has distinct hydrogeological boundaries, and (4) for which there is no economically feasible alternative source of drinking water if it should be contaminated.

Source Water Protection Area – Area protected for drinking water supplies.

Water Right – Legal authorization to use a certain amount of public water for specific beneficial purposes.

Wellhead Protection Area – Area managed by a community to protect groundwater drinking water supplies.

433.02 Applicable Statutes and Regulations

This section lists the primary federal and state statutes applicable to groundwater issues. Implementation of the statutes is described in **Section 431.06**.

(1) National Environmental Policy Act/State Environmental Policy Act

The National Environmental Policy Act (NEPA), requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts on groundwater are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412**.

(2) *Federal*

(a) *Safe Water Drinking Act*

The Safe Drinking Water Act of 1974 (SDWA), 42 USC, Chapter 6A, sets national primary drinking water standards, regulates underground injection of fluids, and designates sole source ***a***quifers. Amendments were issued by Congress in 1986 and 1996. The 1996 amendments identify source water protection, water system operator training, and public information as components of safe drinking water programs. This law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 42, Chapter 6A, Subchapter XII, Safety of Public Water Systems.

Or by direct link:

http://www4.law.cornell.edu/uscode/42/ch6A.html

Or by direct link:

http://www.epa.gov/safewater/sdwa/sdwa.html

Amendments of 1996, Public Law 104-182 are located at:

http://www.epa.gov/OGWDW/

Click on Safe Drinking Water Act, then select the link to the 1996 amendment text.

Or by direct link:

http://www.epa.gov/safewater/sdwa/text.html

(b) *Clean Water Act*

The federal Clean Water Act (Water Pollution Control Act), described in **Section 431.02,** applies to groundwater.

(3) *State of Washington*

Washington State laws (RCW) and rules (WAC) relevant to groundwater are located at Ecology's web site:

http://www.ecy.wa.gov/

Click on Laws and Rules, then Index of Laws (RCW) or Index of Rules (WAC), and look under the Water Quality, and Water Resources sections.

Or by direct link for RCW:

http://www.ecy.wa.gov/laws-rules/ecyrcw.html

Or by direct link for WAC:

http://www.ecy.wa.gov/laws-rules/ecywac.html

(a) *Clean Water Act Implementation*

State water quality regulations are mandated by the Clean Water Act referenced above.

In Washington State, RCW 90.48 is the primary water pollution law. Under this statute, discharge of pollutants into waters of the state, including groundwater, are prohibited unless authorized. Because many citizens drink groundwater and use it in their homes, the state of Washington currently classifies all of its groundwater as a potential source of drinking water. The act is administered by Ecology, and is found on Ecology's web site:

http://www.ecy.wa.gov/

Click on Laws and Rules, then Index of Laws (RCW) then Title 90, then 90.48, Water Pollution Control.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW 90 TITLE/RCW 90 . 48 CHAPTER/RCW 90 . 48 chapter.htm

(b) *Water Quality Standards for Groundwater*

WAC 173-200 mandates groundwater quality standards to maintain the highest quality of the state's groundwaters and to protect existing and future beneficial uses of the groundwater through the reduction or elimination of contaminant discharge. All wastes must be provided with all known, available, and reasonable methods of prevention, control, and treatment (AKART) prior to discharge into the state's waters.

The requirements are administered by Ecology through the State Waste Discharge (SWD) Permit and the National Pollutant Discharge Elimination System (NPDES), online at:

http://slc.leg.wa.gov/

Click on WAC, then Title 173, then 173-200.

Or by direct link:

http://search.leg.wa.gov/wslwac/WAC 173 TITLE/WAC 173 -200 CHAPTER/WAC 173 -200 CHAPTER.htm

Implementation Guidance for the Groundwater Water Quality Standards (Ecology Publication #96-02) is online at:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Groundwater, then Implementation Guidance.

Or by direct link:

http://www.ecy.wa.gov/biblio/96002.html

(c) *Wellhead Protection*

A wellhead protection area is the area managed by a community to protect its groundwater drinking water supplies. Wellhead protection is mandated by the federal Safe Drinking Water Act. In Washington, the Department of Health (DOH) is designated as lead agency for the wellhead protection program. In 1994, WAC 246-290 was modified to include wellhead protection for all public water

systems using groundwater. DOH uses the term "Group A" to designate public water systems that serve 25 or more people, or 15 or more connections. Regulations are online at:

http://slc.leg.wa.gov/

Click on WAC, then Title 246, then Chapter 246-290, Public Water Supplies.

Or by direct link:

http://search.leg.wa.gov/wslwac/WAC 246 TITLE/WAC 246 -290 CHAPTER/WAC 246 -290 CHAPTER.htm

(d) *Underground Injection Control*

The Underground Injection Control (UIC) Program, authorized by the Safe Drinking Water Act (SDWA), is designed to prevent contamination of underground sources of drinking water from the use of injection wells. The UIC Program was established in 1984 and is administered under 40 CFR, Part 144. Ecology was delegated authority by USEPA to administer the program in Washington State, under authority of RCW 43-21A.445 and WAC 173-218. All new underground control activities must treat the "waste" fluid before injection. For the current minimum acceptable level of treatment, see WSDOT's latest approved Highway Runoff Manual (M 31-16) for stormwater standards, and the latest Department of Health standards for onsite sewage.

For information on the UIC Program see:

http://slc.leg.wa.gov/

Click on WAC, then Title 173, then Chapter 173-218, Underground Injection.

Or by direct link:

http://search.leg.wa.gov/wslwac/WAC 173 TITLE/WAC 173 -218 CHAPTER/WAC 173 -218 CHAPTER.htm

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Groundwater, then Underground Injection Control Program.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html

(e) *Growth Management Act*

In 1990, the Washington State Legislature adopted the Growth Management Act (GMA), RCW 36.70A. This statute, combined with Article 11 of the Washington State Constitution, mandates that local jurisdictions adopt ordinances that classify, designate, and regulate land use in order to protect critical areas. Critical areas include aquifer recharge areas, which are regulated through local Critical Aquifer Recharge Area (CARA) ordinances. See **Section 451** for more information on the GMA. Refer to the statute at the following web site:

http://slc.leg.wa.gov/

Click on RCW, then Title 36, then Chapter 36.70A, Growth Management.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW 36 TITLE/RCW 36 . 70A CHAPTER/RCW 36 . 70A chapter.htm

(4) *Local Critical Aquifer Recharge Area Ordinance*

The purpose of a Critical Aquifer Recharge Area (CARA) ordinance is to provide local cities and counties with a mechanism to classify, designate, and regulate those areas deemed necessary to provide adequate recharge and protection to aquifers used as sources of potable (drinking) water. Information on the ordinances which define and regulate Critical Aquifer Recharge Areas, is located at:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Groundwater, then Critical Aquifer Recharge Area Ordinances.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/grndwtr/cara/index.html

Ecology's Guidance Document for the Establishment of Critical Aquifer Recharge Area (Ecology Publication # 97-030) is online at:

http://www.ecy.wa.gov/

Click on Publications, then search for 97-030.

Or by direct link:

http://www.ecy.wa.gov/biblio/97030.html

433.03 Policy Guidance

(1) *Washington State Transportation Commission*

The Transportation Commission's Policy Catalog contains a specific policy on water quality. Policy 6.3.2 is: "Minimize the impact that construction, operation and maintenance of transportation facilities has on the state's surface and groundwater. Minimize and control levels of harmful pollutants generated by transportation activities from entering surface and groundwater resources." The policy and action strategies are available at the commission's web site. See WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(2) *State Source Water Assessment and Protection Programs Guidance*

State Source Water Assessment and Protection (SWAP) Program guidance is required under the SDWA Amendments of 1996 (Public Law 104-182, Section 1453) to ensure better quality drinking water. Water assessments will generate information on significant potential contamination sources and will also generate information regarding the susceptibility of systems to contamination. The USEPA is responsible for the review and approval of state SWAPs.

State Source Water Assessment and Protection Programs Final Guidance (April 1997) describes USEPA's recommendations for what should be the elements of a State SWAP program, and of the importance of federal, state and public cooperation in developing and implementing SWAP programs. (USEPA publication 816-R-97-009). The document is online at:

http://www.epa.gov/OGWDW/

Click on Publications, then Protection of Drinking Water Sources and select Source Water Assessment and Protection, then State Source Water Assessment and Protection Programs Final Guidance, April 1997.

Or by direct link:

http://www.epa.gov/safewater/swp/swappg.html

433.04 MOUs, MOAs, and IAs

(1) Sole Source Aquifers

The Memorandum of Understanding between FHWA Region 10, USEPA Region 10 and WSDOT on sole source aquifers (**Exhibit 433-1**) aims to ensure that each highway project is designed and constructed in a manner that will prevent the introduction of contaminants into a sole source aquifer (SSA) (an aquifer that supplies 50 percent or more of the drinking water of an area) in quantities that may create a significant hazard to public health. For a WSDOT project to be within the scope of the MOU, all three of the following conditions must be met:

- USEPA-designated SSA
- Federal funding
- Project type included, not excluded

The MOU includes lists of sole source aquifers as of 1988 (Attachment A), excluded projects (Attachment B), projects that should be submitted to USEPA (Attachment C), and 1987 National Primary Drinking Water Regulations (Attachment D).

Federal funds may not be expended unless the project is designed to avoid any violation of federal or state drinking water regulations referenced in the MOU, and partially listed in Attachment D.

To comply with the Sole Source Aquifer MOU:

- Provide USEPA early opportunity to participate in development and review of environmental documents. USEPA should be contacted before the first draft document is circulated outside WSDOT for general review.
- Immediately transmit to USEPA any agency comments received indicating adverse impacts on the aquifer.
- Respond to USEPA direction.

USEPA has designated nine Sole Source Aquifers in Washington. They are: Cedar Valley Aquifer, Cross Valley Aquifer, Guemes Island Aquifer, Marrowstone Aquifer, Newberg Aquifer, Pierce County Aquifer System, Spokane Valley Rathdrum Prairie Aquifer, Vashon Aquifer, and Whidbey and Camano Island Aquifers.

The use of injection wells (such as dry wells, sumps, and drainfields) for stormwater treatment and disposal is common over these aquifers. All injection activities must meet Washington groundwater quality standards. Therefore, before injection, all stormwater must be treated using an approved stormwater BMP as contained in WSDOT's latest approved Highway Runoff Manual (M 31-16). EPA may consider the use of other BMPs

on a case-by-case basis or through an updated memorandum of Understanding between EPA, FHWA, and WSDOT. In addition, if untreated stormwater runoff is disposed using injection wells, WSDOT must ensure that the injection well is retrofitted to apply the latest approved stormwater BMPs as identified in the Highway Runoff Manual.

For a map of sole source aquifers, see USEPA's web page:

http://www.epa.gov/

Click on Where You Live, then Regional Offices, then Region 10, then Index, then M, then Map Library, then Sole Source Aquifers (under Maps Related to Groundwater Activities).

Or by direct link:

http://www.epa.gov/r10earth/maps/ssarx.html

MOU Between the FHWA Region 10, Portland, Oregon and the USEPA Region 10, Seattle, Washington and WSDOT, Olympia, Washington: Sole Source Aquifer, State of Washington, June 1988 (**Exhibit 433-1**).

433.05 Technical Guidance

(1) Water Quality Discipline Report

Groundwater issues are covered in the WSDOT Water Quality Discipline Report. Please refer to **Section 431.05** for a description and copies of the relevant checklists (**Exhibits 431-4** and **431-6**) and list of information sources (**Exhibit 431-5**).

(2) WSDOT GIS Workbench

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available databases include selected sole source aquifers, wells, wellhead protection zones, and critical aquifer recharge areas. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(3) WSDOT Highway Runoff Manual

The Highway Runoff Manual (M 31-16) provides a guide for policies, procedures, and methods for developing and documenting the design and maintenance of improvements to WSDOT's transportation system.

The manual contains approved methods of managing water quality issues, including groundwater, from WSDOT facilities. These methods are known as Best Management Practices (BMPs). Selection criteria are established for the use of acceptable BMPs during construction and long-term maintenance of highways. Instructional letters describing temporary changes until the manual is updated are included as part of the HRM. For example, Instructional Letter #IL 4023.00 (March 15, 2000) addresses

stormwater effects on fish species listed under the ESA. The manual is also described in **Section 431.05**. See the *WSDOT Highway Runoff Manual* (M31-16), Chapters 1, 2, 4, 5, and 8 (February 1995) and a 2002 Instructional Letter online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Site Index, then E, then Engineering Publications, then Online Library, then Highway Runoff Manual.

Or by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/Highway.pdf

And

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/IL4020.pdf

WSDOT checklists for Stormwater Site Plans (SSP) (**Exhibit 431-6**) and Temporary Erosion & Sediment Control (TESC) Plans (**Exhibit 431-7**) provide supplemental information for the HRM.

Statutory Authority – NPDES Section 402, 40 CFR; WAC Chapter 173-270.

(4) Wellhead Protection Program

A wellhead protection area is the area managed by a community to protect its groundwater based drinking water supplies. WSDOT practice is to participate proactively in the development of local wellhead protection plans.

DOH provides technical guidance in the *Washington State Wellhead Protection Program Guidance Document* (DOH Publication #331-018, April 1995). The document includes information on the determination of wellhead protection areas, management strategies and implementation, program financing, and interagency issues.

(5) Water Rights

A water right is a legal authorization to use a certain amount of public water for specific beneficial purposes. See **Section 433.06** for water right permits. General information for the appropriation of groundwater or surface water is available at the Ecology web site cited below. Information headings include Water Law Primer, Water Rights in Washington, Water Right Claims, Assessing Your Water Right, a Form for Requesting Existing Water Right Information, and Questions and Answers.

http://www.ecy.wa.gov/

Click on Programs, then Water Resources, then Water Right Information (under Program Areas).

Or by direct link:

http://www.ecy.wa.gov/programs/wr/rights/water-right-home.html

(6) State Groundwater Information

Technical guidance documents on groundwater issues are located at Ecology's web site, listed below. Topics include Underground Injection Control Program, Critical Aquifer Recharge Area Ordinances, and Implementation Guidance for Groundwater Quality Standards.

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Groundwater.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/grndwtr/index.html

(7) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically impacts on groundwater. For example, when a proposed project encroaches on a wellhead protection area (as identified by the state under approval by the USEPA), an EIS should identify the area, the potential impacts, and proposed mitigation measures for each alternative. The water quality discipline report is structured to meet the wellhead protection requirements of the FHWA Technical Advisory. For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(8) FHWA Environmental Guidebook

Guidance documents on Sole Source Designation Aquifer Programs, and Sole Source Aquifer Programs are available from the FHWA's Environmental Guidebook, online via FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Safe Drinking Water Act.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch10.htm

433.06 Permits and Approvals

Permits applicable to groundwater are included in the summary table of water quality permits, **Exhibit 431-9,** found in **Section 431.**

Permit Assistance – Ecology's Permit Assistance Center, which includes on-line questionnaires, provides helpful information on environmental permits. Available via Ecology's home page:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/index.html

Permit Extensions – On request, permit extensions or renewals may be granted by the issuing authorities. Permit extension forms may be required, depending on the agency. The extension process may include issuance of a public notice. Requests for permit extensions are usually submitted at least one month before permit expiration. The agency should be contacted for details of permit extension requirements.

(1) Water Right Permit

Agency Responsible – Ecology Water Resources Program; and/or the city or county.

Regulated Activities and Requirements – A water right permit or certificate is required if a project results in withdrawal of surface or groundwater. A water right is a legal authorization to use a certain amount of public water for specific beneficial purposes. Approval is granted in the form of a water right permit or certificate.

A water right permit is permission given by Ecology to develop a water right. Water rights are developed when water right applicants follow the provisions outlined in their permit, using water for the purposes and up to the limits stated in the permit. Water right permits remain in effect until the water right certificate is issued, until all the terms of the permit are met, or until the permit has been canceled.

A water right certificate is issued by Ecology to certify that water users have the authority to use a specific amount of water under certain conditions. These conditions are based on beneficial use of water under the water right permit. The water right certificate is a legal document recorded at a county auditor's office. The certificate completes the process of obtaining the water right. Once a certificate is issued, no expansion is allowed under the water right.

Information required for a water right permit or certificate includes the source of the water supply, the nature and amount of proposed use, how the water will be used, the exact location of the point of diversion or withdrawal, and a legal description of the property on which the water is to be used.

Statutory Authority – RCW 18.104, 43.27A, 90.03, 90.14 90.16, 90.44, and 90.54. WAC 173-100, 173-136, 173-150, 173-154, 173-166, 173-500, 508-12, and 173-590.

(2) Water System Project Approval

Agency Responsible – DOH or county or city health department.

Regulated Activities and Requirements – Approvals are required for any project in which there are two or more water service connections for human consumption and domestic use.

Statutory Authority – RCW 43.20A; WAC 246-290, 246-291, and 246-293.

(3) State Waste Discharge Permit

Agency Responsible – Ecology.

Regulated Activities – State Waste Discharge (SWD) permits regulate the discharge or disposal of waste material into groundwater of the state and into municipal sewer systems. Permits place limits on the quality and concentrations of contaminants that may be discharged. SWD permits are different from NPDES permits, which regulate discharges directly to water or stormwater systems. Permits are issued on a site-specific basis.

Injection activities are not authorized to receive SWD Permits. Stormwater systems are regulated through the NPDES Phase 1 and Phase 2 municipal stormwater permits. A key element of stormwater management is to provide all known, available, reasonable methods of control and treatment before injection. These minimum standards are defined in WSDOT's latest approved Highway Runoff Manual (M 31-16).

Requirements – To ensure compliance with contaminant limits, permits require wastewater treatment or impose other operational conditions. The permit application requires information on water supply volumes, water utilization, wastewater flow and disposal methods, planned improvements, stormwater treatment, plant operation, and materials and chemicals used.

Permits for on-site sewers (OSS) using systems with design flows between 3,500 and 14,500 gallons per day are administered and regulated by DOH (WAC 246-272). OSS from Domestic and Industrial Wastewater Facilities (rest areas) with subsurface sewage treatment and disposal and a design capacity of 14,500 gallons per day are administered and regulated by Ecology (WAC 173-240).

Statutory Authority – RCW 90.48, 90.52, and 90.54. WAC 173-216, 173-240, 173-994, and 246-272.

(4) NPDES Municipal Permit, Section 402

National Pollutant Discharge Elimination System (NPDES), Section 402 of the (CWA).

Agency Responsible – Ecology issues this permit under authority delegated by the USEPA.

Regulated Activities and Requirements – The discharge of pollutants into waters of the state, including stormwater and groundwater, is regulated through NPDES permits. Permits typically place limits on the quantity and concentration of pollutants that may be discharged.

To ensure compliance with these pollutant concentration limits, permits require wastewater treatment or impose other operational conditions. In most cases, permits have a five-year life span. NPDES permits applicable to WSDOT projects affecting groundwater fall under the category of Municipal Stormwater Discharge (based on watershed). NPDES surface water-related permits are discussed in more detail in **Section 431.06**.

WSDOT is required to obtain coverage under NPDES municipal stormwater permits to control discharges into groundwater during construction and for the long-term operation and maintenance of its facilities. The permits cover WSDOT-operated municipal separate storm sewers that are located within permitted municipalities (those with separate storm sewer systems serving populations over 100,000). These municipal permits are watershed specific. The permits authorize stormwater discharges into ground and surface waters during a five-year period. WSDOT currently has coverage for four watershed areas, and is working with Ecology to establish one statewide permit after June 2002. The four Water Quality Management Areas currently permitted are the Island/Snohomish, the Cedar/Green, the South Puget Sound Watershed, and the Columbia Gorge. By March 2003, NPDES Separate Storm Sewer System (MS4) permits, also known as Phase 2 permits, will add coverage for an additional 78 cities and eight counties statewide.

The coverage of WSDOT's four NPDES Water Quality Management Areas can be viewed as GIS data at WSDOT's internal site for GIS users:

GISOSC\GEODATA\maps\500K\DOT_EAO\npdes.

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

Selected sole source aquifers, wells, wellhead protection zones, and critical aquifer recharge areas can be viewed as GIS data at WSDOT's internal site for GIS users. See **Section 433.05** for more information.

WSDOT's *Highway Runoff Manual* (M 31-16) includes design standards for stormwater discharges (see **Section 433.05**).

Each permit requires a stormwater management program. WSDOT's 1997 *Stormwater Management Plan* provides stormwater management for the Island-Snohomish, Cedar-Green, and South Puget Sound watersheds. Available online at:

http://www.wsdot.wa.gov/eesc/environmental/programs/

Click on hazwqec, then docs, then SWAMP1.

Or by direct link:

http://www.wsdot.wa.gov/environment/eao/wqec/docs/swmp1.pdf

Statutory Authority – Clean Water Act Section 402; WAC Chapter 173-226 (general permits).

(5) Local Permits

Cities or counties may require special permits for projects in a recharge area or wellhead protection area designated for protection under the local Critical Areas Ordinance.

433.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are subject to the same policies, procedures, or permits that apply to road systems.

433.08 Exhibits

Exhibit 433-1 – MOU Between the FHWA Region 10, Portland, Oregon and the USEPA Region 10, Seattle, Washington and WSDOT, Olympia, Washington: Sole Source Aquifer, State of Washington, June 1988.

MEMORANDUM OF UNDERSTANDING
between
THE FEDERAL HIGHWAY ADMINISTRATION
REGION 10, PORTLAND, OREGON
and
THE ENVIRONMENTAL PROTECTION AGENCY
REGION 10, SEATTLE, WASHINGTON
and
WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
OLYMPIA, WASHINGTON

Sole Source Aquifer
State of Washington

I. INTRODUCTION

The purpose of this memorandum is to develop an understanding between the Environmental Protection Agency (EPA), the Federal Highway Administration (FHWA), and the Washington State Department of Transportation (WSDOT) concerning the review of projects on Federal-aid highways which may affect water quality of the designated sole source aquifer listed on Attachment A, hereinafter referred to as the Aquifers. The agreement area is the collective designated "sole source area" encompassing these Aquifers. This memorandum outlines basic criteria against which projects will be evaluated and the procedures to be followed by FHWA and EPA in conducting project evaluation and formal review within the State of Washington.

II. GOAL AND DEFINITIONS

The goal of this memorandum is to assure that each highway project that is to receive FHWA financial assistance is designed and constructed in a manner that will prevent the introduction of contaminants into a "sole source" Aquifer in quantities that may create a significant hazard to public health. A "significant hazard to public health" will be deemed to occur if the level of contaminants in an Aquifer would:

1. exceed National Primary Drinking Water Standards, or
2. exceed public health advisory levels for currently unregulated contaminants, or
3. violate the intent of Executive Order 12088, "Federal Compliance With Pollution Control Standards," or
4. otherwise threaten public health.

In determining whether a level of contaminant would threaten public health, the following factors, at a minimum, shall be considered:

1. the toxicity and transportation/transformation of the contaminants involved;
2. the volume of contaminants which may enter the Aquifer; and
3. aquifer characteristics, i.e., geochemical, hydrological, geological, etc., and attenuation capability of the Aquifer.

III. CRITERIA AND PROCEDURES

EPA, FHWA, and WSDOT hereby mutually agree that all Federal-aid highway projects within the designated sole source Aquifers listed in Attachment A will be constructed so as not to cause to be exceeded the maximum contaminant levels promulgated by the Washington State Department of Social and Health Services in WAC 248-54-175.

EPA will be provided an early opportunity to participate in the development and review of all environmental documents for projects listed in Attachment C, which are within the Aquifer(s) listed in Attachment A.

EPA agrees that all environmental documentation submitted by WSDOT to FHWA and EPA for evaluation or review purposes shall be responded to within thirty (30) calendar days of receipt unless:

1. There are comments (with substantiating data) arising from the Intergovernmental Project (IP) review indicating adverse impacts on the Aquifer. WSDOT, through FHWA, will immediately send these comments to EPA who will notify FHWA and WSDOT within thirty (30) days of receipt of the comments regarding EPA's decision.[1]
2. EPA receives a citizen's petition at any time during the IP review or at any time before FHWA has approved the project's final environmental document. EPA will immediately notify FHWA and WSDOT (in writing, if time permits or by telephone if the end of the comment period is near). EPA will reevaluate the project, and will notify FHWA and WSDOT within thirty (30) days of receiving such petition information of EPA's decision.[1]
3. EPA requests either by telephone or in writing for additional review time. If EPA requests additional time, EPA will inform FHWA and WSDOT within thirty (30) additional days of the results of this evaluation.

IV. GENERAL INFORMATION

Materials furnished EPA by WSDOT, with a copy of FHWA, under this Memorandum of Understanding will be addressed to the attention of the Office of Ground Water in EPA's Region 10 Office in Seattle. Project review comments or findings by EPA will be addressed to the Washington FHWA Division Office and WSDOT Environmental Unit Manager.

FHWA, WSDOT, and EPA will assign a liaison officer to serve as a central contact point to be responsible for maintaining communications as to procedures and activities of their respective Agency. The liaison officers are:

FHWA: Regional Environmental Program Manager
FHWA Region 10 Office
708 Southwest Third Avenue
Portland, Oregon 97204
(503) 221-2061 or FTS 423-2061

[1] However, the EPA Regional Administrator reserves the right to extend this time period where he finds that additional information is needed, that additional administrative review is necessary, or that it will be in the public interest to hold a public hearing. EPA will notify FHWA of any extension of the review time period.

Division Administrator
FHWA Washington Division
Suite 501, Evergreen Plaza
711 South Capitol Way
Olympia, Washington 98501
(206) 753-9480 or FTS 434-9413

WSDOT: Environmental Unit Manager
Washington State Department of Transportation
Transportation Building
Olympia, Washington 98504-5201
(206) 753-0355

EPA: Chief, Office of Ground Water
U.S. Environmental Protection Agency
1200 Sixth Avenue, Mail Stop 409
Seattle, Washington 98101
(206) 442-1216 or FTS 399-1216

The liaison officers accompanied by appropriate staff will hold meetings as needed to discuss matters of concern related to the Aquifers and this Memorandum of Understanding.

This Memorandum of Understanding is subject to revision upon agreement of all following agencies.

Washington State
Department of Transportation

Signed: Robert C. Schuster
Assistant Secretary for Highways

Date 6-22-88

Federal Highway Administration
Washington Division Administrator

Signed: Paul C. Gregson
Division Administrator

Date: 6-28-88

Federal Highway Administration

Signed: M. Eldon Green
Regional Administrator

Date: 8-1-88

Environmental Protection Agency

Signed: Robie G. Russell
Regional Administrator

Date: 8-16-88

2: PD.53

ATTACHMENT A

Pursuant to the Safe Drinking Water Act (42 USC 300-h-3e), EPA has determined that the aquifers listed below are the sole or principal drinking water source for their respective designated areas. As such, no commitment for federal financial assistance may be entered into within the boundaries of these designated areas for any project which EPA determines may contaminate any of these aquifers through their recharge zones (watershed map shown for each aquifer) so as to create a significant hazard to public health or the environment.

Aquifer Name	Location	Federal Register Notice	Date
Spokane Valley Rathdrum Prairie	Spokane County, WA	Vol. 43, No. 28 5566 *et. seg.*	2/9/78
Whidbey Island	Island County, WA	Vol. 47, No. 66 14779 *et. Seg.*	4/6/82
Camano Island	Island County, WA	Vol. 47, No. 66 14779 *et. Seg.*	4/6/82
Cross Valley	Snohomish County, WA King County, WA	Vol. 52, No. 95 18606 *et. Seg.*	5/18/87
Newberg Area	Snohomish, County, WA	Vol. 52, No. 192 37215 *et. Seg.*	10/5/82
Cedar Valley	City of Renton King County, WA	Vol. 53, No. 191 38779 *et. Seg.*	10/3/88
Lewiston Basin	Asotin and Garfield Counties, WA	Vol. 53, No. 191 38782 *et. Seg.*	10/3/88

[Note – error "et seg." for "et seq." is in original]

ATTA: D3: PD3

ATTACHMENT B

Projects that need not be referred to EPA:

Resurfacing; lighting; signing; pavement marking; guardrail; signalization; freeway surveillance and control system; railroad protective devices; glare screening; median barriers; energy attenuators; and the temporary replacement of highway facilities damaged by natural disasters or catastrophic failures.

ATTACHMENT C

Projects listed below should be submitted to EPA for evaluation and comment:

1. All projects within the designated aquifer documented by an Environmental Assessment or Environmental Impact Statement.

2. All categorical excluded projects that include:

   a. Addition of drainage wells, detention or retention basins or new wetland areas.

   b. Addition or widening of lanes or opening of new material sources which could result in a potential contamination.

   c. Rest areas, weigh stations or scenic overlooks with sewage disposal stations.

   d. Landscape construction projects if pesticides, herbicides, and fertilizers use any of the compounds listed or exceed the list on Attachment D.

ATTACHMENT D — August 1987

National Primary Drinking Water Regulations[1] (40 CFR Part 141)

Inorganics	Arsenic	0.05 mg/l
	Barium	1.0 mg/l
	Cadmium	0.010 mg/l
	Chromium	0.05 mg/l
	Lead	0.05 mg/l
	Mercury	0.002 mg/l
	Nitrate (as N)	10 mg/l
	Selenium	0.01 mg/l
	Silver	0.05 mg/l
	Fluoride	4 mg/l
Pesticides	Endrin	0.0002 mg/l
	Lindane	0.004 mg/l
	Methoxychlor	0.1 mg/l
	Toxaphene	0.005 mg/l
	2,4 – D	0.1 mg/l
	2,4,5 – TP Silvex	0.01 mg/l
Microbiological	Coliform bacteria	1/100 ml[b]
Physical/Microbiological	Turbidity	1 NTU[c]
Radiological	Radium – Ra_{226} + Ra_{228}	5 pCi/l
	Gross alpha particle activity	15 pCi/l
	Beta particle and photon radioactivity	4 mrem (annual dose equivalent)
Volatile Organics	Total Trihalomethanes	0.10 mg/l
	Trichloroethylene	.005 mg/l
	Carbon Tetrachloride	.005 mg/l
	1,2 Dichloroethane	.005 mg/l
	Vinyl Chloride	.002 mg/l
	Benzene	.005 mg/l
	Para – Dichlorobenzene	.075 mg/l
	1,1 – Dichloroethylene	.007 mg/l
	1,1,1 Trichloroethane	0.2 mg/l

[1] Regulated for health concerns. *As a monthly average; individual samples may be higher. **Up to 5 NTU in some circumstances.

National Secondary Drinking Water Regulations[2] (40 CFR Part 143)

Chloride	250 mg/l
Color	15 color units
Copper	1 mg/l
Corrosivity	Non-corrosive
Foaming Agents	0.5 mg/l
Iron	0.3 mg/l
Manganese	0.05 mg/l
Odor	3 threshold odor number
pH	6.5 – 8.5
Sulfate	250 mg/l
Total Dissolved Solids	500 mg/l
Zinc	5 mg/l
Fluoride	2 mg/l

[2] Regulated for health concerns.

Pesticides Included in the EPA National Pesticide Survey
April 14, 1988

Acifluorfen *
Alachlor *
Aldicarb *
Aldicarb *
Aldicarb sulfone *
Aldicarb sulfoxide *
Aldrin
Ametryn *
Altraton
Atrazine *
Atrazine, dealkylated metabolite
Barban
Baygon *
Bentazon *
Bromacil *
Butachlor
Butylate *
Carbaryl *
Carbofuran *
Carbofuran phenol
Carbonfuran pheno – 3KET
Carbofuran – 3OH
Carboxin *
Chlordane-alpha *
Chlordane-gamma
Chlorneb
Chlorobenzilate
Chlorothalonil *
Chlorpropham
Chanazine *
Cycloate
2,4-D *
DBCP *
DCPA
DCPA diacid metabolite
4,4' – DDD
4,4' – DDE
4,4' – DDT
Demeton-S
Diazinon *
Dicamba *
3,5-Dichlorobenzoic acid
1,2-Dichloropropane
cis-1,3-Dichloropropene *
trans-1, 3-Dichloropropene *
Dichlorprop
Dichlorvos
Dieldrin *
Dinoseb *
Diphenamid *
Disulfoton *
Disulfoton sulfone
Disulfoton sulfoxide
Diuron
EDB *
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin *
Endrin aldehyde
EPTC
Ethoprop
Etridiazole
ETU *
Fenamiphos *
Fenamiphos sulfone
Fenamiphos sulfoxide
Fanarimol
Fluometuron
Fluridone
HCH-alpha
HCH-beta
HCH-delta
HCH-gamma
Heptachlor *
Heptachlor epoxide *
Hexachlorobenzene *
Hexazinone *
5-Hydroxy Dicamba
Linuron
Merphos
Methiocarb
Methomyl *
Methoxychlor *
Metribuzin *
Metribuzin DA
Metribuzin DADK
Metribuzin DK
Mevinphos
MGK 264
Molinate
Napropamide
Neburon
Nitrates/Nitrites *
4-Nitrophenol
Norflurazon
Oxamyl *
PCP
Pebulate
cis-Permethrin
trans-Permethrin
Pichloram *
Prometon *
Prometryn
Pronamide *
Pronamide metabolite, RH 24,580 *
Propachlor *
Propanil
Propazine *
Propham *
Simazine *
Simetryn
Stirofos
Swep
2,4,5-T *
2,4,5-TP *
Tebuthiuron *
Terbacil *
Terbufos *
Terbutryn
Triademefon
Tricyclazole
Trifluralin *
Vernolate

* Priority pesticides which have a high potential for leaching into groundwater. This list is current as of April 14, 1988, but the list of priority pesticides could change. For information on Health Advisories, contact the Safe Drinking Water Hotline 800-426-4791, toll-free Monday through Friday, 8:30 a.m. to 4:30 p.m., E.S.T. (In Washington D.C., call 382-5533).

436.01 Introduction
436.02 Applicable Statutes and Regulations
436.03 Policy Guidance
436.04 MOUs, MOAs, and IAs
436.05 Technical Guidance
436.06 Permits and Approvals
436.07 Non-Road Project Requirements
436.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

436.01 Introduction

This section describes the policies and procedures related to wildlife, fish, and vegetation that apply to WSDOT projects, particularly the implications of Endangered Species Act (ESA) species listings. It includes information on requirements related to threatened and endangered species, critical habitat, wildlife, fish, and vegetation. This section does not discuss roadside vegetation design and management. Please refer to the WSDOT *Roadside Manual* (M 25-30) for this information.

WSDOT's primary goal is to provide safe, efficient, dependable and environmentally responsible transportation facilities and services. WSDOT is committed to preserving, protecting, and enhancing the state's natural resources while operating, maintaining, and improving the state's transportation system. WSDOT biologists are involved in all stages of project development, evaluating potential adverse impacts and recommending impact avoidance or minimization measures.

Wildlife, fish, and sensitive plants require special consideration during project planning and development. In addition to ESA compliance, areas of particular concern include:

- Direct effects from construction such as noise disturbance or other disruption of habitat areas.
- Interference to critical life functions such as wintering, foraging, migration, breeding and/or rearing.
- Degradation or loss of habitat.
- Habitat fragmentation and edge effects.
- Effects related to collisions between vehicles and animals.
- Loss of animal or plant populations.
- Impacts to food resources.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

- Water quality impacts.
- Effects on migration or dispersal of organisms including mammals, reptiles, amphibians, fish, insects, and/or ground-dwelling birds, where the project could create or exacerbate barriers to movement.

Sections on water quality (**Section 431**) and wetlands (**Section 437**) are also relevant to consideration of fish and wildlife issues.

Road projects are the focus of this section. However, these or similar policies, permits, and procedures also apply to other transportation projects. Issues specific to ferries, airports, rail, and non-motorized transport are addressed in **Section 436.07.**

(1) Summary of Requirements

If a transportation project involves federal funds or permits, or if it is on federal lands, it is said to have a federal nexus. If the project has a federal nexus, it must comply with NEPA and Section 7 of the ESA. All projects, regardless of funding source, must comply with Section 9 of the ESA; SEPA, as supplemented in 1983, RCW 43.21C; *SEPA Rules*, WAC 197-11; and local ordinances.

The recent salmonid listings under the ESA have triggered the development of new policies and requirements at all jurisdictional levels. Some of the information mentioned in this section is in draft form and is in the process of being revised. Because agencies and municipalities are actively creating strategies to address the ESA listings, this section will be updated regularly as policies and regulations change.

(2) Abbreviations and Acronyms

Abbreviations and acronyms specific to this chapter are listed below. Others are found in the general list in the appendix.

BA	Biological Assessment
BE	Biological Evaluation
BO	Biological Opinion
BMP	Best Management Practice
BLM	Bureau of Land Management
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FMP	Fishery Management Plan
GHPA	General Hydraulics Project Approval
HPA	Hydraulics Project Approval
JARPA	Joint Aquatic Resources Permit Application
MSA	Magnuson-Stevens Act
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFP	Northwest Forest Plan
NOAA Fisheries	National Oceanic and Atmospheric Administration (formerly National Marine Fisheries Service [NMFS])
NWP	Nationwide Permit

OHWM	Ordinary high water mark or line
PBA	Programmatic Biological Assessment
PHS	Priority Habitats & Species
PFMC	Pacific Fishery Management Council
RPA	Reasonable and Prudent Alternative
TFW	Timber, Fish, & Wildlife
USFWS	U.S. Fish & Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WNHP	Washington Natural Heritage Program

(3) Glossary

Anadromous Fish – Species that hatch in freshwater, mature in saltwater, and return to freshwater to spawn.

Aquifer Recharge Area – Area which has a critical replenishing effect on aquifers used for potable water.

Baffle – Flow-deflecting structure that provides low-velocity resting water for the passage of fish.

Candidate Species – Any species of fish, wildlife, or plant considered for possible addition to the list of endangered and threatened species. These are *taxa* for which NOAA Fisheries or USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Cumulative Effects – Effects of future state, local, or private actions that are reasonably certain to occur in the action area.

Critical Habitat – Specific area occupied by a listed species within its geographic range, which contains the physical or biological features essential to the conservation of the species and which may require special protection or management considerations.

Endangered Species – Any species which is in danger of extinction throughout all or a significant portion of its range.

Evolutionarily Significant Unit – A designation used by NOAA Fisheries for certain local salmon populations or "runs" which are treated as individual species under the Endangered Species Act. This is equivalent to the U.S. Fish and Wildlife Service (USFWS) "Distinct Population Segment" classification.

Federal Nexus – When the federal government is connected to a project either by owning land within the project limits, providing project funding, or by requiring a permit.

Habitat – Place where a plant or animal naturally or normally completes its life cycle.

Incidental Take – Take of listed species that results from, but is not the intention of, carrying out an otherwise lawful activity.

Indirect Effects – Effects caused by or resulting from the proposed action but that occur later in time, including effects resulting from associated development and other activities that occur following improvements in transportation.

Interdependent Effects – Effects caused by actions that have no independent utility apart from the proposed action.

Interrelated Effects – Effects created by a proposed action that would not occur "but for" that action.

Jurisdiction – Governing authority which interprets and applies laws and regulations.

Large Woody Debris – Conifer or deciduous logs, limbs, or root wads of a certain diameter which interact with the stream channel and contribute to the habitat diversity of the stream.

Late-Successional – Stage in forest development that includes mature and old growth forest and associated plant and animal species.

Listed Species – Any species of fish, wildlife, or plant which has been determined to be endangered or threatened under Section 4 of the ESA.

Old Growth – Forest stand with moderate to high canopy closure; a multilayered, multispecies canopy dominated by large overstory trees; a high incidence of large trees with large, broken tops, and other indications of decadence; numerous large snags and heavy accumulations of logs and other woody debris on the ground.

Programmatic Biological Assessment – A biological assessment designed to cover programs, not specific projects.

Proposed Species – Any species of fish, wildlife, or plant that is proposed by NOAA Fisheries or USFWS for federal listing under Section 4 of the ESA.

Take – Defined under the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct," including modification to a species' habitat.

Threatened Species – Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Viability – Ability of a population to maintain sufficient size so it persists over time in spite of normal fluctuations in numbers; usually expressed as a probability of maintaining a specific population for a defined period.

Watershed – Basin including all water and land areas that drain to a common body of water.

436.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to fish and wildlife are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT).
For details see **Section 410** through **Section 412.**

(2) Federal

(a) Endangered Species Act (ESA)

The criteria for determining threatened and endangered plant and animal species is provided by the ESA of 1973, which is administered by NOAA Fisheries and USFWS. The goals of the ESA include species conservation, ecosystem conservation, and species recovery.

Section 4 of the ESA allows for the listing of species as threatened or endangered based on habitat loss or degradation, overutilization, disease or predation, inadequacy of existing regulation mechanisms, or other human-caused factors. Section 4(d) allows for the promulgation of regulations to provide for the protection and conservation of listed species. It may allow for the "take" of threatened species.

Section 7 of the ESA requires each federal agency to ensure its actions to authorize, permit, or fund a project do not jeopardize the continued existence of any threatened or endangered species. It describes consultation procedures and conservation obligations.

Section 9 of the ESA prohibits a "take" of listed species. "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect or attempt to engage in such conduct" (1532(18)). An exception to the "take" prohibition applies to endangered plants on non-federal lands, unless the taking is in knowing violation of state law (1538(a)(2)).

The habitat of listed species is also protected under Section 9. This prohibition is broadly defined and applies to privately and publicly owned lands. Under USFWS regulations, Section 9 applies to all threatened and endangered species. Under NOAA Fisheries regulations, Section 9 applies to all endangered species. NOAA Fisheries evaluates each threatened species under its jurisdiction on a species by species basis to determine whether or not the "take" prohibition will apply. Section 4d of the ESA allows for each service (USFWS and NOAA Fisheries) to develop special rules (4d rules) which apply a more appropriate level of protection for each threatened species. These protections may be less restrictive than those under Section 9.

Because of the habitat requirements of recently listed salmonids, planning processes under the ESA and the federal Clean Water Act (CWA) are becoming increasingly integrated. The U.S. Environmental Protection Agency (USEPA) and Washington State Department of Ecology (Ecology) are working to ensure that water quality permits and procedures meet the goals and requirements of the ESA. NOAA Fisheries, USFWS, and USEPA are increasing coordination efforts and are reviewing permit requirements, like those in Sections 402 and 404 of the CWA, which could affect listed salmonids. As a result, procedures and policies related to water quality could be modified. As these changes occur, updates will be made in **Section 431.** Regulations pertaining to wetlands also overlap with ESA requirements because wetlands could be habitat for federally listed plants and animals. USFWS has an important role in reviewing permits and regulations pertaining to wetlands. The details of wetland permitting are covered in **Section 437.06**.

The ESA can be viewed at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, then Chapter 35, Endangered Species Act of 1973.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch35.html

A good summary of this statute can be found at the USFWS website:

http://www.fws.gov/

Click on Endangered, then ESA and what we can do.

Or by direct link:

http://laws.fws.gov/lawsdigest/esact.html

(b) National Forest Management Act

The primary goal of the National Forest Management Act (NFMA, 16 USC 1604 (g)(3)(B)) is to maintain multiple use and species diversity on federal forest lands. The NFMA applies directly to lands administered by the U.S. Forest Service (USFS), but also provides direction for Bureau of Land Management (BLM) land management plans. The BLM and USFS have integrated NEPA requirements with their land management regulations.

The NFMA is described online at:

http://www.fs.fed.us/

Enter National Forest Management Act in the Search box.

Or by direct link:

http://www.fs.fed.us/forum/nepa/nfmalaw.html

The USFS has developed forest-specific "forest plans" which identify "species of concern" found within that forest. This list is comprised of several categories of species such as federally listed species, USFS sensitive species, survey and manage species, and state-listed species. Forest plans can cover a wide range of species (e.g. slugs, lichens, mammals). Staff of each forest decide which designated species to include on its species of concern list. Different requirements are associated with different species ranking; however, actions on federal land must always comply with the ESA.

The Northwest Forest Plan (NFP) is a management plan affecting federal forest lands within the range of the northern spotted owl in western Washington, Oregon, and northern California. The standards and guidelines set forth in this plan supersede any existing forest plans within the range of the spotted owl. The NFP also applies directly to National Forests without existing, approved forest plans within the range of the spotted owl. The goals of this plan include: maintaining late-successional and old growth habitat and ecosystems, maintaining biological diversity, restoring and maintaining ecological health of watersheds, and promoting regional economic stability by providing a sustainable supply of timber and other forest products. All WSDOT projects occurring on federal forest lands within the range of the northern spotted owl must follow the standards and guidelines within the NFP.

The following web site contains the NFP:

http://www.or.blm.gov/

Click on Northwest Forest Plan.

Or by direct link:

http://www.or.blm.gov/nwfp.htm

(c) *Fish and Wildlife Coordination Act*

The Fish and Wildlife Coordination Act (16 USC 661-667 (e)) authorizes the USFWS, NOAA Fisheries, and the Washington Department of Fish and Wildlife (WDFW) to investigate all proposed federal and non-federal actions needing a federal permit or license, which would impound, divert, deepen, or otherwise control or modify a stream or other body of water and to make mitigation or enhancement recommendations. The primary goal of this act is to incorporate wildlife conservation with water resource development programs (see the Fish and Wildlife Coordination Flowchart, FHWA, 1998 in **Exhibit 436-1**).

The statute can be viewed at:

http://www4.law.cornell.edu/uscode/

Click on Table of Popular Names, then Part 13, then Fish and Wildlife Coordination Act.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/661.html

A good summary of this statute can be found at:

http://www.fws.gov/

Click on Habitat, then Branch of Federal Activities, then Fish and Wildlife Coordination Act.

Or by direct link:

http://laws.fws.gov/lawsdigest/fwcoord.html

(d) *Migratory Bird Treaty Act*

This federal law, administered by the USFWS, makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, with the exception of the taking of game birds during established hunting seasons. The law also applies to feathers, eggs, nests, and products made from migratory birds. This law is of particular concern when birds nest on bridges, buildings, signs, and ferry dock structures. WSDOT must be in compliance with the Migratory Bird Treaty Act.

The statute can be viewed at:

http://www4.law.cornell.edu/uscode/

Click on Table of Popular Names, then Part 18, select Migratory Bird Treaty Act.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/703.html

A good summary of this statute can be found at:

http://www.fws.gov/

Click on Conserving Wildlife and Habitats, then Laws, then Resource, then Migratory Bird Treaty Act.

Or by direct link:

http://laws.fws.gov/lawsdigest/migtrea.html

(e) Bald and Golden Eagle Protection Act

This federal law, administered by the USFWS, makes it unlawful to take, import, export, sell, purchase, or barter any bald or golden eagle, their parts, products, nests, or eggs. "Take" includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing the eagles. Permits may be issued by the USFWS for scientific or exhibition use, or for traditional and cultural use by Native Americans. All WSDOT projects must be in compliance with the Bald and Golden Eagle Protection Act.

The statute can be viewed at:

http://www4.law.cornell.edu/uscode/

Click on Table of Popular Names, then Part 3, select Bald Eagle Protection Act.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/668.html

A good summary of this statute can be found at:

http://www.fws.gov/

Click on Birds; then Laws, Regulations, and Policy; then Laws and Acts; then Bald Eagle Protection Act.

Or by direct link:

http://laws.fws.gov/lawsdigest/baldegl.html

(f) Protection of Migratory Birds – Executive Order

Signed by President Bill Clinton effective January 10, 2001, Executive Order 13186 outlines federal agency responsibilities for protecting migratory birds under the Migratory Bird Protection Act and other statutes. It requires the FHWA to enter into a MOA with the USFWS on protecting a wide range of migratory bird species; this MOA is not yet finalized. WSDOT guidance will be forthcoming in the next update of this manual on avoiding active nests during highway construction or bridge maintenance, and other relevant issues. The Executive Order is online at the Federal Register web archive:

http://www.archives.gov/

Click on Federal Register, then Presidential Documents, then Executive Orders Disposition Tables, then William J. Clinton, then Executive Order 13186.

Or by direct link:

http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2001_register&docid=fr17ja01-142.pdf

(g) Marine Mammal Protection Act

This 1972 law establishes federal responsibility for conservation and management to protect marine mammals. It establishes a moratorium on the taking and importation of marine mammals and marine mammal products. It also encourages creation of international agreements for research and conservation of these species. The statute can be viewed at:

http://www4.law.cornell.edu/uscode/

Click on Table of Popular Names, then Part 18, and select Marine Mammal Protection Act of 1972.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/1361.html

A good summary of this statute can be found at:

http://www.fws.gov/

Click on Policies, then Resource Laws, then, Resource, then Marine Mammal Protection Act of 1972.

Or by direct link:

http://laws.fws.gov/lawsdigest/marmam.html

(h) Magnuson-Stevens Act (MSA)

Under the Fishery Conservation and Management act of 1976 (Magnuson Act), NOAA Fisheries was given legislative authority to regulate the fisheries of the United States. The Act also established eight Regional Fisheries Management Councils. These Councils prepared Fishery Management Plans (FMPs) to govern their management activities which were submitted to NOAA Fisheries for approval. In 1996, this Act was amended to emphasize the sustainability of the nation's fisheries and create a new habitat conservation approach. This habitat is called Essential Fish Habitat (EFH). The Act is now known as the Magnuson-Stevens Act.

In 1999 and 2000, the Pacific Fishery Management Council (PFMC) added provisions for the protection of EFH to three FMPs (Coastal Pelagics, Groundfish, and Pacific Coast Salmonids) in the Pacific Northwest. EFH is defined by Congress as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 USC 1802(10)).

The pacific salmon fishery management unit includes chinook (*Oncorhynchus tshawytscha*), coho (*Oncorhynchus kisutch*), and pink salmon (*Oncorhynchus gorbuscha*). This designation is not limited to federally listed species. The west coast groundfish management unit includes 83 species that typically live on or near the ocean floor. Species groups include skates and sharks, rockfish, flatfish, and groundfish. The west coast pelagics management unit includes those species primarily associated with the open ocean and coastal areas such as the pacific sardine (*Sardinops sagax*), pacific chub (*Scomber japonicus*) and several others.

Federal agencies must consult with NOAA Fisheries on all activities, or proposed activities, authorized, funded, or undertaken by the agency that may adversely affect EFH. Information on EFH can be found at the NOAA Fisheries homepage:

http://www.nmfs.noaa.gov/

Click on Essential Fish Habitat.

Or by direct link:

http://www.nmfs.noaa.gov/ess_fish_habitat.htm

(3) Tribal Laws

Projects on tribal lands may be subject to tribal laws that regulate fish, wildlife, and habitat. Projects not on tribal land could affect treaty-reserved resources or species of tribal significance. The appropriate tribal biologist should be contacted to discuss any regulations that may apply to the project.

(4) State of Washington

(a) Forest Practices Act

The Forest Practices Act is directed towards timber harvesting and reforestation on non-federal forestland. It regulates forest management related activities such as road construction, pesticide and herbicide use, and work in waters of the United States. Forest Practices Application (FPA)/Notification procedures are detailed in **Exhibit 455-5.**

In addition to Forest Practices requirements, Timber, Fish and Wildlife (TFW) caucuses (including federal and state agencies, local authorities, tribes, and the timber industry) have produced the *Forest and Fish Report* (April 1999). This report was an attempt by TFW to address the recent ESA listings of salmonids by introducing new regulations and guidelines to ensure ESA compliance for activities on non-federal forest land. The Forest Practices Board adopted emergency rules consistent with the *Forest and Fish Report*. These emergency rules have been combined with the permanent forest practices rules in the *Washington Forest Practices Rule Book*, April 2000. . Currently the Forest Practices Board is conducting a comprehensive revision of the permanent forest practices rules based on the following goals:

- To provide ESA compliance for aquatic and riparian-dependant species on state-owned and private forest lands.
- To restore and maintain riparian habitat on state-owned and private forest lands to support a harvestable supply of fish.
- To meet the requirements of the CWA for water quality on state-owned and private forest lands.
- To keep the timber industry economically viable in Washington State.

Information on the Forest Practices Act can be found at:

http://www.wa.gov/dnr/

Click on Forest Practices, then Forest Practices Act.

Or by direct link:

http://www.wa.gov/dnr/htdocs/fp/fpb/act.html

(b) Bald Eagle Protection Rules

The Bald Eagle Protection Rules (WAC 232-12-292) are designed to protect eagle habitat and thereby increase and maintain eagle populations. The rules promote cooperative habitat management between state and federal agencies and private landowners.

(c) Fish Passage Law

This law (RCW 77.55.060), requires that any dam or other obstruction across or in a stream shall be provided with a durable and efficient fishway approved by WDFW. The fishway must be maintained and continuously supplied with sufficient water to freely pass fish.

(d) Shoreline Management Act

The goal of Washington's Shoreline Management Act (RCW 90.58) is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." The Act establishes a broad policy of shoreline protection, which includes fish and wildlife habitat.

The SMA uses a combination of policies, comprehensive planning, and zoning to create a special zoning code overlay for shorelines. Under the SMA, each city and county can adopt a shoreline master program that is based on state guidelines but tailored to the specific geographic, economic and environmental needs of the community. Master programs provide policies and regulations addressing shoreline use and protection as well as a permit system for administering the program.

Please refer to **Section 452.02** for more details about the SMA and local Shoreline Master Programs. To reference the statute, see the web site below:

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.58, Shoreline Management Act.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.58CHAPTER/RCW90.58chapter.htm

(5) Local Comprehensive Plans and Critical Area Ordinances (CAO)

Washington's Growth Management Act of 1990 (GMA) requires counties and cities to take a comprehensive, cooperative approach to land use planning. The focus of the GMA is to avoid unplanned growth, and conserve natural resources, while allowing for economic development. Under the GMA, counties, cities, and towns must classify, designate, and regulate critical areas through Critical Areas Ordinances (CAOs). Any of the five types of critical areas may serve as fish, wildlife, or sensitive plant habitat:

- Wetlands
- Aquifer recharge areas
- Frequently flooded areas
- Geologically hazardous areas
- Fish and wildlife habitat conservation areas

All regulated habitat areas should be identified during the project development phase. Some local jurisdictions may have fish and wildlife habitat regulation inventory maps.

These maps identify what types of habitat the jurisdiction regulates, indicate where all the inventoried habitat areas are, and identify the regulations relating to the management and development of these areas. If available, these maps should be reviewed to help identify critical areas.

The GMA also requires counties and cities that meet certain population and growth rate criteria to adopt planning policies and comprehensive plans. WDFW makes recommendations for comprehensive plan contents related to fish and wildlife habitat and critical area regulations, but local jurisdictions develop the final plans and regulations. The result is inconsistencies in regulations among jurisdictions. Unless the local laws conflict with state law, WSDOT must be consistent with local regulations. Local planning departments should be contacted to determine requirements that could affect a project. See **Section 451.02** for details on the GMA.

436.03 Policy Guidance

The Transportation Commission's Policy Catalog contains a specific policy on fish and wildlife protection. Policy 6.3.3 states that: "Efforts will be made to mitigate the potential adverse effects that transportation activities can have on fish and wildlife populations." WSDOT intends to "protect, restore, and enhance, where feasible, fish and wildlife habitat and populations within transportation corridors." Action strategies are to:

- Conduct a study to inventory transportation barriers to fish passage; establish criteria for identifying which barriers pose the most significant environmental harm; prioritize the removal of identified transportation barriers; and seek program funding for fish passage barrier removal.
- Identify transportation corridors with significant wildlife losses due to "road kill" or habitat impacts and develop strategies for reducing wildlife losses within these corridors.
- Improve interagency communications, consultations and agreements on habitat protection issues.
- Minimize impacts to natural habitats in design, construction, and maintenance activities.

The policy and action strategies are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

436.04 MOUs, MOAs and IAs

(1) MOA on Work in State Waters

This MOA, currently under revision, established procedures to prevent habitat loss through damage by flooding and future land development. Participating agencies cooperate in joint projects to restore fish and wildlife habitat loss due to past flooding, land development activities, or public transportation facilities. Implementation of the MOA is intended to facilitate cooperation and dialogue between the signatory agencies. See **Exhibit 431–1** in **Section 431**.

MOU Between Washington State Department of Fish and Wildlife, and Washington State Department of Transportation: Concerning Work in State Waters (June 2002).

(2) *MOU on Culvert Installations*

This MOU presents guidelines for use by designers and resource managers to assure juvenile and adult salmonid fish passage at culvert installations, as required by the Fish Passage Law (RCW 77.55.060). This MOU will probably be updated to conform to WDFW's 1999 manual on fish passage (see **Section 436.05(8)**). See **Exhibit 436-2.**

MOU Between Washington State Departments of Fisheries, Wildlife, and Transportation. Fish Passage Guidelines: Culvert Installations (Appendix A of MOU on Compliance with Hydraulic Code, August 1990).

(3) *MOU on Compliance with Hydraulic Code*

This MOU is currently in draft form and is out for comment. It is designed to provide a mutual understanding between the participating agencies for the application and acquisition of Hydraulic Project Approvals (HPA). When complete it may be inserted in this manual as **Exhibit 431-3** or referenced online.

MOU between Washington State Departments of Fisheries, Wildlife, and Transportation, Concerning Compliance with the Hydraulic Code (RCW 77.55.100 and WAC 220-110) (Draft, January 22, 2001).

436.05 Technical Guidance

(1) *Discipline Reports*

Components of the Biology/Wetland Discipline Report address fish, wildlife, and habitat. This report is described in **Section 437.05(3).** Guidelines are included as **Exhibit 437-11.**

(2) *FHWA*

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including water body modification and wildlife impacts, and threatened or endangered species. For details, see FHWA's web page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, and select T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(3) *ESA Procedures*

All WSDOT projects are required to comply with the ESA. All projects are subject to Section 9 of the ESA (prohibited acts). If the project has a federal nexus such as federal funding or permitting, it is also subject to Section 7 of the ESA. WSDOT has made ESA compliance an agency-wide priority. Coordination between various WSDOT offices will increase the efficiency and effectiveness of the ESA analysis.

WSDOT identifies potential impacts to listed or proposed species associated with a proposed action and then attempts to avoid, minimize, or eliminate these impacts. For

some actions, WSDOT conducts preliminary environmental reviews to identify likely impacts early in the project design. This approach allows for design adjustments if impacts to listed or proposed species are identified.

(a) 4(d) Rule

In June 2000, NOAA Fisheries adopted a rule under Section 4(d) of the ESA. This rule prohibits the take of 14 salmon and steelhead Evolutionarily Significant Units (ESUs) in the Pacific Northwest. Eight of these ESUs are in Washington State. The 4(d) rule was published July 10, 2000 (65FR 42422).

The rule applies to any agency, authority, or private individual subject to U.S. jurisdiction. However, the take prohibition is not applied to threatened species when the take is associated with a NOAA Fisheries-approved program (one of the 13 "limits"). The 13 limits can be considered exceptions to the 4(d) take prohibition. NOAA Fisheries has determined that these programs, activities, and criteria will minimize impacts on threatened steelhead and salmon enough so additional federal protection is not needed. NOTE: If there is a federal action agency, Section 7 consultation is still required.

NOAA Fisheries will periodically monitor these activities to ensure they continue to qualify under the 4(d) limit. Entities that have been granted a take limit for their activities must conduct monitoring to ensure they remain consistent with the approved plan or program. The 13 limits include:

- ESA Permits.
- Ongoing Scientific Research (expired March 7, 2001).
- Fish Rescue and Salvage Actions (limited to agency or official personnel or their designees).
- Fishery Management (limited to fishery management agencies).
- Artificial Propagation (federal or state hatcheries).
- Joint Tribal/State Plans (covering aspects of fishery management).
- Scientific Research Activities (either permitted or conducted by the state).
- Habitat Restoration (if part of a state-certified watershed conservation plan).
- Water Diversion Screening (must comply with NOAA Fisheries' *Juvenile Fish Screening Criteria*).
- Routine Road Maintenance (equivalent or better to Oregon State Department of Transportation program).
- Portland Parks Integrated Pest Management (specific to Portland Parks).
- Municipal, Residential, Commercial, and Industrial Development and Redevelopment.

WSDOT is pursuing coverage under the routine road maintenance limit. A program specific to WSDOT road maintenance activities has been developed and is currently undergoing NOAA Fisheries review. The program provides coverage for routine, unscheduled, and emergency/disaster maintenance activities. It defines

general practices (such as adaptive management, monitoring, and training) and specific practices (such as BMPs) that WSDOT will utilize to avoid adverse impacts to the aquatic environment.

The WSDOT program, described in *The Washington State Department of Transportation Maintenance Manual for Water Quality and Habitat Protection*, June 2000, is designed to plug into the Tri-County Regional Road Maintenance plan. The regional plan is also under NOAA Fisheries review. The manual can be found at:

http://www.wsdot.wa.gov/

Click on Site Index, then M, then Maintenance Office, then Environment, then Endangered Species Act, then Maintenance Manual for Water Quality and Habitat Protection.

Or by direct link:

http://www.wsdot.wa.gov/fossc/maint/4d_Rule/default.htm

(b) Section 7 Compliance

All projects with a federal nexus are subject to Section 7 of the ESA and an analysis is required to ensure compliance with the ESA. WSDOT acts on behalf of FHWA and the COE for Section 7 interagency coordination. Depending on the level of impacts, preparation of a "no effects" letter and/or a biological assessment (BA) will be required. Projects requiring a BA could be covered under an existing Programmatic Biological Assessment (PBA), and/or they could require the completion of an individual BA. Depending on the level of impact identified in the above documentation, informal or formal consultation with the Service (NOAA Fisheries/USFWS) may be required.

For projects with a federal nexus, the project biologist – either a WSDOT biologist or a consulting biologist – conducts a preliminary evaluation to determine the level of project impacts and the appropriate documentation. If the project is not covered by an existing PBA, the biologist first prepares a project-specific species list. Typically, this list is determined by providing a written request to the USFWS, reviewing the NOAA Fisheries species list and reviewing the Priority Habitat and Species (PHS) and Natural Heritage Program (NHP) databases. WSDOT may also prepare its own USFWS species list by reviewing PHS and NHP data and by using local knowledge.

WSDOT regional offices and Washington State Ferries (WSF) receive copies of the NOAA Fisheries list from the ESO. A NOAA Fisheries list can also be created from information provided at the NOAA Fisheries Northwest Region web site:

http://www.nwr.noaa.gov/

Click on Summary of Salmon & Steelhead Listings (under ESA Information).

Or by direct link:

http://www.nwr.noaa.gov/1salmon/salmesa/pubs/1pgr.pdf

This project species list identifies the federally listed, proposed, and candidate species, and designated and proposed critical habitat potentially present in the project vicinity. The USFWS list could include fish, wildlife, and plant species.

The NOAA Fisheries list could include fish and marine mammal species. The project biologist needs to contact local experts (federal, state, and tribal biologists) for additional species occurrence information.

The USFWS normally responds to the species list request within 30 days. The project species list is only considered current for 180 days. If the Section 7 documentation is not completed within this 180-day period, an updated list must be obtained.

The project biologist should discuss the proposed activity with the design engineer and obtain project plans and maps. The biologist conducts a site visit to evaluate habitat conditions and identify potential impacts from the project. The project biologist determines if suitable habitat for listed or proposed species is present in the project vicinity.

If suitable habitat is present, the project biologist determines if species surveys are necessary. Often surveys must take place within a specified timing window (such as when a plant is flowering or when a species is most active) or a survey protocol may be in effect. Existing survey timing windows and protocols typically apply to species under USFWS jurisdiction and are determined by the USFWS. If surveys are necessary, the project biologist identifies the survey timing window and/or survey protocol. Because survey timing windows could affect project timelines, the project biologist should discuss survey schedules with the design engineer.

During the site visit, the project biologist should also note any state-listed rare and sensitive plants and/or special habitats and take photos of the project area. Agency and/or tribal biologists should be consulted to further evaluate the potential for species occurrence. Following this preliminary evaluation, the project biologist determines what level of documentation is appropriate. After species habitat and occurrence is determined, the project biologist determines whether or not timing restrictions will be necessary.

(1) No Effects Letters

If, during the preliminary evaluation, the project biologist determines there will be no impact to federally listed species (all species under NOAA Fisheries and/or USFWS jurisdiction) the biologist writes a “no effects” letter to FHWA. For example, if the project is determined to have no effect on all species under NOAA Fisheries jurisdiction but may impact one or more species under USFWS jurisdiction, a "no effects" letter would be written only for NOAA Fisheries species. Preparation of a BA would be necessary for the USFWS species unless the project is covered under an existing PBA. WSDOT’s No Effect Letter Checklist (**Exhibit 436–3**) details the information to be included.

A template for a standard “no effects” letter can be found at WSDOT’s web site:

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then Environmental, then ESA/BA Guidance and Tools, then Template for Drafting No Effects Letter Biological Assessment.

Or by direct link:

http://www.wsdot.wa.gov/TA/Operations/Environmental/noeffectba.html

(2) Programmatic Biological Assessments

The purpose of PBA development is to streamline the Section 7 consultation process. PBAs are designed to receive advance concurrence from the Services (USFWS and NOAA Fisheries) on certain road maintenance, preservation, and improvement programs that are likely to be implemented in the future. They cover only those projects which can meet the effect determinations, project conditions, and conservation measures described in the PBA. USFWS and NOAA Fisheries species are addressed in separate PBAs.

Currently five PBAs either are in production or have been completed. Three PBAs address species under USFWS jurisdiction: Olympic Region PBA (approved), Eastern Washington PBA, and Western Washington PBA (both in review). WSDOT's statewide NOAA Fisheries Aquatic PBA has been approved and is in use. WSF's aquatic PBA is being reviewed internally.

After completing the preliminary evaluation, the project biologist should determine if a PBA is in place in the region where the project is located. Then, the biologist should determine if the project meets the conditions of the PBA for the species covered under the PBA. If the project can be addressed under a PBA, the project biologist ensures that the potential effects do not exceed anticipated levels and assigns the appropriate conservation measures which are to be included as part of the project. The project-level evaluation is documented using WSDOT's PBA determination form. Photos and a vicinity map are attached to the determination form and it is sent to the appropriate Service (USFWS or NOAA Fisheries). Individual project consultation with the Service is not necessary. After completion of the first ten projects covered under each PBA, WSDOT meets with USFWS/NOAA Fisheries to discuss the projects and the PBA process. Thereafter the meeting is held annually.

If any listed or proposed species or critical habitat not covered under the PBA could be impacted by the project, an individual BA may be required. The Service should be consulted to see if an individual BA will be necessary. For controversial or high profile projects, the project biologist may choose to complete an individual BA even if the project is covered under the PBA. Projects which occur on federal lands may also require an individual BA.

(3) Individual Biological Assessments

An individual BA must be prepared if the proposed activity has a federal nexus, could impact a listed or proposed species or its critical habitat, and is not covered in part or entirely under an existing PBA. Occasionally several similar projects (such as bridge scour repair projects) are "batched" into one BA to streamline the review process.

A BA is an evaluation of the potential impacts of a specific project on federally listed threatened, endangered, and proposed species and designated and proposed critical habitat. The basic purpose is to evaluate potential effects and determine the need for consultation. WSDOTs BA Checklist (**Exhibit 436–4**) details the information to be included.

For each listed species evaluated, the BA should arrive at one of three conclusions:

- The action will have "no effect" on the species;
- The action "may affect, not likely adversely affect" the species; or
- The action "may affect, likely adversely affect the species.

The BA should be submitted to the appropriate Service (USFWS or NOAA Fisheries) depending on the species addressed. A transmittal letter written on behalf of the federal nexus agency should be included with every BA. The cover letter should include a brief project description and a determinations summary. If during the evaluation, the project biologist determines that formal consultation is necessary, the consultation must be requested by the federal action agency.

If the project BA includes "may affect, not likely to adversely affect" determinations but no "may affect, likely to adversely affect" determinations, informal consultation is required. For informal consultation, the NOAA Fisheries/USFWS reviews the BA and either concur or not concur with the determinations. If the agency concurs in writing, then no further consultation is needed. The agency may request additional information before giving concurrence and the project biologist should respond to such requests.

If the project BA includes any "may affect, likely to adversely affect" determinations or if during the informal consultation process NOAA Fisheries/USFWS does not concur with a determination and determines that there is a "may affect, likely to adversely affect" situation, then formal consultation is required. If the project biologist determines that formal consultation is necessary, the consultation must be requested in the cover letter transmitted through FHWA. Formal consultation is then initiated through a written request by the federal nexus agency. During the formal consultation, NOAA Fisheries/USFWS may recommend modifications to eliminate or reduce adverse effects. If effects can be reduced to an insignificant or discountable level, then consultation can proceed informally. Formal consultation ends with NOAA Fisheries/USFWS preparing a biological opinion (BO). This document may include:

- Reasonable and Prudent Alternatives (RPAs). Actions recommended to avoid jeopardy/adverse modification.
- Incidental Take Statement. Specifies the amount/extent of takings authorized, requires RPAs, and sets terms and conditions.
- Re-initiation Clause. Included in case there are changes or new information.

The BO is an in-depth document that identifies whether or not the action "is likely to jeopardize the continued existence of a listed species or adversely modify critical habitat." If the action is not likely to jeopardize the continued existence of a listed species or adversely modify critical habitat, the project may proceed, provided it follows the terms and conditions outlined in the BO. The formal consultation process is typically conducted within 135 days with extensions likely.

(c) Section 9 Compliance

Section 9 of the ESA prohibits the "take" of listed species. To ensure Section 9 compliance, projects with no federal nexus must avoid the take of threatened and endangered species. The take of threatened species may be allowed under certain circumstances if a 4d rule applies to the situation.

(d) *References on ESA Compliance*

The references described below may be useful in understanding ESA requirements and preparing biological assessments**:**

WSDOT ESA Handbook – *Endangered Species and Transportation Handbook - An Introduction to Understanding the ESA in Relation to Transportation Projects*, WSDOT Environmental Services Office, February 2001 as amended. This document provides an overview of the ESA, agency coordination, impact analysis, and the recent salmonid listings. It contains several flowcharts and appendices including recent updates to WSDOT's *Local Agency Guidelines* (LAG) manual (M 36-63) and the BA Review Checklist.

WSDOT Environmental Services Office Homepage – This web site contains WSDOT policy guidance specific to the ESA, legislative initiatives, regulatory compliance, and information on water quality, wetlands, and cultural resources. It includes the ESA Stormwater Effects Guidance and the *Highway Runoff Manual* (M31-16) and links to WSDOT's Permits and Documentation Coordination Program, with reference to environmental regulations, procedures, and policies.

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/

Stormwater Effects on Listed Species – WSDOT's Instructional Letter (#IL 4023.00), *Stormwater Effects Determinations*, communicates the interim agreements reached with NOAA Fisheries, USFWS, and WSDOT regarding stormwater effects on fish species listed under the ESA. It will be incorporated into WSDOT's *Highway Runoff Manual* (M31-16) by July 4, 2001.

Highways and Local Programs (HLP) Environmental Web Site – This web site contains information on various environmental issues related to HLP activities. A biological assessment tracking sheet which reports the status in the concurrence process of BAs for various HLP projects can be found here. It also provides links to threatened and endangered species web resources and the ESO homepage.

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then Environment.

Or by direct link:

http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironmentalHP.htm

FHWA Guidance – The *FHWA Guidelines for the Fulfillment of Interagency Cooperation Under Section 7 of the Endangered Species Act* (January 1988*),* describes Section 7 requirements and their relation to the federal highways program. It includes the FHWA Endangered Species Flowchart, which displays the ESA Section 7 consultation process as it applies to the Federal Highways Program. See **Exhibit 436-5.**

An earlier version of these guidelines is accessible in pdf format on FHWA's *Environmental Guidebook* along with the Federal Interagency Memorandum of

Understanding (MOU) for Implementation of the ESA (November 8, 1994) and other documents on endangered species. Online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Endangered Species.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch4.htm

USFWS Endangered Species Homepage – This web site contains various useful documents such as the *ESA Section 7 Consultation Handbook* and Recovery plans.

http://www.fws.gov/

Click on Endangered.

Or by direct link to:

http://endangered.fws.gov/

NOAA Fisheries Homepage – Refer to this site for NOAA Fisheries species list requests. Other information on threatened and endangered species under NOAA Fisheries jurisdiction can be found here.

http://www.nwr.noaa.gov/

(4) Essential Fish Habitat (EFH) Consultation

For WSDOT projects with a federal nexus that may have an adverse effect on EFH, consultation is required. To streamline the process, EFH consultation can occur through the NEPA, EA, ESA, or other federal process agreed upon by NOAA Fisheries and the federal action agency.

To achieve a streamlined approach, WSDOT is currently negotiating with FHWA to allow FHWA-funded projects to combine the EFH analysis with ESA Section 7 consultation. Since the biological assessment contains a detailed analysis of project impacts to critical habitat and the environmental baseline, it should already address most requirements of the EFH impact analysis. The EFH section in the BA therefore is not expected to exceed one page in length. The EFH analysis should include:

- A brief introductory paragraph describing why addressing EFH is required.
- A definition of the EFH designation for the fisheries potentially affected by the project.
- An identification of the fish species likely to occur in the project area and a brief description of their use of the project action area (significant prey species like Pacific sand lance should also be considered).
- A brief statement of potential impacts to EFH.
- A determination of effect for EFH (either "no effect" or "adverse effect").

If the determination of effect is "adverse effect", NOAA Fisheries must provide EFH conservation recommendations to the federal agency that submitted the environmental documentation. The federal action agency must then provide a detailed written response within 30 days after receiving them (or at least 10 days prior to final approval of the action, if a decision by the federal agency is required in less than 30 days. The written response must include a description of avoidance measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. If the response is

inconsistent with the recommendations made by NOAA Fisheries, adequate justification for not following the recommendations by NOAA Fisheries must be provided. If the federal action agency determines that an action or proposed action will not affect EFH, no consultation is required.

For WSDOT projects with no federal nexus, EFH consultation is voluntary. In situations where non-federal actions occur in areas under a NOAA Fisheries-approved Conservation Plan, NOAA Fisheries participation in, and approval of the Plan would be combined with the EFH consultation and would constitute NOAA Fisheries requirements of the Magnuson-Stevens Act for providing advisory conservation recommendations to state agencies. Included in this scenario would be coordination with Section 4(d) rulemaking, Section 4(f) recovery planning, and Section 10 permitting under the ESA.

(5) Projects on Federal Forest Land or Resource Areas—Biological Evaluations

WSDOT projects involving any ground-disturbing activities on federal forest land or resource areas covered by the National Forest Plan must consider potential impacts to the northern spotted owl and other "survey and manage" species within the range of the northern spotted owl. These are species associated with old-growth forests that are afforded special management consideration under the Northwest Forest Plan.

The agency responsible for the affected forest (USFS) or resource area (BLM) should be contacted to obtain a species of concern list. Before any ground disturbing activity can occur, surveys must be performed for each managed species that may be present in the project area. Surveys may take up to a year to complete.

(a) Biological Evaluation Requirements

If it is suspected that an action or proposed action may affect a sensitive species, a biological evaluation (BE) must be written in addition to the NEPA documentation and BA. The BA and BE can be integrated into one document which the USFS or BLM can submit to NOAA Fisheries and USFWS for ESA Section 7 compliance. The main objectives of the BE are to reduce negative impacts and increase mitigation opportunities for sensitive species, to ensure that USFS/BLM actions do not decrease the viability of native or desired non-native plant or animal species, and to ensure that actions will not lead to the federal listing of species.

(b) Contents of a Biological Evaluation

A BE should include the following:

- An identification of all USFS and BLM sensitive species and federally-listed and proposed species and their habitat potentially affected by the proposed activity.
- An identification and description of habitat within the area needed to meet USFS/BLM objectives for sensitive species.
- An analysis of the direct, indirect, and cumulative effects of the proposed action (including mitigation) on species or habitat essential to meet USFS/BLM objectives.
- A determination for each sensitive species of either "no impact"; "beneficial impact"; "may impact individuals, but not likely to cause a trend toward federal listing or loss of viability"; or "likely to result in a trend toward federal listing or loss of viability". Discussion of the process and rationale

for the determination, including documentation of any contacts with other agencies or data sources whose information was utilized in the impact determination.

- Recommendations for reducing negative impacts and beneficial mitigation measures.

(c) References on Biological Evaluations

USFS Manual – This manual, with further guidance on writing BEs, is online at:

http://www.fs.fed.us

Click on Publications then Forest Service Manual and Handbook.

Or by direct link:

http://www.fs.fed.us/im/directives/

BLM Homepage –contains information on the Northwest Forest Plan, the National Forest Management Act, and species of concern:

http://www.or.blm.gov/

FHWA Fish and Wildlife Coordination Flow-chart – This flowchart (December 1998) provides guidelines for compliance with the Fish and Wildlife Coordination Act (see **Exhibit 436-1**).

(6) State Priority Habitat and Species (PHS)

The PHS program is managed by the WDFW. It designates species and habitat considered to be priorities for conservation and management. State priority habitat is a habitat type with unique or significant value to many species. State priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority species can be state-listed as candidate, or sensitive species; species of tribal, recreational, or commercial importance; or species vulnerable to significant population declines because of aggregation habits (vulnerable aggregates). Species can be considered priority species only in certain locations, such as a breeding area, that are called priority areas.

The PHS program is designed to provide information to local governments, state and federal agencies, private landowners, consultants, and tribal biologists for land use planning purposes. PHS data is used by local jurisdictions to help meet the requirements of the Growth Management Act. Many local jurisdictions have a fish and wildlife ordinance in place to protect these species and habitats. PHS data is part of WSDOT's BA review process and is also considered in some jurisdictions' comprehensive plans. Impacts to PHS species and habitats should be evaluated and local WDFW biologists should be consulted by WSDOT during the project development phase.

WDFW also has maps showing shellfish, forage fish, and spawning habitat, which can be useful for WSF projects and other WSDOT projects which interface with marine environments.

Information on the PHS program can be found on the WDFW homepage:

http://www.wa.gov/wdfw/

Click on Habitat, then Priority Habitats and Species.

Or by direct link:

http://www.wa.gov/wdfw/hab/phspage.htm

(7) *Washington Natural Heritage Program*

The Washington Natural Heritage Program (WNHP) is a division of the Department of Natural Resources. The WNHP collects data about existing native ecosystems and rare plant species in Washington State. It develops and recommends strategies for protecting native ecosystems and plant species most threatened in the state. Natural heritage data is part of WSDOT's BA review process. Impacts to natural heritage habitats and species should be evaluated during the project development phase. Information on the WNHP can be found at the DNR's home page:

http://www.wa.gov/dnr/

Click on Programs and Topics, then Natural Heritage Program.

Or by direct link:

http://www.wa.gov/dnr/htdocs/fr/nhp/wanhp.html

(8) *Mitigation*

WSDOT practice is to minimize impacts to wildlife, fish, sensitive plants, and their habitat. Unavoidable impacts may require mitigation, which is planned during project design. During the mitigation design, coordination between offices is necessary. The designer should work closely with the regional environmental office. Mitigation can involve:

- Designing vertical and horizontal road alignment shifts and modifications to avoid sensitive habitats.
- Installing wildlife overpasses.
- Replacing culverts that impede fish passage.
- Including fish baffles in culverts.
- Reducing clearing limits to save significant trees and other native habitats such as grasslands and prairies.
- Installing wildlife reflectors or other measures to reduce vehicle/animal collisions.
- Habitat improvements including native plantings and placing large woody debris in streams.
- Providing wildlife fencing where accident statistics indicate the need.
- Evaluating the placement of concrete barriers to assess impacts to wildlife and provide for public safety. (See **Exhibit 436-6**).

Long-term maintenance needs should be considered when designing sustainable mitigation systems.

(9) *Other Useful Guidance*

(a) *Salmon Recovery Strategy*

Salmon Habitat Protection and Restoration Standards and Guidelines, May 1999 (Draft Five-Year Work Plan – WDFW, Ecology, and WSDOT). This work plan is part of Washington's salmon recovery strategy (Governor's Salmon Recovery Office, 1999). It addresses the need for permit streamlining, improved comprehensive stream corridor management, and policy development in response to the ESA listings of salmonids.

Statewide Strategy to Recover Salmon, September 1999. A long-term guide developed by the Washington State Joint Natural Resource Cabinet to identify the actions needed to recover salmon in Washington State. This and other salmon-related documents can be found at:

http://www.governor.wa.gov/

Click on Salmon Recovery, then look for Reports.

Or by direct link:

http://www.governor.wa.gov/esa/

(b) Concrete Barrier Placement Guidance

The placement of concrete barriers in locations where wildlife frequently cross the highway can influence wildlife mortality and traffic safety. Concrete barriers of varying heights can be difficult for wildlife to cross. When wildlife encounter physical barriers, they often travel parallel to the barrier, remaining on the highway longer and increasing the risk of wildlife/vehicle collisions or vehicle/vehicle collisions as motorists attempt to avoid them.

To address public safety and wildlife concerns, the ESO and Design Offices have developed guidance to determine if concrete barrier placement requires an evaluation of the effect on wildlife by environmental staff. This guidance has been incorporated into WSDOT's Design Manual (see **Exhibit 436-6**). Coordination between the Design Office and the ESO must occur early in the Project development process to allow adequate time for discussion of options.

(c) WSDOT Resources

WSDOT Environmental GIS Workbench – This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available databases include: Water Resource Inventory Areas (WRIAs), critical habitats for marbled murrelet and northern spotted owl, spotted owl special emphasis areas, Evolutionarily Significant Units (ESUs), PHS data, habitat conservation projects, fish passage barriers, outdoor recreation projects, wildlife and recreation projects, the Lower Columbia River Conservation Initiative Boundary, and heritage plants. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

Automated Training System **–** This program provides standard recommended courses for biologists including an ESA and Transportation course. A special ESA class is offered for maintenance employees. Additional courses may be offered in the future including an advanced course on ESA and Transportation.

Roadside Manual – This WSDOT manual (M25-30) includes definitions of federally designated lands (Chapter 410) and discusses roadside vegetation design and management (Chapter 800).

Local Agency Guidelines **–** This manual (M36-63, June 1998) provides local agencies with statewide policies and standards to follow when using FHWA funds for transportation projects. Chapter 24 addresses environmental processes and contains an Environmental Classification Summary checklist (ECS), as well as NEPA guidelines and flowcharts. Recent updates (March 15, 1999) to this chapter are included on the electronic version; they are also included in WSDOT's *An Introduction to Understanding the ESA in Relation to Transportation Projects* (WSDOT, 2001 as amended).

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then LAG.

Or by direct link:

http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM

Roadside Classification Plan 1996 – The partial intent of this document is to provide guidance for the protection and restoration of Washington State's natural environment and heritage resources within the state highway ROW.

(d) WDFW Resources

Fish Passage – *WDFW Fish Passage Design at Road Culverts*, March 1999. A design manual for fish passage at road crossings, online at:

www.wa.gov/wdfw/

Click on Habitat, then Upstream Fish Passage at Dams and Culverts (under Technical Assistance for Habitat Protection), then Fish Passage Design at Road Culverts.

Or by direct link:

http://www.wa.gov/wdfw/hab/engineer/habeng.htm - upstrm

Streambank Protection – *WDFW Integrated Streambank Protection Guidelines*, April 1998. This workbook provides guidance for responses to eroding stream and river banks. It presents an ecological approach to the management of stream banks and associated uplands.

Various Species Status Reports and Management Plans – These documents typically contain guidelines and recommendations for the conservation and management of state listed and/or priority species.

(e) *FHWA Environmental Guidebook*

In addition to its ESA information, FHWA's online *Environmental Guidebook* contains documents on wildlife, habitat, and ecosystems. Topics include biodiversity, ecosystem management, and ecological mitigation. See also Watershed Management and Endangered Species. Available on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Wildlife, Habitat and Ecosystems, Watershed Management or Endangered Species.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

436.06 Permits and Approvals

(1) *Threatened and Endangered Species*

Because critical habitat of federally listed species is protected under the ESA, several permits that pertain primarily to water quality and wetlands also overlap with threatened and endangered species. The water quality permits, described in detail in **Section 431.06,** include Section 401, 402 and 404 permits. The wetland permits are described in **Section 437.06**.

(2) *Joint Aquatic Resource Permit Application (JARPA)*

Agencies Responsible – This joint application is used to apply for COE permits (Section 10 and Individual Section 404), Coast Guard Bridge Permits, Hydraulic Project Approvals (HPAs) (see below), Shoreline Management Permits from local governments, Approvals for Exceedance of Water Quality Standards (only for certain in-water work and aquatic pesticides) from Ecology, Water Quality Certifications (Section 401) from Ecology, and DNR's Aquatic Resources Use Authorization. More information on these permits/approvals is provided under separate permit headings in **Section 431.06** and **Section 437.06**. The complete JARPA form is online at:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then Permits and Applicant Information, then Joint Aquatic Resource Permit Application.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/jarpa.html

Requirements – The JARPA form is accompanied by an instruction sheet that includes definitions of terms used and a checklist to determine the permits that apply. The JARPA form is structured to lead the WSDOT applicant through the permit requirements. JARPA submittals to the appropriate agencies must include readable copies of the completed application form together with project drawings, prepared in accordance with the drawing guidance in Appendix A (on the web site listed above). Detailed engineering plans and specifications are not required. For assistance with questions, permit source agency contact telephone numbers are provided in Appendix B.

Depending on the WSDOT project, other permits not covered by the JARPA application may be required.

Statutory Authority – Please refer to individual permits, certificates, or approvals.

(3) *Application for Streamlined Process for Fish Habitat Enhancement Projects*

This application is in addition to the JARPA form. Online at:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center, then Permit Applications, then JARPA, then Download the Application Form under Fish Enhancement Projects.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/enhan.htm

Agency Responsible – WDFW.

Regulated Activities – Projects designed to enhance fish habitat.

Requirements – Completion of the JARPA requirements and the permit application.

Statutory Authority – Please refer to Section 431.06 and Section 437.06 under JARPA.

(4) *Hydraulics Project Approval (HPA)*

Agency Responsible – WDFW.

Regulated Activities – HPA permits are obtained for projects that will use, cross, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state. Examples of regulated activities include culvert work, stream channel realignment, and bridge replacement. The application form refers to SEPA determinations and other applicable permits.

Requirements – The HPA permit process is included as part of the JARPA requirements (please see JARPA above). Written approval must be obtained from WDFW before commencement of construction or other work.

NOTE: Two general HPAs (GHPAs) are in place and one draft GHPA is in review for specific WSDOT maintenance activities. Please refer to Section 520.

Statutory Authority – RCW 77.55.100; Chapter 220110 WAC; Second Substitute House Bill 2879.

436.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road systems. For ferry projects, WSF must follow strict guidelines in order to work in near-shore environments. These guidelines include avoidance of eelgrass and spawning habitat, restrictions on construction materials, and specific BMPs. Removal of creosote associated with docks, pilings, and piers from the aquatic environment is a high priority for the resource agencies.

Public-use airports must address specific wildlife hazards on or near airports. These issues are addressed in the Federal Aviation Administration (FAA) Publication, *Hazardous Wildlife Attractants on or Near Airports* (No. 150/5200-33, May 1, 1997). Online at:

http://www.faa.gov/

Click on FAA Offices (under How Do I…), then Airports (ARP); then Airport Compliance, then Advisory Circulars, then find 150/5200-33.

Or by direct link:

http://www.faa.gov/arp/ace/625/wildlife.htm

Or:

http://www.faa.gov/arp/pdf/5200-33.pdf

436.08 Exhibits

Exhibit 436-1 **–** Fish and Wildlife Coordination Flowchart - Federal Highway Program.

Exhibit 436-2 – Memorandum of Understanding, between the Departments of Fisheries, Wildlife, and Transportation Concerning Fish Passage Guidelines: Culvert Installations (Appendix A of MOU on Compliance with the Hydraulic Code).

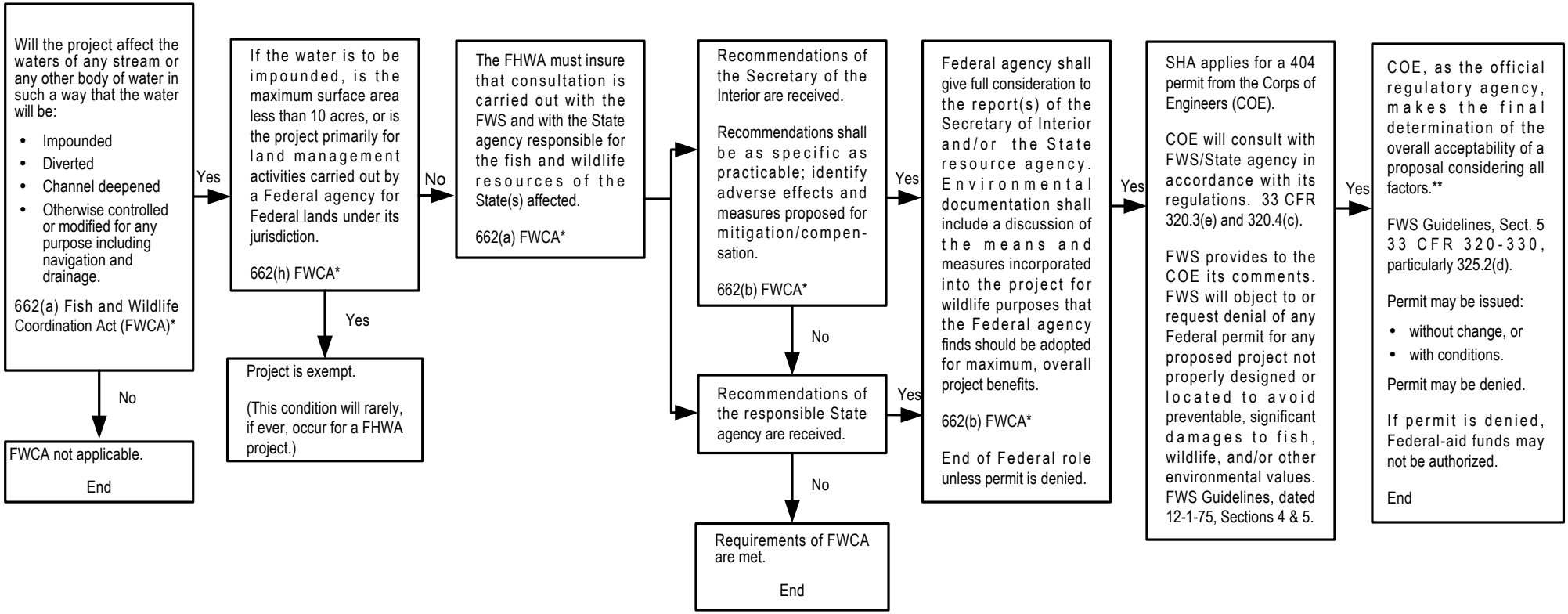
Exhibit 436-3 – No Effects Letter Checklist.

Exhibit 436-4 – Biological Assessment Checklist.

Exhibit 436-5 **–** Guidelines for the Fulfillment of Interagency Cooperation Under Section 7 of the Endangered Species Act.

Exhibit 436-6 – Concrete Barrier Placement Guidance

Fish and Wildlife Coordination Flowchart
Federal Highway Program



Source: USFWS, December 17, 1998.

* Section references to 16 USC 661-667(d). If the proposed project affects water resources that are covered by the FWCA, it should be recognized that a 404 permit will also be required. If the recommendations of the FWS/State agency can be accommodated and a mitigation commitment made in the environmental document, then the re-examination of FWCA issues at the 404 permit statge should be routine unless project or policy change has occurred. If resolution cannot be obtained during the environmental process, then the objection of the FWS/State agency can be expected at permit time.

** The EPA may review the permit and if necessary, veto it in accordance with Section 404(c) of the Clean Water Act.

MEMORANDUM OF UNDERSTANDING

Between The

WASHINGTON STATE DEPARTMENTS OF

FISHERIES, WILDLIFE, AND TRANSPORTATION

Concerning

FISH PASSAGE GUIDELINES: CULVERT INSTALLATIONS

August 29, 1990

(Appendix A of MOU on Compliance
with the Hydraulic Code, August 29, 1990
Revised Draft under Review, January 22, 2001)

Introduction

This report presents guidelines for use by designers and resource managers to assure juvenile and adult salmonid (trout and salmon) fish passage, as required, at culvert installations. Guidelines for special structures such as fishways and streambed controls are not included. In general, these special structures are not considered satisfactory for fish passage at road crossings except in extraordinary circumstances.

Authority

The authority of the Washington Department of Fisheries (WDF) and Washington Department of Wildlife (WDW) in this regard is the Hydraulic Law RCW 75.20.100 which requires that a Hydraulic Project Approval (HPA) be obtained from these agencies for work within the ordinary high water line of streams. In addition, if a culvert is a fish obstruction, RCW 75.20.060 requires that fish passage be provided with a fishway or that the obstruction be removed.

Fish Migration Needs

Maintaining free upstream passage for migrating salmonids at culvert sites is essential. The success or failure of a fish migrating through a culvert depends upon the swimming ability of the fish, the hydraulic conditions at the site, and proper maintenance of the culvert (e.g., debris removal). An interruption or delay by any obstruction in the upstream migration of adult salmonids can adversely affect the spawning success by depleting the fish's limited energy budget before the fish reaches an acceptable spawning area.

This can result in spawning in marginal spawning areas or loss of spawning ability and increasing the possibility of injury, disease, or predation. A complete obstruction will result in a full loss of production from the habitat upstream of that point.

In many areas, necessary juvenile upstream migration occurs as a response to water conditions, predation, and population pressures. Juvenile migration and redistribution is a means for increased survival and full stream production. An obstruction to juvenile fish migration may result in a limit to production both upstream and downstream from the barrier. Design guidelines for areas requiring upstream juvenile migration are very restrictive due to the size and limited swimming ability of those fish.

Excessive water velocity, inadequate water depth, excessive vertical drop at the culvert outfall, and debris blockages are the most frequent causes of fish passage problems at culverts. Consideration of these factors for successful fish passage must include design provisions for the fish having the most restrictive swimming ability rather than just the strongest swimmer. Otherwise, undesirable genetic selection will occur in favor of the strongest fish.

Culvert Design Criteria

Table 1 presents the hydraulic criteria for the design of culverts for the passage of salmon and steelhead. Satisfaction of these criteria is essential to approval of the culvert installation. These criteria are based on numerous literature references, of which the most significant are included in the attached bibliography. These criteria are the limits of athletic ability for the weakest fish of each species; there is no safety factor for fish passage built into a structure designed by these criteria. In a natural stream channel, the average flow characteristic may often exceed these criteria. The diversity of natural channel beds and formations, however, provides paths of access with suitable depths and velocities and only brief exposure to excessive conditions. Relatively smooth culverts, on the other hand, provide no such diversity and the average flow characteristics within the culvert approach the maximum.

Baffles within culverts are not recommended as a means of providing fish passage and are acceptable only if all other options are deemed unfeasible or less desirable by the fisheries agencies. Full bridging structures (bottomless structures with foundation and supports placed beyond the margin of the channel) are preferred to ensure against fish passage problems. In important spawning areas, culverts are not allowed unless assurance can be made, to the satisfaction of the fisheries agencies, for full replacement of habitat disrupted or lost.

It is recognized that fish passage through culverts, as well as through many natural channels, cannot practically be provided at all discharges. Acceptable hydraulic design of culverts includes selection of appropriate design flows from which the flow characteristics can be derived by hydraulic analysis. The low flow depth design should be the two-year, seven-day low flow discharge for the subject basin or 95 percent exceedance flow for migration months of the fish species of concern. When sufficient data is available, the high flow design discharge, to determine velocity, should be the flow that is not exceeded more than 10% of the time during the months of adult migration ($Q_{10\%}$). That flow can be approximated by

$$Q_{10\%} = 0.18 \times (Q_2) + 36$$

for cases where the two-year flood event is greater than 44 cfs. Q_2 is the two-year flood event in cubic feet per second. For cases where Q_2 is less than 44 cfs, the design flow can be approximated as equaling the two-year flood event (Bates, 1988).

Appropriate statistical or hydrological methods must be applied for the determination of these flows. These methods, as well as the methods of calculating the resulting hydraulic characteristics, should be documented within the HPA application. An acceptable alternative to the hydrologic and hydraulic analysis is described in the following section.

These flow event criteria may be modified for specific proposals as necessary for unusual fish passage requirements, or where other mutually agreed upon methods of empirical or hydrologic analysis are used, or where special facilities are deemed adequate by the fisheries agencies.

Culvert Size and Slope

Culvert size (diameter or equivalent) and slope must consider and accommodate juvenile and/or adult fish passage. At any given flow, hydraulic characteristics within a culvert are most sensitive to the variables of size and slope. Acceptable hydraulic characteristics (depth, velocity) and the design flows from which they are derived are presented in Table 1.

The velocity criteria for juvenile salmonids are based on the assumption that, for culverts up to 60 feet in length, roughness within the culvert will provide a passage migration path along flow boundaries, where the velocity will be less than the 4.0 fps average flow velocity required by Table 1. By limiting the design flow velocity to 4.0 fps, bed material can be expected to deposit in the culvert to provide that roughness. Also, juvenile salmonid passage typically occurs when flows are much less than the two-year flood frequency flow design suggested by Table 1.

A hydrologic analysis may not be warranted for very small streams. An acceptable alternative to the hydrologic and hydraulic analyses described above is to install a culvert, on level grade (0% slope), with a diameter (or span) at least as large as the characteristic toe width of the stream channel. The tow width, the horizontal distance between the points where the banks and streambed join, includes the width of gravel bars, if present. Consideration must, of course, also be given to flood capacity and debris and bed load passage. No culvert should be designed to be structurally jeopardized at flows less than a 100-year flood.

Debris racks are not an acceptable alternative to passage of debris through the culvert. Placement of multiple parallel culverts is not desirable due to increased potential of blockage by debris.

Elevation

Culverts must be placed below the natural channel grade (countersunk) by a minimum 20 percent of the culvert diameter or rise. The natural channel grade is defined as the profile connecting the low flow hydraulic controls in the natural channel. Culvert capacity for flood design flow must be determined by using the remaining capacity of the culvert.

The minimum depth criteria presented in Table 1 can be applied to the culvert, assuming no bed material is retained within the structure.

In the case of culverts proposed for channels with gradients that, if applied to the culvert, would cause a water velocity greater than that acceptable for fish passage, the upstream end of the culvert may be further countersunk. Approval of either option must be on a site-specific basis. Generally, an additional countersink of 1.0 foot at the upstream end is acceptable for culverts in channels with gradients up to 3.0 percent. A bridge may be required in more severe cases.

General Design Considerations

To design a culvert solely by the criteria presented here ignores the presence or potential of on-going or eventual changes in dimensions or characteristics of the stream channel. Natural changes related to the continual evolution of the basin and channel are always present. Such changes may be accelerated or reversed by basin land use changes or by influences of structural changes or development within a particular reach of channel. Such changes must be accounted for in the design of any effective hydraulic structure within a natural stream corridor. This is especially important in the case of culverts, since the athletic limitations of fish are more restrictive and often prevail as a limiting design factor over corresponding structural and hydraulic constraints.

Fish passage improvements may be required as a result of channel evolution and changes. Any fish passage improvement should initially be located at the downstream end of the scour pool at the discharge of the culvert. For this reason, in new project planning, an area extending at least 30 feet downstream of the culvert should be included within the right-of-way or under the control of the owner of the road crossing.

A scour pool may develop at the culvert outlet due to poor energy dissipation through the culvert. The scour pool is important to the protection of the downstream channel. In a bedrock or non-erodible channel, a scour pool may not form by itself, in which case one should be constructed. A pool 3 feet deep by 20 feet long is recommended.

Table 1 Fish Passage Design Criteria for Culvert Installation				
Criteria	**Juvenile Salmonid 1/ < 6 in. (150mm)**	**Adult: Trout < 6 in. (150mm)**	**Adult: Pink Chum**	**Adult: Chinook Coho Sockeye Steelhead**
1. Velocity, Maximum (fps) 2/				
Culvert length (ft)				
a. 10 - 60	4.0	4.0	5.0	6.0
b. 60 - 100	(not	4.0	4.0	5.0
c. 100 - 200	allowed 3/)	3.0	3.0	4.0
d. > 200		2.0	2.0	3.0
2. Depth, Minimum (ft) 4/	0.3	0.8	0.8	1.0

1. Juvenile salmonid passage is required in reaches of streams where migration to seasonal rearing habitat occurs. This is a site-specific requirement to be determined by the resource agency's field representatives.
2. High design flow for velocity shall be two-year frequency flood flow unless specifically stated otherwise.
3. For culverts longer than 60 feet, an excessive risk of passage failure exists for juvenile salmonids.
4. Low design flow depth shall be two-year, seven-day low flow unless specifically stated otherwise. Depth considerations do not apply within structures with natural beds.

FISH PASSAGE AT CULVERT INSTALLATIONS
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"No Effect" Letter Checklist

Project Name: _____
Region, City or County:_____
Biologist Name, Affiliation and Phone Number: _____
Contact Name, Agency/Region, Phone Number: _____

General Comments:

_____
_____
_____
_____
_____
_____

Typically, the "no effect" letter (NEL) should be two to three pages in length, depending on the complexity of the proposed action. The purpose of the NEL is to document and support the "no effect" determination(s). The focus of a NEL should be a brief but complete project description, species habitat and occurrence information, analysis of project impacts, and justification for the "no effect" determination. The NEL should end with this language, "*It is our understanding that this satisfies our responsibilities under Section 7 (c) of the Endangered Species Act at this time, and we are sending you this copy of our assessment for your files. We will continue to remain aware of any change in status of these species and will be prepared to re-evaluate potential project impacts if necessary*."

Key:
SUF = Sufficient information contained in the NEL;
INC = Incomplete or insufficient information to justify "no effect" determination;
MIS = Missing information that is key to addressing potential impacts and justifying the "no effect" determination.
N/A = Not Applicable, the project does not require this information to justify the "no effect" determination, or does not apply.

Remember, the level of detail should be commensurate with the effects of the action.

No Effect Letters Should Include The Following Information:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Describe the overall **purpose of the project** and a brief summary of project objectives. Estimate the duration and the dates that the project will occur.
❒	❒	❒	❒	B. Cite species listings provided by NMFS and/or USFWS. Append a copy of the listing to the report. Species listings should be updated every 6 months (listings must not be more than 6 months old) or if there are status changes.
❒	❒	❒	❒	C. Provide a legal description (Section, Township, Range) and vicinity map that clearly shows the project in relation to nearby waterbodies, sensitive habitats, etc.
❒	❒	❒	❒	D. Photographs, especially color copies, are useful to orient the reviewer to the project area. A combination of aerial or orthophotos, and snapshots are ideal.
❒	❒	❒	❒	E. List all proposed project related construction activities and types of equipment. Describe expected noise and disturbance issues. Estimate timing (daylight/nighttime) of project activities. Include all phases or stages of the project. Include any secondary project features such as mitigation, staging areas, detours, waste and stockpile sites, etc.
❒	❒	❒	❒	F. Date of field review(s) of project, personnel involved, and results of visit(s).
❒	❒	❒	❒	G. Describe the project setting in terms of physiographic region, general topography, dominant habitat and vegetation type(s), aquatic resources, land use patterns and existing disturbance levels from human activities, roadways, etc.
❒	❒	❒	❒	H. Describe the potential suitable habitat for the species found on-site or in the project vicinity. Reference WDFW PHS data, State salmonid stock inventories, and consult WDFW/Tribal habitat biologists for species use in the project vicinity.
❒	❒	❒	❒	I. Include a brief discussion of where EFH is found in the project action area, which species or species groups are within the action area it pertains to, and their use of habitat within the action area.

SUF	INC	MIS	N/A	
❒	❒	❒	❒	J. Quantify area of habitat disturbance as it relates to the species being addressed. Examples include: vegetation removal (include species and size [height and dbh]), stream substrate disturbance, proposed earthwork, increase in impervious surface, etc.
❒	❒	❒	❒	K. Discuss why likely impacts to the listed species and their habitat from construction and/or operation of the project will not occur (one paragraph per species).
❒	❒	❒	❒	L. Discuss why likely impacts to the EFH of each species and/or species group for which it is present in the action area from construction and/or operation of the project will not occur.
❒	❒	❒	❒	M. A "no effect" determination must be made for each listed species as well as designated critical habitat (if appropriate). It must provide supporting evidence to justify the "no effect" determination. A "no jeopardy" call and a conditional (upon listing) "no effect" determination should be made for proposed species. A "no impact" call should be made for candidate species and species of concern.
❒	❒	❒	❒	N. A "no effect" determination must be made for the EFH of each species group for which it is present in the action area, unless the impacts vary by species. Then the effect determination would be made at the individual species level.

Note: EFH pertains to both listed and non-listed species.

Comments:

_____
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Biological Assessment Checklist (Version 8)

Project Name: _____
Region, City or County:_____
Biologist Name, Affiliation and Phone Number: _____
Contact Name, Agency/Region, Phone Number: _____

General Comments: _____
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Key: **SUF = Sufficient information** contained in BA; **INC = Incomplete** or insufficient information to justify effect determination; **MIS = Missing** information that is key to addressing potential impacts and justifying determinations of effect. **N/A = Not Applicable**, the project does not require this information to justify the effect determination, or does not apply. ***Remember, the level of detail should be commensurate with the effects of the action.*** *Required information is not shaded, items that are shaded are highly recommended to support the analysis and justify the effect determination.*

Biological Assessments Should Include the Following Information:

Project Description. Describe in detail the type and scope of action proposed. Use plain language and avoid engineering jargon with no explanation, for example, signalization and channelization. To a fish biologist, channelization means straightening and ditching a stream. To a road engineer, it means turn lanes. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Describe the overall **purpose of the project** and a brief summary of project objectives.
❒	❒	❒	❒	B. List all proposed project related **construction activities** and types of equipment. Include sources of loud noise above ambient levels. Include all phases or stages of the project and include details about any structures altered or built by the proposed actions.

SUF	INC	MIS	N/A	
❒	❒	❒	❒	C. **Secondary project features** (i.e. wetland mitigation construction, staging areas, detours, waste and stockpile sites, safety clearing, work trestles and temporary work bridges, and demolition). Include mitigation activities required by regulatory agencies (i.e. WDFW, etc.) that are a part of the proposed actions.
❒	❒	❒	❒	D. Include **simple plan sheets or overview of alignment** showing where work is proposed relative to sensitive areas and/or habitat.
❒	❒	❒	❒	E. Quantify area of **vegetation removal**, include clearing and grubbing, vegetation type, replanting plans. For trees include species and size (height and dbh). Describe both temporary and permanent clearing.
❒	❒	❒	❒	F. Provide a **chronology of when activities will occur**, timing of construction, phasing. Provide hours of operation, specify day or night, time of year (months and year), duration. If details are unavailable, identify a potential work window using the worst case scenario.
❒	❒	❒	❒	G. Describe **proposed grading and filling or other earthwork, include specific BMP's** for erosion, sedimentation, stormwater and spill control. If appropriate, append the TESC Plan, Spill Control Plan, BMP specifications, etc.
❒	❒	❒	❒	H. Explain any expected changes to the **operation of the facility** (i.e., increased traffic, revised use patterns, new maintenance needs, etc.).
❒	❒	❒	❒	I. **Stormwater treatment information**: How much **new impervious surface (NIS)** is the project creating (including sidewalks, parking lots, etc. for which it is determined that stormwater treatment should be included), and how much of the NIS is being treated for stormwater (% or total amount)? What BMPs are proposed to treat NIS for quality & quantity? What is the receiving area/waterbody and overflow channel for each BMP? What is the amount of **existing (pre-project) impervious surface (EIS)** in project area? How much EIS is currently (pre-project) treated for stormwater? What BMPs are being used to treat EIS for quality, quantity and what are the receiving areas/waterbody for each BMP? How much of the untreated EIS is proposed for treatment as part of project? What BMPs are proposed for treatment of the untreated EIS identified above (quality, quantity, receiving area/waterbody)? If the project is not infiltrating all of the runoff from NIS and is unable to treat to a min. of 140% of NIS for quality & quantity, explain why. Is off-site stormwater being treated in WSDOT stormwater facilities under pre-project conditions? If yes, will this treatment continue at the same level under the proposed project?

SUF	INC	MIS	N/A		
❒	❒	❒	❒	J.	Describe **proposed in-water work** (below OHWM) and work over waterbodies, and potential for impacts to riparian vegetation. Include conditions and work windows as described in the WDFW Hydraulic Project Approval and/or negotiated with USFWS and NMFS. State clearly if the project does not include any in-water or over water work. Include a figure showing locations of waterbodies potentially affected by proposed in-water work.

Project Description Comments:

_____

_____

_____

_____

Description of the Project Action Area. The following items should be addressed as appropriate:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. **Define the Action Area** (area of potential impacts, both **indirect** and direct). The action area is usually larger than the project area or project vicinity (i.e., the river upstream & downstream from a bridge project, waterbodies receiving stormwater, detour routes or borrow pits for source material, wetland or other mitigation sites resulting from project impacts). Include *all* areas, including mitigation areas and other areas located outside of the immediate project area, that may be affected by project activities.
❒	❒	❒	❒	B. Provide a **legal description** (Section, Township, Range) and **vicinity map** that clearly shows the project in relation to nearby waterbodies, sensitive habitats, etc.
❒	❒	❒	❒	C. **Photographs**, especially color copies, are useful to orient the reviewer to the project area. A combination of aerial or orthophotos, and snapshots are ideal.
❒	❒	❒	❒	D. Date of **field review**(s) of project, personnel involved, and results of visit(s).
❒	❒	❒	❒	E. Describe the **environmental baseline (current or pre-project) condition** of the habitat and the project area. The baseline description should address all pertinent habitat parameters for the species. Where appropriate, address aquatic baseline conditions using the matrix of pathways and indicators (MPI) for the appropriate species.
❒	❒	❒	❒	F. Describe the **project setting** in terms of physiographic region, general topography, dominant habitat and vegetation type(s), aquatic resources, land use patterns and existing disturbance levels from human activities, roadways, etc.
❒	❒	❒	❒	G. Include information about **past and present activities** in the area that relate to the species or its habitat and/or the proposed action. This could include past consultations and conservation measures, or species management plans.

Description of the Project Action Area Comments:

_____
_____
_____
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_____

Endangered, Threatened and Proposed Species and Designated Habitat Occurrence. The BA should be based on current site-specific information about the species and its life history. Be sure to cite any relevant scientific literature or research findings as referenced. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Cite **species listings** provided by NMFS and/or USFWS. . Species listings should be updated every 6 months (listings must not be more than 6 months old) or if there are status changes.
❒	❒	❒	❒	B. Identify any **listed, proposed species** (and candidate or species of concern if appropriate), and **designated or proposed critical habitat**, that are **known or have the potential to occur** on site or in the project action area. Cite the Federal Register notice of listing status or proposal for listing. Identify fish by ESU or DPS. Discussion included about individual species should focus primarily on site specific information.
❒	❒	❒	❒	C. Describe the **species, its habitat requirements and ecology** in general, and relate that to the local populations. A lengthy life history is not required, but enough information should be provided to adequately explain the potential impacts.
❒	❒	❒	❒	D. Describe the **potential suitable habitat** and **critical habitat** for the species found on site or in the project action area and how local populations use it. Discuss the **local status** of the species as appropriate. Determine the likely level and type of use of the area by each species.
❒	❒	❒	❒	E. If a No Effect determination is made based on **lack of suitable habitat** for a particular species in the action area, this needs to be adequately justified and documented. Discuss the **habitat features or types that are available** as compared to the habitat features that define suitable habitat for each species.
❒	❒	❒	❒	F. If relevant, describe any efforts to determine the status of the species in the project area, including information on **survey methods, timing and results of surveys** for species or suitable habitat identification. *If suitable habitat is present, species presence should be assumed until adequately proven otherwise*.
❒	❒	❒	❒	G. Include any information received from **biologists with special expertise** on the species or location, such as WDFW, Tribal, USFS or other local, regional and university fish, wildlife and habitat biologists and plant ecologists. Include conversations cited as pers. comm. in the References section.

Listed and Proposed Species and Habitat Occurrence Comments:

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Analysis of Effects on Listed and Proposed Species and Designated and Proposed Critical Habitat. Provide a thorough analysis of the proposed project on the species and its habitat within the Action Area. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Describe how the **environmental baseline** (current or pre-project condition of the habitat in the action area) will be degraded, maintained or improved (restored). Append the completed NMFS and/or USFWS Checklist for Documenting Environmental Baseline and Effects of Proposed Action(s) on Relevant Indicators.
❒	❒	❒	❒	B. **Direct Effects:** Describe and analyze the **effects of the action that would directly affect the species, suitable habitat and food resources**. Include actions that would potentially remove or destroy habitat, displace or otherwise influence the species, either positively (beneficial effects) or negatively (adverse effects).
❒	❒	❒	❒	C. Describe potential for **impacts from disturbance** (i.e., noise above ambient levels, sudden loud noises, increased human activity), **from construction and continuing operation.** Construction impacts would be considered direct effects whereas operation noise impacts could be considered indirect effects (occur later in time).
❒	❒	❒	❒	D. **Indirect Effects:** Describe any potential **indirect impacts** (those that occur later in time) such as impacts to future food resources or habitat, and impacts from increased long-term human access or project-induced growth. **The action area must include the extent of these impacts.**
❒	❒	❒	❒	E. **Interrelated and Interdependent Effects:** Describe and analyze any potential effects from interdependent actions (actions that have no independent utility apart from the primary action) and interrelated actions (actions that are part of the primary action and dependent upon that action for their justification) on the species or habitat that **would not occur "if not for" the proposed action**.
❒	❒	❒	❒	F. **Cumulative Effects:** Identify those **cumulative effects** within the action area (defined as future State or private actions) that are reasonably certain to occur. Cumulative effects are not used to make the effect determination, but must be provided to the Services for their analysis. Please note that this definition differs from that used under NEPA as it does not include future Federal actions. **Cumulative effects analyses are required for formal consultations ("likely to adversely affect") only.**

SUF	INC	MIS	N/A	
❒	❒	❒	❒	G. If species specific **recovery, management, and/or watershed plans** have been established, address the project in terms of compliance and recommendations.
❒	❒	❒	❒	H. For **proposed species**, analyze the potential for the project to jeopardize the continued existence of the species.
❒	❒	❒	❒	I. Discuss any **potential take** of listed species. This must be unavoidable and quantified if an incidental take permit is being requested.
❒	❒	❒	❒	J. The BA must contain a **distinct statement of the overall effect of the project on each species**. It must also provide supporting evidence to justify the effect determination (for listed species) or jeopardy call (for proposed species). The determination must be consistent throughout and worded correctly.

Analysis of Effects on Listed Species Comments:

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Analysis of Impacts on Candidate Species, Species of Concern and Other Sensitive Wildlife. Depending upon the scope of the project the BA should address federal candidate and species of concern, as well as state listed species, PHS resources, Tribal resources, and Forest Service Sensitive species or those identified under the Northwest Forest Plan as Survey & Manage or Protect & Buffer. Although the ESA may not apply to these species, if significant impacts could occur, they should be discussed commensurate with the issues. This could also help avoid future listings. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Indicate the potential suitability of habitat in or near the project. Indicate the known or likely potential level of use of the site or project vicinity by the species.
❒	❒	❒	❒	B. These species can be addressed in guilds (species with similar life histories or habitat requirements), for example all bat species, amphibians, or aquatic species can be lumped together.
❒	❒	❒	❒	C. Describe any potential direct or indirect impacts on the species, (i.e., habitat loss, disturbance, etc.).
❒	❒	❒	❒	D. Species other than federally listed species, such as those mentioned above (State listed, Forest Service, Tribal, PHS, etc.) could be mentioned here as appropriate.
❒	❒	❒	❒	E. Impact assessment for these species should indicate whether the project is likely to significantly impact their populations or important habitat components.

Analysis of Impacts on Candidates and Species of Concern Comments:

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Recommended Conservation Measures. Describe components of the project that may benefit or promote the recovery of listed species and are included as an integral part of the proposed project. These conservation (or mitigation) measures serve to minimize or compensate for project effects on the species under review. Recommendations should be discussed with the project engineer to insure that they are feasible for the project. Typically NMFS and USFWS require inclusion of the recommendations in the project as part of the conditions of their concurrence. For the purpose of this document, "conservation measure" and "mitigation measure" can be used interchangeably, except when referring to wetland mitigation. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Provide **specific recommendations**, as appropriate**, to reduce or eliminate the adverse effects of the proposed activity**. Potential measures include: timing restrictions for all or some of the activities; clearing limitations; avoidance of specific areas; special construction techniques; HPA conditions; replanting with native vegetation; potential of habitat enhancement (i.e., fish passage barrier removal); best management practices, etc. If applicable, append a copy of the HPA, specs. for BMPs, or other documentation to support the implementation of the conservation measure.
❒	❒	❒	❒	B. These should be clearly stated so they can be **easily incorporated into contract plans and implemented**.
❒	❒	❒	❒	C. Include a **description of any proposed monitoring** of the species, its habitat and mitigation effectiveness.

Recommended Conservation Measures Comments:

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Conclusions and Effect Determinations. Summarize the proposed project and objectives, and restate the listed species that may occur near the project and the expected level of use. State what conclusions regarding potential impacts to the species discussed can be supported from the information presented in the report. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. A **determination of effect** must be made for each threatened and endangered species as well as any designated critical habitat*. For each, only one of the following determinations of effect is acceptable: • Beneficial Effect (by definition cannot be a No Effect, must also be one of the May Affect calls); • No Effect (absolutely NO effect whatsoever); • May Affect, Not Likely to Adversely Affect (insignificant - never reaches level where take occurs, or discountable - extremely unlikely to occur); or • May Affect, Likely to Adversely Affect (measurable or significant effects) *In addition to the determination of effect made for designated critical habitat, you must also determine whether the action will **destroy or adversely modify** designated critical habitat.
SUF	INC	MIS	N/A	
❒	❒	❒	❒	B. For any **proposed species or proposed critical habitat** discussed, the conclusions should indicate whether the proposed project is likely to **jeopardize** the continued existence of the species (as in the entire species, not individual(s)), or destroy or adversely modify the proposed critical habitat. A **conditional effect determination** is also recommended in the event that the species is listed prior to project completion.
SUF	INC	MIS	N/A	
❒	❒	❒	❒	C. For species discussed that are not afforded protection under ESA (i.e**., candidates, species of concern, state listed species**, etc.), the conclusions should indicate whether the project is likely to significantly impact populations, individuals or suitable (occupied or unoccupied) habitat.

Conclusions and Effect Determinations Comments:

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Essential Fish Habitat (EFH). EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH assessments must include a brief description of what EFH is, where it is located within the action area, a description of the project actions, an analysis of effects, including cumulative effects, of the proposed action on EFH, and an effects determination for the EFH of each species and/or species group for which habitat is present. When integrated with a biological assessment prepared for Section 7 consultation, elements of the project description, impact analysis, and conservation measures that are included in the ESA portion of the BA may be referenced in the EFH portion to avoid redundancy

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Provide a brief description of what EFH is, why it must be addressed, where it is found in the project action area, which species or species groups are within the action area it pertains to, and their use of habitat within the action area (significant prey species should also be considered). For the Pacific Coast salmon fishery, identify species (coho, chinook, and/or pink). Otherwise, identify species group (groundfish and/or coastal pelagics).*

*Note that EFH pertains to both listed and non-listed species. For example, an EFH analysis may still be required when a project does not occur within the ESU of a listed species, but where chinook, pink, or coho salmon or groundfish occur. Additional guidance for integrating ESA and EFH consultations may be found at: http://www.nwr.noaa.gov/1habcon/habweb/msa.htm

SUF	INC	MIS	N/A	
❒	❒	❒	❒	B. Include a brief statement of **potential impacts (including beneficial effects) to EFH**, including a description of individual or cumulative adverse effects of the project on relevant EFH, the managed species or species groups, and associated species such as major prey species, referring as necessary to supporting material in the ESA portion of the BA.

SUF	INC	MIS	N/A	
❒	❒	❒	❒	C. Include a description of **conservation measures** that will minimize or eliminate potential impacts to EFH and/or refer to appropriate conservation measures detailed in the ESA portion of the BA.

SUF	INC	MIS	N/A	
❒	❒	❒	❒	D. A **determination of effect** must be made for the EFH of each species and/or species group for which it is present. If the effect determination will be different for a species of Pacific salmon, the determination is made for each species in the species group (e.g., chinook, coho and/or pink salmon). Otherwise, the determination of effect is made for the species group (e.g., Pacific salmonids, groundfish and/or coastal pelagics). It should state either **"no adverse effect"** or **"adverse effect"** on EFH).

EFH Additional Comments:

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References and Appendices Refer to all appropriate project documents, particularly if the assessment depends upon information located elsewhere (e.g., in an EIS or EA). You should consider providing the Service with copies of pertinent documents along with the BA. Ideally, the BA will be a complete stand-alone document for ESA purposes. The following items should be addressed:

SUF	INC	MIS	N/A	
❒	❒	❒	❒	A. Provide **citations** for other information referred to in the BA, such as current literature and personal contacts used in the assessment. Include name, affiliation, and date.
❒	❒	❒	❒	B. Include as appropriate: any photographs; simple project plans; survey methods, protocols and results; and copies of the listing letters from NMFS and USFWS; Hydraulic Project Approval (WDFW); planting plans; Hydraulic Report; NMFS Baseline Checklist; Stormwater guidance, etc.
❒	❒	❒	❒	C. In the final document, **do NOT include** copies of PHS maps or site specific habitat resource maps, or tabular data **if they contain details on sensitive information such as nest site locations or congregation areas.** Information on some listed species should not be included in a public document. This information can accompany the document to aid the reviewer, but should not be incorporated into the document.

References and Appendices Comments:

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_____
_____
_____
_____

Additional Comments:

_____
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_____
_____
_____

RECOMMENDED GUIDANCE DOCUMENTS (CHECK IF ATTACHED.)

Stormwater

☐ ESA Stormwater Effects Guidance for Projects. Version 6. ("Stormwater Matrix").

☐ Information on Stormwater for a BA. ("Stormwater Questionnaire").

NMFS

☐ Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale. August 1996. (This document details NMFS preferred approach for assessing environmental baseline conditions. It also contains a matrix of key aquatic and riparian habitat parameters for anadromous salmonids and a checklist to be used in conjunction with the matrix to describe the effects of the action on each habitat indicator). ("NMFS Matrix").

☐ A Guide to Biological Assessments, Revised 23 March 1999. ("NMFS BA Guidance").

☐ Guidance for Integrating Magnuson-Stevens Fishery Conservation and Management Act EFH Consultations with Endangered Species Act Section 7 Consultations. (NMFS - January 2001).

USFWS

☐ Biological Assessment Preparation and Review. Updated March 1999. ("Peregrine Document").

☐ A Framework to Assist in Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Bull Trout Subpopulation Watershed Scale. February 1998. ("Bull Trout Matrix").

WSDOT ESO

☐ "No Effect" BA Letter Template

☐ "May Effect" BA Template

☐ ESA Definition Pages

Other:

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Guidelines for the Fulfillment of Interagency Cooperation Under Section 7 of the Endangered Species Act

ENVIRONMENTAL ANALYSIS DIVISION

OFFICE OF ENVIRONMENTAL POLICY

FEDERAL HIGHWAY ADMINISTRATION

January 1988

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I. PURPOSE:

This guidance describes the Section 7 requirements of the Endangered Species Act and its relation to the Federal highway program. On June 3, 1986, the U.S. Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration Fisheries (NOAA Fishers) issued a joint rule (50 CFR, Part 402) establishing the procedural regulations governing interagency cooperation under Section 7 (Appendix 1). This regulation is for the purpose of ensuring that actions are not taken to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of such species. The June 3 regulation supersedes the previous final rule issued on January 4, 1978.

II. BACKGROUND:

A. Legislation

The endangered species program is mandated by the Endangered Species Act of 1973 (P.L. 93-205). The Act is composed of 16 sections (Sections 2 – 17). The following paragraphs summarize the major elements of each of these sections.

Section 2 (Findings, Purposes, and Policy) mandates all Federal departments and agencies to conserve endangered species and to utilize their authorities in furthering the purposes of the Endangered Species Act.

Section 3 (Definitions) provides a number of key definitions, such as critical habitat, endangered species, take, and others.

Section 4 (Determination of Endangered Species and Threatened Species) provides the criteria for determining endangered and threatened species. This section also provides guidance on the procedure for listing species and directs the development of recovery plans (see Appendix 2 for current procedures). As of March 31, 1987, 376 species are protected in the U.S. and territories. Hawaii, California, and Florida are accountable for the highest percentage of protected species. Generally, the marine species protected are under the jurisdiction of NMFS, and the remaining species are under FWS jurisdiction.

Section 5 (Land Acquisition) indicates which funding authorities can be used for acquisition.

Section 6 (Cooperation with the States) provides numerous options for the FWS in their relationship with the States, such as:

1. obtaining information;
2. assisting in the development of a State program for protecting species;
3. providing financial assistance; etc.

Section 7 (Interagency Cooperation) is the key section which requires each Federal agency to ensure that its actions do not jeopardize the continued existence of any threatened or endangered species or adversely modify the habitat of such species.

Section 8 (International Cooperation) encourages foreign countries to develop programs to conserve fish and wildlife, including the protection of threatened and endangered species.

Section 9 (Prohibited Acts) provides direction on importation of protected species, species held in captivity or a controlled environment, import and export rules, and designation of ports-of-entry.

Section 10 (Exceptions) provides exemptions to the law; such as the hardship criteria, rules governing Alaska natives, and the exemption of certain antique articles.

Section 11 (Penalties and Enforcement) provides the criteria for civil and criminal penalties, district court jurisdictions, rewards for information, enforcement of the Act, and provisions for citizen suits.

Section 12 (Endangered Plants) provides a report to Congress on species of plants which are now or may become threatened or endangered (report has been provided to Congress).

Section 13 (Conforming Amendments) amends certain laws to be in conformance with the Endangered Species Act.

Section 14 (Repealer) repeals portions of the Endangered Species Conservation Act of 1969.

Section 15 (Authorization of Appropriations) authorizes monies to implement the Act.

Section 16 (Effective Date) indicates the effective date of the Act to be December 28, 1973.

Section 17 (Marine Mammal Protection Act of 1972) emphasizes that unless otherwise indicated, no provisions are to take precedence over these more restrictive, conflicting provisions of the Marine Mammal Protection Act of 1972.

B. Amendments

The Endangered Species Act has been amended eight times, the latest being 1984. These amendments and their effects on the FHWA programs are listed as follows:

1. P.L. 94-325 of June 30, 1976

   No effect.

2. P.L. 94-359 of July 12, 1976

   No effect.

3. P.L. 95-212 of December 19, 1977

   No effect.

4. P.L. 95-632 of November 10, 1978

   a. establishes an Endangered Species committee;

   b. formalizes the process for issuing a biological opinion;

   c. requires the preparation of a biological assessment, in appropriate instances; and

   d. prohibits a Federal agency from making irreversible or irretrievable commitments of resources after the initial consultation

5. P.L. 96-159 of December 28, 1979

   a. modifies Section 7(a)(2) so that actions are not likely to jeopardize the continued existence of any of the endangered or threatened species to destroy or adversely modify the critical habitat of such species;

   b. requires all Federal agencies to confer with the Secretary of the Interior; and

   c. requires Federal agencies to use the best available scientific and commercial data during formal consultation.

6. P.L. 96-246 of May 23, 1980

   No effect.

7. P.L. 97-304 of October 13, 1982

   a. streamlines the listing process by reducing to 1 year the time period when final action on listing, delisting, and/or critical habitat proposals must be completed; and

   b. implements changes in the exemption process by eliminating review boards and substituting the Secretary of the Interior as the authority responsible for threshold determinations.

8. P.L. 98-327 of June 25, 1984

   No effect.

III. RESPONSIBILITY:

A. Applicability

The Section 7 regulations are applicable to all actions that have discretionary Federal involvement or control. Each Federal agency must confer with the FWS on any action likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. For listed and proposed species

as well as designated and proposed critical habitat, a biological assessment is prepared to determine whether a formal consultation or a conference is necessary.

These procedures are required for major construction activities which are defined as a major Federal action significantly affecting the quality of the human environment, as referred to in the National Environmental Policy Act (NEPA).

For non-major Federal actions, the requirements of these regulations are in effect, however, the preparation of a biological assessment is not required. For each non-major Federal action, a determination of whether the action is likely to jeopardize the continued existence of a listed species or any critical habitat of a listed species should be made and documented. Thus, a letter to the FWS/NMFS requesting a species list or a letter to the FWS/NMFS indicating either "no listed species are in the project area" or presenting a list of species being reviewed initiates the coordination requirement.

B. FHWA Role

The FHWA shall perform the formal consultation procedures, but either the FHWA or the State highway agency (SHA) can perform the informal consultation process.

The Office of Environmental Policy maintains a complete accounting of proposed and listed species, including critical habitat information. This information may be obtained by calling (FTS 366-2068).

C. State Highway Agency Role

50 CFR, Part 402.08, allows a Federal agency to designate a non-Federal representative to conduct informal consultations or to prepare biological assessments. The FHWA has received written authorization from the FWS to allow SHAs to conduct informal consultations and to prepare biological assessments (Appendix 5). Written authority was not received from the NMFS, however, its agency representatives have indicated that the procedure agreed to by the FWS is satisfactory. However, the ultimate responsibility for compliance with Section 7 remains with FHWA.

D. The FWS/NMFS Role

The FWS and the NMFS are charged by Congress with the overall management of the Endangered Species Act and are jointly responsible for 50 CFR, Part 402—Interagency Cooperation. The NMFS is responsible for marine species, and the FWS is responsible for the remaining protected species. For species which spend a part of their life cycle in both fresh water and marine environment, an informal contact with either agency is recommended to obtain jurisdictional information. The appropriate field offices for the FWS and the NMFS are listed in Appendix 7.

IV. PROCESS

A. Overview

There are three basic procedures: (1) informal consultation; (2) early consultation, and (3) formal consultation. Informal and early consultations are designated as optional processes and may be converted to the formal consultation procedure. Formal consultation is required to satisfy the requirements of Section 7 except in the preparation of a biological assessment (Appendix 4) or as a result of an informal consultation, both of which require a written concurrence from the FWS. The written concurrence should indicate that the proposed action is not likely to adversely affect a listed species or critical habitat. A flow diagram is attached (Appendix 6) which charts the formal and informal consultation process. Early consultation is not charted but closely parallels the formal consultation.

B. Informal Consultation

1. The Procedure (Part 402.13)

The informal consultation process includes those steps necessary to determine whether or not formal consultation is required. In the vast majority of highway projects, Section 7 requirements will be met at the conclusion of informal consultation. If the SHA obtains written concurrence from either the FWS or the NMFS, agreeing that the action is not likely to adversely affect listed species or critical habitat, the FHWA is assured that the Section 7 requirements are complete. During this process, the FWS or the NMFS may suggest modifying the proposed action to avoid the likelihood of adverse effects to listed species or to critical habitat. The non-Federal representative (SHA) is encouraged to take the lead in this process if modification of the proposed action is necessary.

2. Relationship to Formal Consultation (Part 402.14(b))

As indicated in the previous section, the informal consultation procedure may complete the process, thus, the formal consultation process is not necessary. However, if the FWS or the NMFS indicates during the informal consultation process that the proposed action may affect a listed species or critical habitat, then formal consultation procedures must be followed unless the proposed project is modified so that "no effect" results. The FWS or the NMFS must then be informed of the change and concur. This completes the process, unless new species or new critical habitat is proposed before project completion. Then the informal consultation process may again be utilized.

3. Relationship to a Conference (Part 402.10)

A conference is a procedural step the Federal agency and the NMFS or the FWS take if a proposed species or proposed critical habitat are involved. The participation of the SHA is encouraged during the conference procedure. If any action is likely to jeopardize the continued existence of any proposed species or adversely modify proposed critical habitat, the FWS or the NMFS will,

subsequent to a conference, make advisory recommendations on ways to minimize or avoid adverse effects. If the species are listed or the critical habitat is designated prior to completing the project, the FHWA must review the action to determine whether formal consultation is required. The criteria used to decide whether to proceed to a formal consultation are:

a. significant new information about the species or critical habitat; or

b. significant changes to the FHWA proposed action.

The conclusions reached at a conference shall be provided to the FHWA by either the FWS or the NMFS. This process may complete the endangered species requirements, unless either criteria listed above develops.

C. Early Consultation

1. The Process (Part 402.11)

These procedures are intended primarily for private-sector applications for a Federal permit or license. The procedure is conducted between the FWS or the NMFS and the Federal agency responsible for issuing the permit or license. However, the prospective applicant should be involved throughout the consultation process. The procedures are essentially the same as the formal consultation but with minor changes in nomenclature.

2. Applicability

This process would not normally be used with Federal-aid procedures. The informal and/or formal consultation process would be most pertinent to the Federal-aid highway process.

D. Formal Consultation

1. The Process (Part 402.14)

The formal consultation procedure follows the informal consultation discussed previously. This procedure begins when a Federal agency or the FWS/NMFS determines that an action is likely to affect listed species or critical habitat. A written request by the Federal agency to the FWS or the NMFS shall include items in Section 402.14(c). If the FWS or the NMFS requests consultation, the Federal agency shall submit the information given in Section 402.14(c) to the FWS or the NMFS, as appropriate. The preparation of the formal consultation information by the Federal agency shall be completed within 90 days with an option to extend an additional 60 days. The FWS or the NMFS shall render the biological opinion within 45 days on its analysis of formal consultation items in Section 402.14(c). The FWS or the NMFS may ask for additional data to make a biological opinion. The biological opinion shall result in either a “no jeopardy” opinion or a “jeopardy” opinion. The process is complete if a “no jeopardy” opinion is issued. If a “jeopardy” opinion is issued, the FHWA can

either drop the project or accept the reasonable and prudent measures necessary to convert the "jeopardy" opinion to a "no jeopardy" opinion.

2. Exceptions – (Part 402.14b)

The endangered species process is completed, prior to entering formal consultation, if:

a. the biological assessment process or results of the informal consultation determines that the proposed action is not likely to adversely affect any listed species or critical habitat (A written notice of concurrence from the FWS or the NMFS must be received.); or

b. a preliminary biological opinion, issued as a result of early consultation, is confirmed by the FWS or the NMFS as the final biological opinion.

3. Responsibility After Issuance of a Biological Opinion

If a "jeopardy" opinion is received by the FHWA, either the FWS or the NMFS, as appropriate, shall be notified, in writing, of our final decision. If the FHWA agrees with the FWS's or the NMFS's recommendations, the process is complete. However, if the FHWA considers the recommendations to be unreasonable, the exemption process is the only option available for advancing the project.

4. Exemption Process

The exemption process is found in 50 CFR, Part 450-453. The procedure for applying for an exemption is listed on sheets 4, 5, and 6 of the flow chart (Appendix 6). The FHWA has not utilized this procedure. There have been only two cases where an exemption was requested (Tellico Dam and Gray Rocks Dam)—neither were exempted.

5. Reinitiation of Formal Consultation

Even though the Section 7 requirements are fulfilled, reinitiation of the formal consultation procedure may be necessary under certain conditions. The reinitiation process may be applied until construction is completed. Either the FHWA or the FWS or the NMFS may reinitiate the formal consultation. The reinitiation of the formal consultation should be considered when:

a. new information changes the effect of the project on listed species or critical habitat not previously considered; or

b. the construction project is modified such that it causes an effect to the listed species or critical habitat that was not considered in the biological opinion, or

c. a new species is listed or a new critical habitat is established that may be affected by the construction project.

V. SPECIAL CONCERNS

A. Candidate Species

For the first time, the term "candidate species" is officially embodied within regulation. The term has caused confusion when it appeared in letters from the FWS and the NMFS by implying legal protection. Paragraph 402.(d) clearly specifies the status of candidate species.

"Candidate species" refers to any species being considered by the FWS or the NMFS for listing as endangered or threatened species but are not yet the subject of a proposed rule. Although candidate species have no legal status and are accorded no protection under the Act, these species are receiving consideration by experts for possible listing in the future.

B. Biological Assessment (Part 402.12)

A biological assessment is the process which determines the potential effect a construction project will have upon listed and proposed species and designated and proposed critical habitat. The assessment may be accomplished by the non-Federal representation, but in all cases, it remains a Federal responsibility under the oversight of the FHWA. The biological assessment procedure is for the purpose of determining whether formal consultation or a conference is necessary or whether the endangered species requirements are fulfilled. The key steps for the biological assessment procedures are included on sheet 2 of the flow chart (Appendix 6).

C. Permit Stage

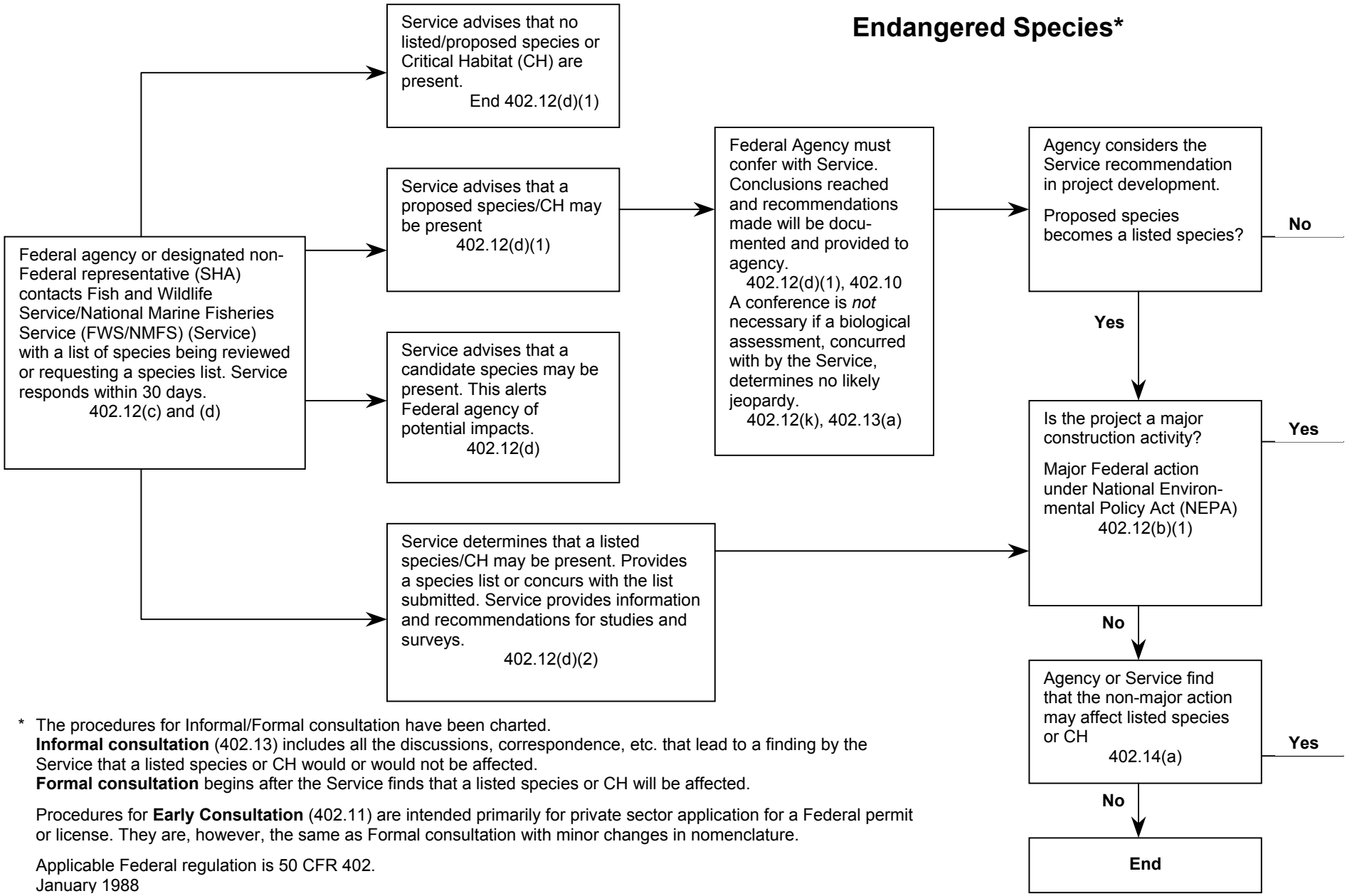
All Federal agencies responsible for issuing permits are also required to meet the mandates of the Endangered Species Act. In most cases, the endangered species process completed by the applicant during the environmental stage will suffice. However, especially if several years have lapsed after completion of the process, the SHA should screen the protected list for new species or correspond with the appropriate office of either the FWS or the NMFS. It is anticipated that in most cases the consultation process, completed during the EIS stage, will suffice.

VI. CONCLUSION

In general, the FHWA has not found the requirements of Section 7 of the Endangered Species Act to be onerous. The two areas of difficult encountered to date involved: (1) lack of sufficient scientific data by the FWS to support its recommendations; and (2) suggested alternatives (mitigation) that are not eligible for FHWA participation.

The guidance discussed in this paper is generally completed during the environmental process. Federal-aid is processed normally, as long as the requirements discussed previously are satisfied. Federal-aid will be delayed until requirements of the Endangered Species Act are met (see the flow chart in Appendix 6).

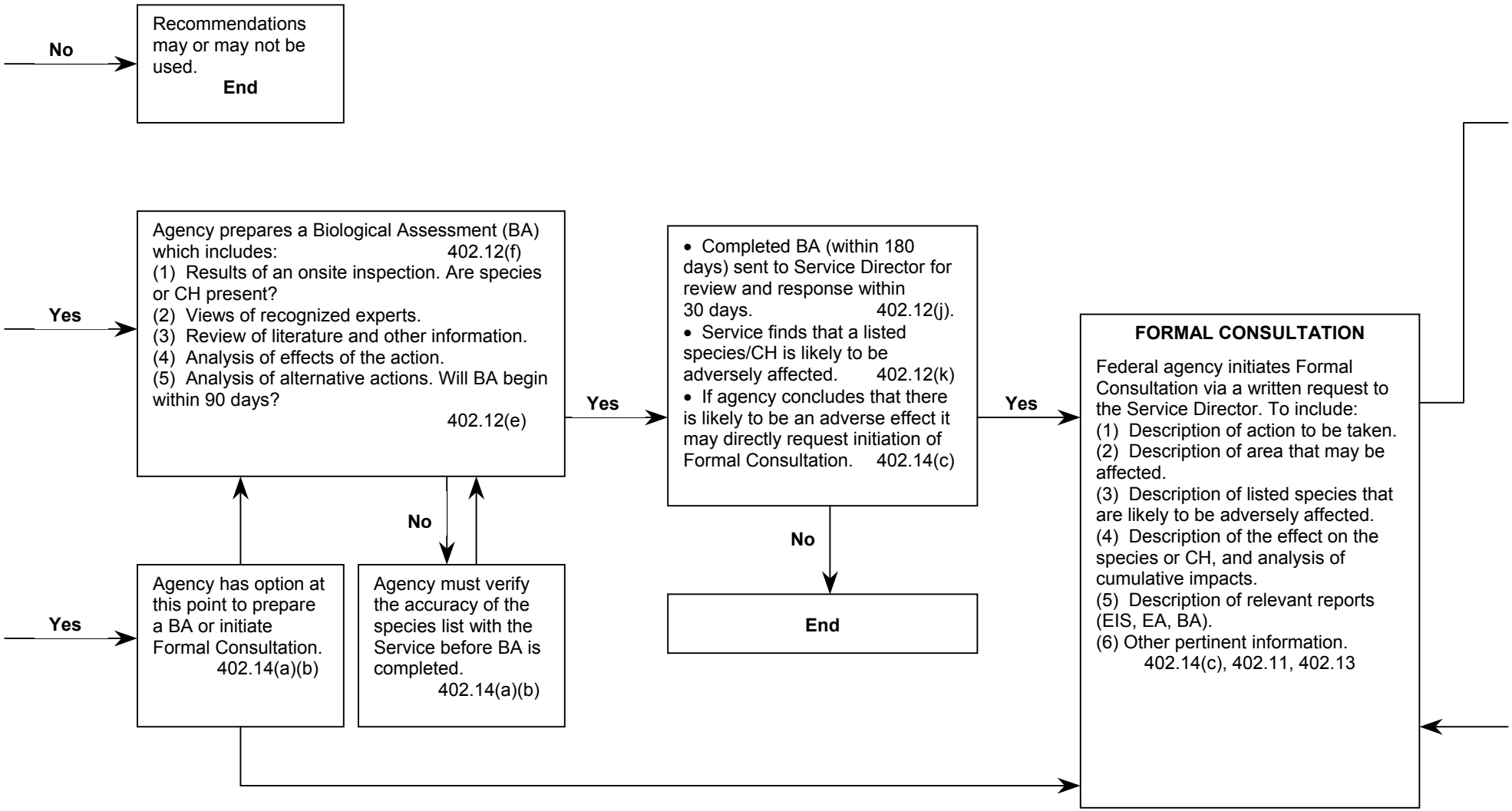
Endangered Species*

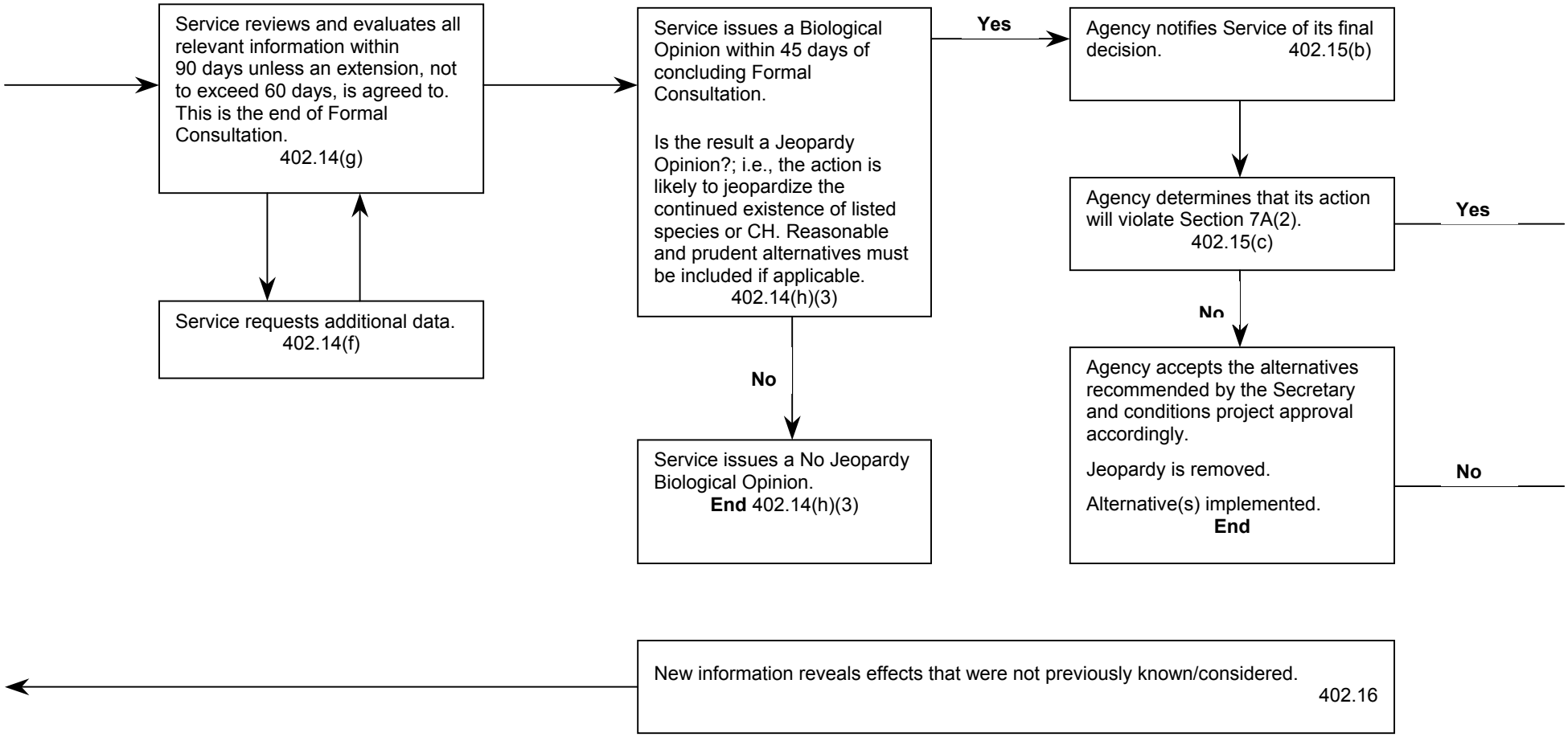


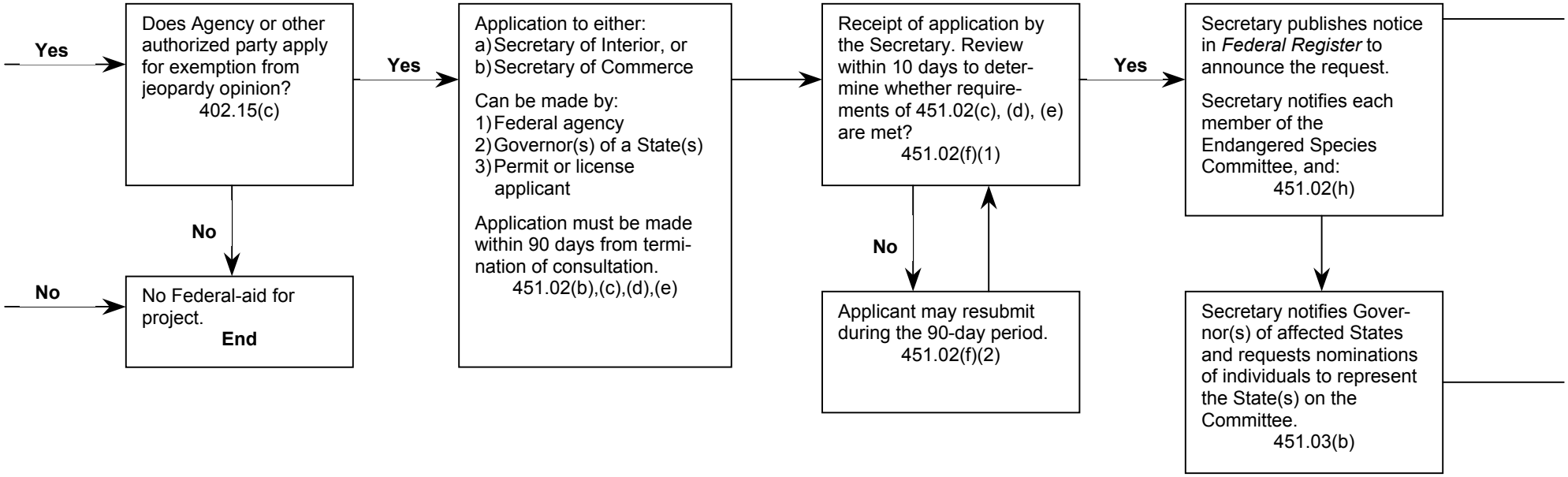
* The procedures for Informal/Formal consultation have been charted.
Informal consultation (402.13) includes all the discussions, correspondence, etc. that lead to a finding by the Service that a listed species or CH would or would not be affected.
Formal consultation begins after the Service finds that a listed species or CH will be affected.

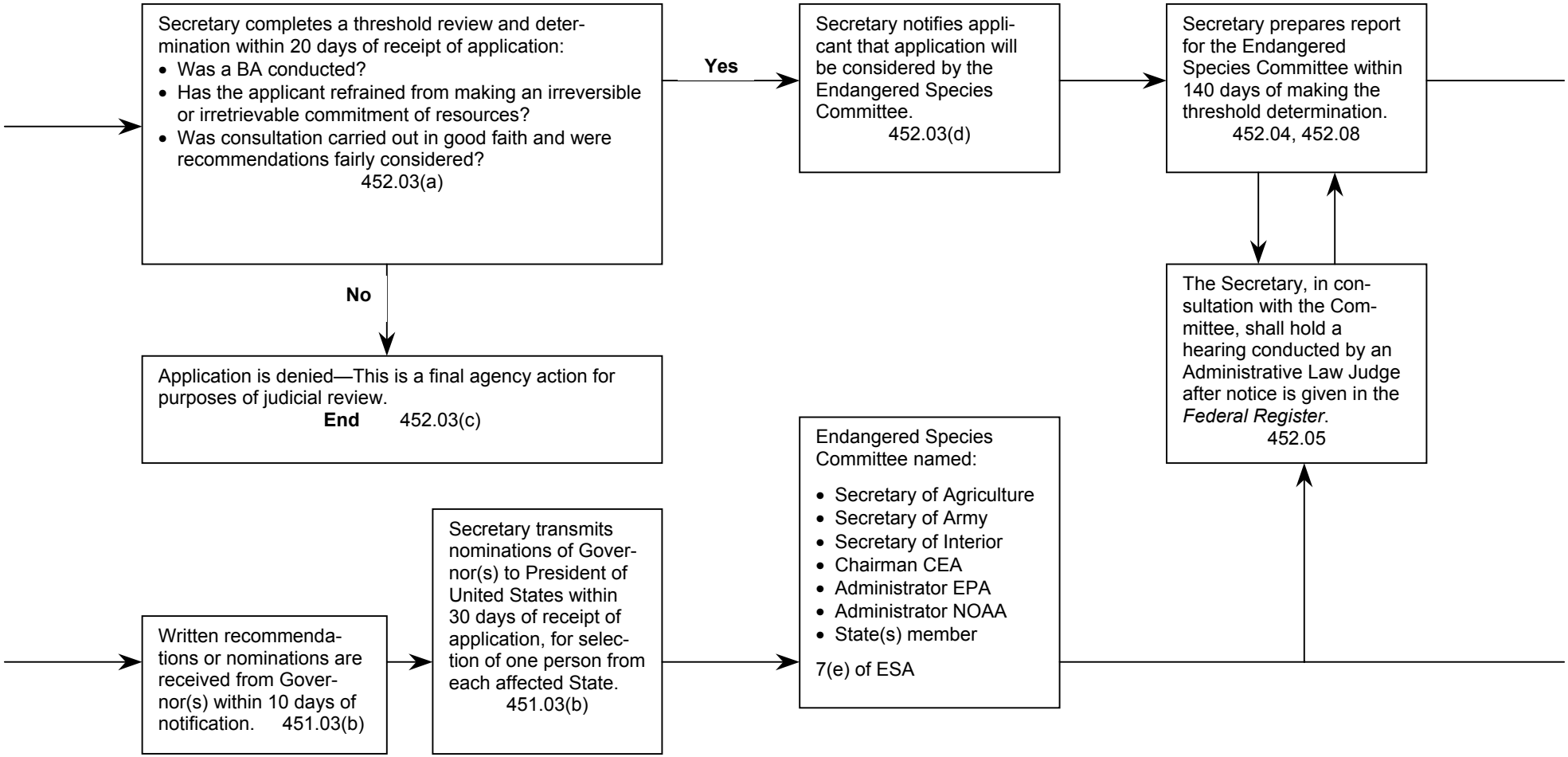
Procedures for **Early Consultation** (402.11) are intended primarily for private sector application for a Federal permit or license. They are, however, the same as Formal consultation with minor changes in nomenclature.

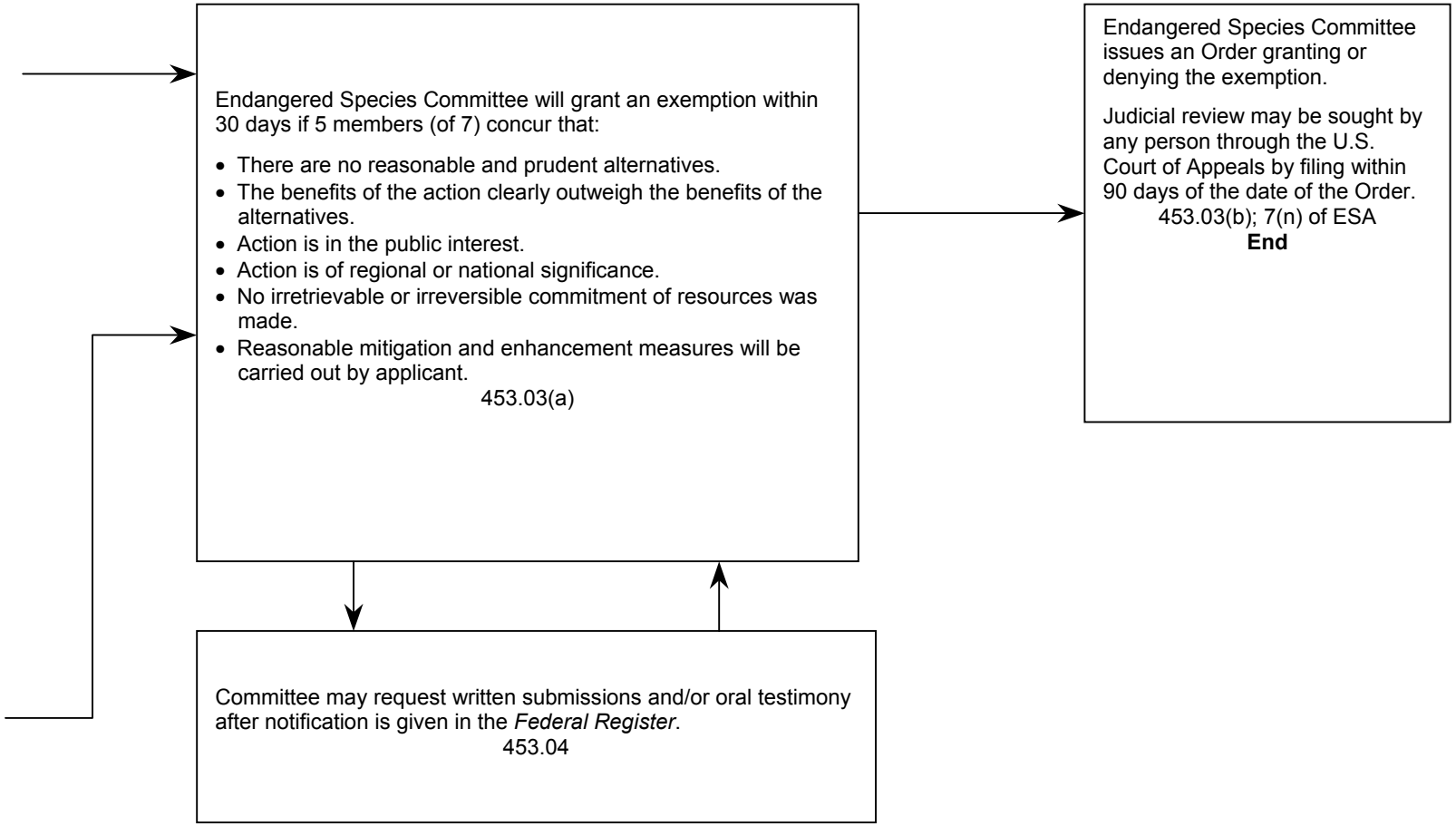
Applicable Federal regulation is 50 CFR 402.
January 1988


No
Recommendations may or may not be used.
End
Yes
Agency prepares a Biological Assessment (BA) which includes: 402.12(f)
(1) Results of an onsite inspection. Are species or CH present?
(2) Views of recognized experts.
(3) Review of literature and other information.
(4) Analysis of effects of the action.
(5) Analysis of alternative actions. Will BA begin within 90 days?
402.12(e)
Yes
• Completed BA (within 180 days) sent to Service Director for review and response within 30 days. 402.12(j).
• Service finds that a listed species/CH is likely to be adversely affected. 402.12(k)
• If agency concludes that there is likely to be an adverse effect it may directly request initiation of Formal Consultation. 402.14(c)
Yes
FORMAL CONSULTATION
Federal agency initiates Formal Consultation via a written request to the Service Director. To include:
(1) Description of action to be taken.
(2) Description of area that may be affected.
(3) Description of listed species that are likely to be adversely affected.
(4) Description of the effect on the species or CH, and analysis of cumulative impacts.
(5) Description of relevant reports (EIS, EA, BA).
(6) Other pertinent information.
402.14(c), 402.11, 402.13
No
End
No
Agency must verify the accuracy of the species list with the Service before BA is completed.
402.14(a)(b)
Yes
Agency has option at this point to prepare a BA or initiate Formal Consultation.
402.14(a)(b)


Service reviews and evaluates all relevant information within 90 days unless an extension, not to exceed 60 days, is agreed to. This is the end of Formal Consultation. 402.14(g)
Service requests additional data. 402.14(f)
Service issues a Biological Opinion within 45 days of concluding Formal Consultation.
Is the result a Jeopardy Opinion?; i.e., the action is likely to jeopardize the continued existence of listed species or CH. Reasonable and prudent alternatives must be included if applicable. 402.14(h)(3)
Yes
No
Service issues a No Jeopardy Biological Opinion. **End** 402.14(h)(3)
Agency notifies Service of its final decision. 402.15(b)
Agency determines that its action will violate Section 7A(2). 402.15(c)
Yes
No
Agency accepts the alternatives recommended by the Secretary and conditions project approval accordingly.
Jeopardy is removed.
Alternative(s) implemented. **End**
No
New information reveals effects that were not previously known/considered. 402.16


Yes
Does Agency or other authorized party apply for exemption from jeopardy opinion?
402.15(c)
Yes
Application to either:
a) Secretary of Interior, or
b) Secretary of Commerce
Can be made by:
1) Federal agency
2) Governor(s) of a State(s)
3) Permit or license applicant
Application must be made within 90 days from termination of consultation.
451.02(b),(c),(d),(e)
Receipt of application by the Secretary. Review within 10 days to determine whether requirements of 451.02(c), (d), (e) are met?
451.02(f)(1)
Yes
Secretary publishes notice in Federal Register to announce the request.
Secretary notifies each member of the Endangered Species Committee, and:
451.02(h)
No
No
No Federal-aid for project.
End
No
Applicant may resubmit during the 90-day period.
451.02(f)(2)
Secretary notifies Governor(s) of affected States and requests nominations of individuals to represent the State(s) on the Committee.
451.03(b)


Secretary completes a threshold review and determination within 20 days of receipt of application:
• Was a BA conducted?
• Has the applicant refrained from making an irreversible or irretrievable commitment of resources?
• Was consultation carried out in good faith and were recommendations fairly considered?
452.03(a)
Yes
Secretary notifies applicant that application will be considered by the Endangered Species Committee.
452.03(d)
Secretary prepares report for the Endangered Species Committee within 140 days of making the threshold determination.
452.04, 452.08
No
Application is denied—This is a final agency action for purposes of judicial review.
End 452.03(c)
The Secretary, in consultation with the Committee, shall hold a hearing conducted by an Administrative Law Judge after notice is given in the Federal Register.
452.05
Endangered Species Committee named:
• Secretary of Agriculture
• Secretary of Army
• Secretary of Interior
• Chairman CEA
• Administrator EPA
• Administrator NOAA
• State(s) member
7(e) of ESA
Written recommendations or nominations are received from Governor(s) within 10 days of notification. 451.03(b)
Secretary transmits nominations of Governor(s) to President of United States within 30 days of receipt of application, for selection of one person from each affected State.
451.03(b)


Endangered Species Committee will grant an exemption within 30 days if 5 members (of 7) concur that:
• There are no reasonable and prudent alternatives.
• The benefits of the action clearly outweigh the benefits of the alternatives.
• Action is in the public interest.
• Action is of regional or national significance.
• No irretrievable or irreversible commitment of resources was made.
• Reasonable mitigation and enhancement measures will be carried out by applicant.
453.03(a)
Endangered Species Committee issues an Order granting or denying the exemption.
Judicial review may be sought by any person through the U.S. Court of Appeals by filing within 90 days of the date of the Order.
453.03(b); 7(n) of ESA
End
Committee may request written submissions and/or oral testimony after notification is given in the Federal Register.
453.04

Guidance on the Placement of Concrete Barriers

ENVIRONMENTAL SERVICES OFFICE

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

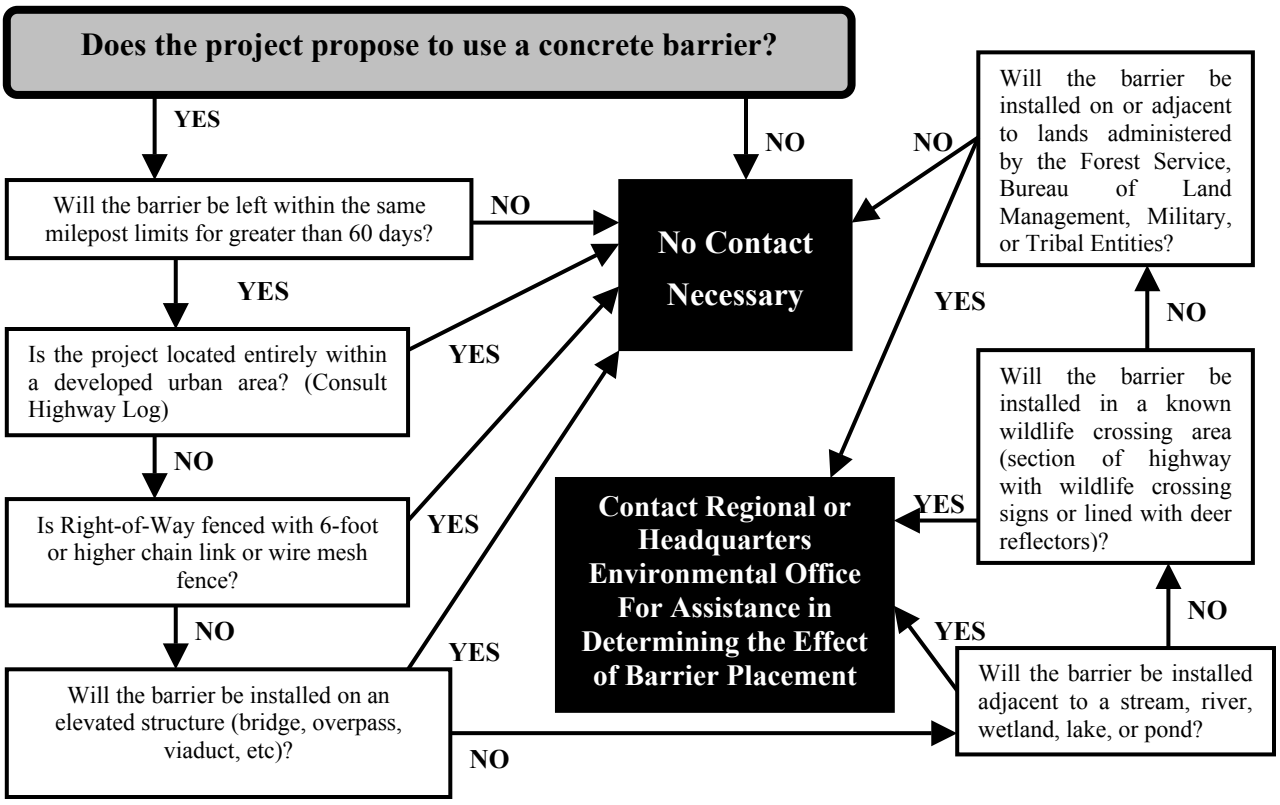
October 2002

PURPOSE

The purpose of this document is to facilitate collaboration between Design and Environmental staff in determining the effect of concrete barrier placement on wildlife and public safety. The placement of concrete barriers in locations where wildlife frequently cross the highway can influence traffic safety and wildlife mortality. When wildlife encounter physical barriers that are difficult for them to cross, they often travel parallel to those barriers. With traffic barriers, this means that they often remain on the highway for a longer period, increasing the risk of wildlife/vehicle collisions or vehicle/vehicle collisions as motorists attempt avoidance. Traffic-related wildlife mortality may play a role in the decline of some species listed under the Endangered Species Act.

To address public safety and wildlife concerns, the following decision matrix (**Figure 1**) will be used by the Design Office to determine if an evaluation by the Environmental Office is necessary regarding the placement of concrete barriers and the possible impacts to wildlife. This collaboration will occur early in the project development phase to ensure adequate time for discussion of options.

Figure 1. Decision Matrix
(used by Design Office to determine the need for consultation with the Environmental Office).



DESIGN PROCESS

When WSDOT projects are designed to use concrete barriers, the potential for impacts to wildlife and the safety of the traveling public may occur. The questions in the decision matrix (**Figure 1**) are designed to establish a set of parameters where the placement of a barrier will most likely affect

wildlife, and initiate contact with the Environmental Office. Each of these decisions and associated justifications are outlined in **Table 1**.

Table 1. Decision Matrix Questions and Justification.

MATRIX DECISION	JUSTIFICATION
Does the project propose to use a concrete barrier?	If the project does not propose the use of a barrier, continuing is not necessary.
Will the barrier be left within the same milepost limits for greater than 60 days?	If the project will temporarily use concrete barriers (<60 days), contact is not necessary due to the low potential for a wildlife encounter during construction activities.
Is the project located entirely within a developed urban area? (Consult Highway Log)	The WSDOT State Highway Log classifies each section of roadway in the State as Rural or Urban. In general, urban areas are not considered high-risk due to the low potential for wildlife occurrences.
Is Right-of-Way fenced with 6-foot or higher chain link or wire mesh fence?	Areas with this type of fencing are likely to preclude use of the roadway by wildlife that could be affected by a barrier.
Will the barrier be installed on an elevated structure (bridge, overpass, viaduct, etc)?	Wildlife crossing would be unlikely on elevated structures.
Will the barrier be installed adjacent to a stream, river, wetland, lake, or pond?	Riparian areas have high likelihood of use by wildlife.
Will the barrier be installed in a known wildlife crossing area (section of highway with wildlife crossing signs or lined with deer reflectors)?	These areas have already been identified as high-use areas by wildlife.
Will the barrier be installed on or adjacent to lands administered by the Forest Service, Bureau of Land Management, Military, or Tribal Entities?	Lands administered by these Agencies are likely to contain habitat conducive to use by wildlife. Also, other laws and regulations may apply which protect species on Federal lands.

ENVIRONMENTAL REVIEW

Regional and/or Headquarters biologists will be contacted by Design offices if a proposed project involves using a concrete barrier for longer than 60 days in the following areas: riparian habitats, including rivers, lakes, streams, ponds, and wetlands; known wildlife crossing areas, or; on or adjacent to lands under the jurisdiction of the Forest Service, Bureau of Land Management, Military, or Tribal Entities. Once contacted, the biologist should assess the project effects of barrier placement on wildlife. Biologists have several tools available to assess the impact of barrier placement.

- **Topographic Maps**
  -Check for natural wildlife crossings
  -Topography may limit wildlife crossing to a particular section of highway
- **Aerial Photos**
  -Establish stand structure and size of contiguous habitat
  -Wildlife will likely cross by using larger stands of existing cover
- **WSDOT Deerkill Database**
  -The Deerkill Database can provide mortality data for each State Highway
  -The database identifies problem crossing areas
- **WDFW Priority Habitats and Species Database**
  -PHS Database can identify wildlife use in an area
  -Known occurrences and wintering or breeding ranges can be determined

After review of the available resources, a site visit may need to be scheduled. If it is determined that placement of concrete barriers may affect wildlife or increase threats to public safety, the next step is to work with the Design Office to avoid or minimize impacts through design changes. There will not be a single solution to minimizing impacts. This is why it is critical to complete this process early in the project development stage, so adequate time is available to discuss options. These options may include, but are not limited to:

- Alter project design to include a break in the barrier at a determined location. The distance to these locations will vary depending on the species that are using the section of roadway and site-specific conditions. For example, amphibians or small mammals might require a gap every 50 feet, while large mammals may use a gap every 300 feet to exit the roadway. The gap in the barrier can be as simple as installing a section of guardrail, similar to those used at drainage inlets, or changing the type of barrier.
- Right-of-way exclusionary fencing would be an option to keep wildlife off the section of highway where barrier placement is necessary and no other alternative exists.
- A change in barrier type may allow wildlife to cross. For example, changing from a 42-inch single-slope barrier to a 32-inch jersey barrier may meet the design needs of the project while allowing wildlife to cross.

The use of this guidance will obviously not eliminate wildlife mortality on our State Highways. However, the collaboration between WSDOT Design and Environmental Staff when using concrete barriers will improve survival of species listed under the Endangered Species Act and ensure that the Agency meets its responsibility for sound stewardship of all species.

437.01 Introduction
437.02 Applicable Statutes and Regulations
437.03 Policy Guidance
437.04 MOUs, MOAs and IAs
437.05 Technical Guidance
437.06 Permits and Approvals
437.07 Non-Road Project Requirements
437.08 Exhibits

Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

437.01 Introduction

Wetlands provide important functions and values, including groundwater recharge, floodflow alteration, water quality improvements, erosion control and shoreline stabilization, and fish and wildlife food and habitat. This section includes information on wetland inventory, assessment, mitigation, and related procedures that should be followed when it is anticipated that a WSDOT project may have an impact on wetlands. It should be noted that wetland issues have the potential to trigger an analysis of aquatic and terrestrial wildlife and habitat in the vicinity of the wetland (see **Section 436**).

The listing of salmonids under the Endangered Species Act (ESA) has spawned the development of new requirements related to wetland protection. Planning processes under the ESA and the Clean Water Act (CWA) are becoming increasingly integrated. The Environmental Protection Agency (USEPA), Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), U. S. Army Corps of Engineers (COE), and state Department of Ecology (Ecology) are working to ensure that Washington's wetland permits and procedures meet the goals and requirements of the ESA. As a result, regulations related to threatened and endangered salmonids are presently in the process of being incorporated into permits related to the CWA. In turn, WSDOT is incorporating ESA-related issues into its water quality procedures and design standards.

Impacts of transportation projects that may adversely affect wetlands include: sediment loads and deposition; toxic runoff; alteration of natural drainage patterns; water level increases or decreases; wetland filling or displacement; wetland draining due to channel straightening, deepening, or widening; and development in the wetland buffer areas that protect and shield the wetland from adverse impacts to water quality and habitat functions. When wetlands are adversely affected by a transportation project, WSDOT provides compensation for the impacts by restoring, enhancing, and/or creating wetlands.

The section focuses mainly on road projects. Policies, procedures, and permit requirements specific to ferries, airports, rail, and non-motorized transport are addressed in **Section 437.07**.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) *Summary of Requirements*

WSDOT policy is to avoid to the fullest extent practicable any activities that would adversely affect wetlands during the design, construction, and maintenance of the state transportation system. WSDOT supports federal and state "no net loss" policies by protecting, restoring, and enhancing natural wetlands that are unavoidably and adversely impacted by transportation-related construction, maintenance, and operations activities. WSDOT is committed to taking appropriate action to minimize impacts and to mitigate impacts that cannot be avoided, as required by federal, state, and local laws. In the event of unavoidable impacts, WSDOT policy is to consider the use of mitigation concepts. These include wetland mitigation banking and advanced mitigation such as wetland preservation where no overall net loss of functions will result. Applicable policies are referenced in **Section 437.03**.

Wetland analysis and impact mitigation are integral parts of the engineering and environmental process. Early review and analysis of project alternatives by regulatory and resource agencies, combined with effective inter-office coordination, are key elements in meeting project schedules and developing a successful wetland management program.

Environmental reports sometimes include information on additional aquatic resources (such as streams) together with wetland issues. In routine wetland practice, the four WSDOT wetland discipline reports (Wetland Inventory Report, Wetland/Biology Report, Conceptual Mitigation Plan, and Wetland or Environmental Mitigation Plan) provide the basis for responding to wetland issues. To facilitate the production of a wetland discipline report, technical documents that pertain directly to a given discipline report are included as reference documents for that particular report. The checklists and reference documents are described in **Section 437.05**.

Information on policy and technical documents, MOUs, Interagency Agreements, permits, certificates, and approvals included in this section provides background useful in preparing the WSDOT wetland discipline reports.

(2) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

401 Certification	Clean Water Act Section 401 Water Quality Certification
ATMS	WSDOT's Automated Training Management System
BPJ	Best Professional Judgement
CAO	Critical Areas Ordinance
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
CZM	Coastal Zone Management
DNR	Washington State Department of Natural Resources
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GMA	Growth Management Act
HGM	Hydrogeomorphic Model
JARPA	Joint Aquatic Resource Permits Application

LA	Landscape Architect
NOAA Fisheries	National Oceanic and Atmospheric Administration Fisheries
NRCS	Natural Resources Conservation Service
NWP	Nationwide Permit
OCD	Office of Community Development
OSC	Olympia Service Center
PE	Project Engineer
PHS	Priority Habitat and Species
PS&E	Plans, Specifications, and Estimates
REC	Regional Environmental Coordinator
SAC	Signatory Agency Committee Agreement
SAO	Sensitive Areas Ordinance
SMA	Shoreline Management Act
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WSPI	Wetland Strategic Plan Implementation

(3) Glossary

Many technical terms are associated with wetlands. A glossary of wetland terminology, including terms used in mitigation banking, is presented in **Exhibit 437-14**.

437.02 Applicable Statutes and Regulations

This section lists the primary federal and state statutes applicable to wetland issues. Permits required pursuant to these statutes are described in **Section 437.06**.

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts on wetlands are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). Wetland issues identified in NEPA/SEPA documents include wetland impacts, acreage totals and functions, and avoidance and minimization measures. Also included is a commitment to mitigate for the impacts, with general or conceptual mitigation ideas and acreage requirements discussed. For details see **Section 410** through **Section 412.**

(2) Federal

(a) Clean Water Act

The Water Pollution Control Act, better known as the Clean Water Act (CWA), 33 USC Section 1251 *et seq*., provides for comprehensive federal regulation of all sources of water pollution. It prohibits the discharge of pollutants from non-permitted sources. The CWA authorizes the USEPA to administer or delegate wetland regulations covered under the act, which in Washington State is mainly to the U.S. Army COE and Ecology. USEPA administers CWA implementation on tribal and federal land. Implementation requirements for CWA Sections 401, and 404 are described in **Section 437.06**. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 33, then Chapter 26.

Or by direct link:

http://www4.law.cornell.edu/uscode/33/ch26.html

(b) Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972, 16 U.S.C. 1451 *et seq*., and its regulations, 15 CFR Parts 923-930, was enacted to encourage advancement of national coastal management objectives and assist states to develop and implement management programs. Washington's Coastal Zone Management (CZM) Program has been approved by the National Oceanic and Atmospheric Administration and is administered by Ecology. Under the program, cities and counties can develop local management plans that must be approved by Ecology. Ecology also provides general program overview and support. Implementation of the act is described in **Section 437.06**. For details, see **Section 452.02**. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, Chapter 33.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch33.html

(c) Endangered Species Act (ESA)

This act is administered by USFWS and NOAA Fisheries. Formal consultation under the act is triggered by a federal nexus including permits, funding or actions on federal land, and by the potential harm, harassment, or take of listed species or impacts to their habitat. Informal consultation under Section 10 of the act requires applicants to comply with the ESA even if a federal nexus does not occur. The ESA has relevance to wetlands section because of listed aquatic species. Please see **Section 436.02** for details. The law is online at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, then Chapter 35.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch35.html

(d) ***Protection of Wetlands, Presidential Executive Order 11990***

Presidential Executive Order 11990 (May 1977) requires federal agencies to minimize the loss or degradation of wetlands and enhance their natural value. WSDOT projects with federal funding are subject to this order. The document is available on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs; then Planning, Environment, and Real Estate Services; then Environment; then Environmental Guidebook; then Wetlands.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

Click on Wetlands

(e) ***Preservation of the Nation's Wetlands, U.S. Department of Transportation Order DOT 5660.1A***

This order (August 24, 1978) describes U.S. Department of Transportation (DOT) policy that transportation facilities and projects should be planned, constructed, and operated to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable. The order established procedures for implementation of the policy. (See **Exhibit 437-1.**)

(3) ***State of Washington***

(a) ***Protection of Wetlands, Governor's Executive Order EO 89-10***

This Governor's Executive Order (December 11, 1989) commits state agencies to the "no net loss" wetland policy, and to the encouragement of sensitive site design and planning on a watershed basis to avoid or minimize damage to wetlands. The order designates Ecology to provide guidance on wetland issues, and instructs each affected state agency to develop an action plan to lessen the loss of wetlands and to preserve or enhance the values of wetlands. (See **Exhibit 437-2.**)

(b) ***Protection of Wetlands, Governor's Executive Order EO 90-04***

This Executive Order (April 21, 1990) is more comprehensive than EO 89-10. Order 90-04 requires all state agencies to rigorously enforce their existing authorities to assure wetlands protection. State agencies are required to promote and support mitigation in the order of decreasing preference from avoidance to compensatory mitigation. (See **Exhibit 437-3.**)

Statutes and regulations identified in the Governor's EO include SEPA, Shoreline Management Act, COE Section 404 permits, Ecology's water quality certifications, Ecology's water quality standards, WDFW's Hydraulics Code authority, the Puget Sound Water Quality Authority's implementation of the Puget Sound Plan, the Department of Agriculture's permit system for application of pesticides, the Forest Practices Board's forest practices rules, and grants and loans by the Office of Community, Development (OCD) and Community Economic Revitalization Board.

Ecology's requirements include developing state-wide policies and standards on a variety of wetland issues, and providing technical and educational assistance to state and local regulators.

(c) *Clean Water Act State Implementation*

Water quality regulations are mandated by the federal Clean Water Act (Water Pollution Control Act) described above. RCW 90.48 is the primary water pollution law for the state of Washington. WAC 173-201A mandates water quality standards for state surface water requirements. Ecology issues a 401 certificate of water quality compliance for each CWA Section 404 permit (see **Section 437.06**). Ecology also has the authority to issue administrative orders for projects not requiring 404 permits. The statute is online at:

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.48, Water Pollution Control; and go to WAC, then Title 173, then Chapter 173-201A, Water Quality Standards for Surface Waters.

Or by direct link for RCW 90.48:

http://search.leg.wa.gov/wslrcw/RCW 90 TITLE/RCW 90 . 48 CHAPTER/RCW 90 . 48 chapter.htm

Or by direct link for WAC 173-201A:

http://search.leg.wa.gov/wslwac/WAC 173 TITLE/WAC 173 -201A CHAPTER/WAC 173 -201A CHAPTER.htm

(d) *Growth Management Act*

In 1990, the Washington State Legislature adopted the Growth Management Act (GMA), codified as RCW 36.70A. This statute, combined with Article 11 of the Washington State Constitution, mandates that local jurisdictions adopt ordinances that classify, designate, and regulate land use in order to protect critical areas. Critical areas include wetlands and their buffers; these areas are regulated locally through critical/sensitive areas ordinances. See **Section 451.02** for more information on the GMA. The statute is online at:

http://slc.leg.wa.gov/

Click on RCW, then Title 36, then Chapter 36.70A, Growth Management.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW 36 TITLE/RCW 36 . 70A CHAPTER/RCW 36 . 70A chapter.htm

(e) *Shoreline Management Act (SMA)*

The goal of Washington's Shoreline Management Act (RCW 90.58) is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines. The act establishes a broad policy of shoreline protection, which includes wetlands.

The SMA uses a combination of policies., comprehensive planning, and zoning to create a special zoning code overlay for shorelines. Under the SMA, each city and county can adopt a shoreline master program that is based on state guidelines but tailored to the specific geographic, economic and environmental needs of the community. Master programs provide policies and regulations addressing shoreline use and protection as well as a permit system for administering the program.

Please refer to **Section 452.02** for more details about the SMA and local Shoreline Master Programs.

http://slc.leg.wa.gov/

Click on RCW, then Title 90, then 90.58, Shoreline Management Act. The state guidelines for Shoreline Master Programs can be found at Chapter 173-26 WAC.

Or by direct link for RCW 90.58:

http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.58CHAPTER/RCW90.58 chapter.htm

Or by direct link for WAC 173-26:

http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173-26CHAPTER/WAC 173-26Chapter.htm

(f) Coastal Zone Management Act Certification (CZM)

Ecology includes a CZM consistency response with the CWA 401 certification for any work in the 15 coastal counties. For more detail, please see **Section 437.06** and **Section 452.06**.

(g) Wetland Mitigation Banking

The 1997 Washington State Legislature passed a law (RCW 90.84) directing Ecology to adopt a rule for the certification of wetland mitigation banks. The statute requires that Ecology use a collaborative process to develop the rule. Ecology's approach to writing the rule is outlined in a rule development plan. The rule will become WAC 173-700, Wetland Mitigation Banks.

Ecology has recruited an advisory team to help prepare rule language. The following web site posts the team's meeting agendas and summaries of all meetings. The web site also includes general information about wetland banking, RCW 90.84, Ecology's rule development program, opportunities for public involvement throughout the process, and links to related sites:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then Wetlands, then look under Wetlands Mitigation to find Mitigation Banking.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/wetmitig/index.html

437.03 Policy Guidance

(1) Federal Policy Guidance

(a) U.S. Army Corps of Engineers Water and Wetland Protection Guidance

The COE regulatory program concerns not only the integrity of traditional navigable waters, but also the quality of waters of the United States, from wetlands to the territorial seas. For concise current information on COE policies regarding wetlands, consult the COE Seattle District web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits. Also click on Environmental Resources Section.

Or by direct links:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page

Or

http://www.nws.usace.army.mil/ers/index.html

(b) U.S. Fish & Wildlife Service Mitigation Policy, Federal Register, Vol. 46, No. 15

This document (January 23, 1981) can be located at the web site below; the preamble to the policy (not located on the web site) is **Exhibit 437-4.** These two documents established policy for USFWS recommendations on mitigating the adverse impacts of land and water developments on fish, wildlife, and their habitats. The policy does not apply to threatened or endangered species or to the enhancement of fish and wildlife resources. The focus is on recommendations related to habitat value losses. USFWS commits to promote and support mitigation in the order of decreasing preference from avoidance to compensatory mitigation.

The USFWS mitigation policy provisions complement NEPA requirements. In fact, the NEPA regulations require that USFWS recommendations be fully integrated into the NEPA process as vital information necessary to comply with NEPA. The policy is online at:

http://www.fws.gov/

Click on Search, type in Mitigation Policy, and select Mitigation Policy, U.S. Fish and Wildlife Service.

Or by direct link:

http://www.fws.gov/r9dhcbfa/hpmpol.htm

(c) U.S. Environmental Protection Agency Region 10 404 Mitigation Policy

This document (September 4, 1985) establishes USEPA Region 10 policy on mitigating for adverse impacts on wetlands permitted under Section 404 of the CWA. USEPA commits to a no net loss wetland policy and to cooperating with other resource agencies in developing site-specific mitigation plans, including mitigation banking. USEPA also commits to promote and support mitigation in the order of decreasing preference from avoidance to compensatory mitigation. (See **Exhibit 437-5.**)

(d) Federal Guidance for Mitigation Banking

This document provides policy guidance for the establishment, use and operation of mitigation banks for the purpose of providing compensatory mitigation for authorized adverse impacts to wetlands and other aquatic resources. This guidance is provided expressly to assist federal personnel, bank sponsors, and others meeting the requirements of Section 404 of the Clean Water Act (CWA), Section 10 of the Rivers and Harbors Act, and other applicable federal statutes and regulations. The

policies and procedures discussed herein are intended only to clarify the applicability of existing requirements to mitigation banking.

The policies and procedures discussed are applicable to the establishment, use and operation of public mitigation banks and privately-sponsored mitigation banks, including third party banks (e.g., entrepreneurial banks). The guidance is available online at USEPA's web site:

http://www.epa.gov/owow/wetlands/

Click on Laws, Regulations, Guidance, and Scientific Documents; then Guidance; then find 1995 Mitigation Banking Guidance (under Mitigation/Mitigation Banking).

Or by direct link:

http://www.epa.gov/owow/wetlands/mitbankn.html

(2) State Policy Guidance

(a) Washington Transportation Commission

The Transportation Commission's Policy Catalog contains a specific policy on wetlands conservation. Policy 6.3.4 acknowledges that population growth, urban runoff, erosion, and current construction practices all contribute to the destruction and degradation of wetlands in the state. The Commission's goal is to "support federal and state 'no net loss' policies by protecting, restoring, and enhancing natural wetlands adversely impacted by transportation-related construction, maintenance, and operations activities." The policy and action strategies are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans,, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(b) Protection of Wetlands Action Plan, Washington State Department of Transportation Directive D31-12

This WSDOT directive (August 1, 1990) is in response to and support of EO 89-10 and EO 90-04, which require that each state agency develop an action plan for the protection of wetlands. (See **Exhibit 437-6.**)

WSDOT policy is to avoid, to the fullest extent practicable, any activities that would adversely affect wetlands in designing, constructing, and maintaining the state transportation system. Where it is not possible to avoid wetlands, WSDOT will take appropriate action to minimize wetland impacts and to adequately mitigate impacts that cannot be avoided.

Appendix 1 of the Directive describes WSDOT's Action Plan for Implementation of Protection of Wetlands. The Action Plan program development includes actions for impact identification, wetland inventory, project prospectus, agency SEPA

policy, wetland mitigation banks, wetland management agreements, wetland research, wetland buffers, and wetland education programs. The plan includes the following components:

- Design – including project design alternative analysis, biology/ wetland analyses and reports, environmental documents, project design documents, wetland mitigation plan, and permit applications.
- Land management – including wetland preservation on WSDOT-owned properties, and wetland preservation maps.
- Construction – including mitigation implementation, disposal sites, drainage facility construction, and pile driving.
- Maintenance – including mitigation implementation, disposal of waste materials, and roadside management planning for the protection of wetlands.

437.04 MOUs, MOAs, and IAs

(1) Alternative Mitigation Policy Interagency Agreement

The purpose of this February 2000 interagency agreement between Ecology and WDFW is to present consensus on mitigation policy among the agencies responsible for aquatic resource mitigation, which includes wetland mitigation. Several agencies participated in the development of this policy, including WSDOT, tribal governments, and OCD. Use of the guidance by local governments will facilitate a consistent approach to aquatic permitting in the same watershed.

The agreement recognizes the need to consider the watershed ecosystem as a whole when evaluating impacts. Policy guidance includes agreement on mitigation requirements, the importance of avoidance measures, minimization of impacts, compensatory mitigation for unavoidable impacts, and other requirements of aquatic resource functions mitigation such as best available science, mitigation plans, and monitoring.

The most detailed part of the policy deals with compensatory mitigation, including policies on preservation and wetland mitigation banking. The agreement is online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then Alternative Mitigation Policy (under Related Wetland Publications).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/AlternativeMitigationPolicy2000.pdf

State of Washington Alternative Mitigation Policy Guidance for Aquatic Permitting Requirements from the Departments of Ecology and Fish and Wildlife. February 10, 2000.

(2) Wetland Protection and Management Implementing Agreement

The purpose of this agreement (**Exhibit 437-7**) between WSDOT and Ecology is to clarify and promote interagency coordination in wetland protection and management. The agreement also institutes a wetland training program to benefit staff from both agencies and establishes a process for conflict resolution.

Coordination between WSDOT and Ecology is strongly encouraged. Permit coordination staff from other agencies are invited to meetings on a case-by-case basis.

Under the agreement, the two agencies determine policies of mitigation, preservation, mitigation banking, and training programs. The following appendices provide guidelines and other information to assist interagency coordination:

Appendix A. List of WSDOT and Ecology Wetlands-Related Staff.

Appendix B. Documents of the Project Development Process.

Appendix C. WSDOT Guidelines for Wetland Reports.

Appendix D. WSDOT Guidelines for Wetland Mitigation Plans.

Appendix E. Guideline for Compensation Mitigation Ratios.

Appendix F. List of Invasive/Exotic Plant Species.

Appendix G. Definitions of Wetland Terms.

Implementing Agreement between the Washington State Department of Transportation and the Washington State Department of Ecology Concerning Wetlands Protection & Management. July 1, 1993.

(3) Signatory Agency Committee (SAC) Agreement

This 1996 Agreement, formerly known as the NEPA/404 Merger Agreement, was revised in September 2002 and re-named the Signatory Agency Agreement to Integrate Aquatic Resource Permit Requirements into the National Environmental Policy Act and State Environmental Policy Act Processes in the State of Washington. This Agreement is summarized in **Section 431.04**. Known as the "SAC Agreement" it applies to all transportation construction projects in the state of Washington that require an individual COE Section 404 or Section 10 Permit and FHWA action on a NEPA EIS. Signatories to this agreement are FHWA, NOAA Fisheries, COE, EPA, USFWS, Ecology, WDFW, and WSDOT. These agencies are committed to integrating the Section 404 and Section 10 permit process and other related aquatic permitting and certification procedures in the NEPA/SEPA processes. A high priority is placed on the avoidance of adverse impacts to waters of the United States and Washington including wetlands, other aquatic resources, and associated sensitive species. The agreement also recognizes the need to consider non-water related impacts and acknowledges that those impacts may affect the decision on the least environmentally damaging practicable alternative.

The following appendices of the Section 404 Merger agreement apply specifically to wetlands:

Appendix D. Alternatives Analysis and Aqua-tic Resource Avoidance Guidance for Transportation Projects.

Appendix E. Compensatory Mitigation.

Appendix F.. Level of Data Needs/Threshold for Involvement.

Appendix L. Monitoring and Evaluation.

Additional process improvement amendments to the SAC Agreement are ongoing. It is suggested project proponents access the web site referenced at the end of this section to ensure access to the most current version of the SAC Agreement. The SAC Agreement is online by direct link at:

http://www.wsdot.wa.gov/environment/eao/regcomp/SAC_committee.htm

Signatory Agency Committee Agreement to Integrate Aquatic Resource Permit Requirements into the National Environmental Policy Act and State Environmental Policy Act Processes in the State of Washington, September 17, 2002.

(4) COE Permit Process Working Agreement

The purpose of this 1993 working agreement (**Exhibit 431-2**) is to clarify and streamline the COE permit process for the Washington Division FHWA and WSDOT, and to facilitate earlier involvement of the COE in WSDOT projects. Permit applications are submitted and permit decisions made early in the WSDOT project development process, and the COE is a more integral part of WSDOT design decisions, thereby saving time and money for all three agencies. It is designed primarily to facilitate the processing of WSDOT/FHWA permit applications involving wetland fills and mitigation.

The agreement also assists in integrating the COE permit process and NEPA processes whenever possible to avoid unnecessary duplication of effort and paperwork for agencies and the public (see JARPA, **Section 437.06**).

The agreement contains guidance on descriptions of the various meetings and field visits that may be utilized early in the permitting process, and detailed procedures for coordination before and during the permit application process. It includes the following appendices:

Appendix A. Lists of permit coordination staff.

Appendix B. WSDOT guidelines for wetland reports.

Appendix C. Drawing checklist and sample drawings for Individual 404 Permit applications, including information on wetland mitigation.

Appendix D. WSDOT guidelines for wetland mitigation plans.

Working Agreement between the Seattle District, Corps of Engineers, the Washington Division, Federal Highway Administration, and the Washington State Department of Transportation. July 26, 1993.

(5) Wetland Mitigation Banking Memorandum of Agreement

The purpose of this Memorandum of Agreement is to establish the principles and procedures that signatories will adhere to when establishing, implementing, and maintaining the WSDOT Wetland Compensation Bank Program. Signatories are the COE, EPA, USFWS, NOAA Fisheries, FHWA, Ecology, WDFW, and WSDOT.

The MOA and its appendices include goals of the MOA and the Wetland Compensation Bank Program; definitions; oversight committee issues; methods for establishing and maintaining wetland bank sites; criteria for the use of wetland banks; use and calculation of banking currency, credits, and debits; requirements for inspections and monitoring of bank sites; methods of maintaining the MOA; and references.

The MOA can be viewed at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Wetland Banking, then WSDOT Memorandum of Agreement.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/bankWSDOTWBMOAFinalMOA(1=4=94).doc

An amendment in October 1998 clarifies and updates the 1994 MOA. Appendix A and the MOA amendment are presented in **Exhibit 437-8**. However, an Ecology rulemaking process on wetland banking is underway and WSDOT is participating in the process. Criteria for bank use are likely to change from those presented in this MOA. After adoption, the Ecology rule will take precedence over the MOA. When the WSDOT wetland mitigation banking policies are developed they will be provided in this manual.

Washington State Department of Transportation Wetland Compensation Bank Program: Memorandum of Agreement. September 15, 1994.

437.05 Technical Guidance

(1) General Guidance

Exhibit 437-9 is a flow chart showing how wetland issues are incorporated into WSDOT's engineering design process. The flow chart shows the typical process and responsibilities for analyzing wetland impacts, evaluating design alternatives, and developing wetland mitigation designs.

(a) Required Reports

Wetland reports are required by regulatory agencies for projects in which wetlands may be adversely affected during project construction. These reports are usually required before permits are issued. A typical report submitted for a permit application includes a wetland assessment, an impact assessment, a mitigation proposal, a monitoring plan to determine the success of mitigation, success standards, and contingency plans in case of failure.

In general, WSDOT uses four sequential discipline report checklists as guides to the technical information required in drafting wetland reports. WSDOT policy is to prepare a Wetland Inventory Discipline Report and/or a Wetland/Biology Discipline Report for each project that will potentially impact wetlands. A Wetland Inventory Report is used for in-house planning; a Wetland/Biology Report is required for permits. The two mitigation discipline reports (Conceptual Mitigation Plan and Wetland Mitigation Plan) are developed when unavoidable adverse impacts are identified. A conceptual mitigation plan is often included in the Wetland/ Biology Report.

Key elements in the flow chart, as well as essential coordination that should take place, are elaborated below in descriptions of the four wetland discipline reports. FHWA and other technical guidance information are also cited.

Wetland discipline report templates are currently available on the WSDOT network server. In the future, the templates will be available online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then look for the report template under Related Information or under Wetland Publications.

WSDOT's online GIS capabilities can be accessed to obtain some of the data necessary to write the wetland reports. Local jurisdictions can be contacted to find out whether additional local wetland mapping is available, on GIS or hard copy. When required, WSDOT's GIS staff can process requests for this information. National Wetlands Inventory coverage can be viewed as GIS data at WSDOT's internal site for GIS users:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(b) *WSDOT Standard Symbols and Conventions*

WSDOT Standard Symbols and Conventions for Wetlands and Stormwater Treatment Areas are listed in the *Plans Preparation Manual* (M 22-31). Current standards are located on WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library, then search for Plans Preparation Manual.

Or download by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/manuals/Plnsprep.pdf

Click on Division 5, Contract Plan Standard Symbols, Conventions, and Details; then to Symbols and Conventions, and find page 5-46, Level 31: Wetlands and Stormwater Treatment Areas.

WSDOT mapping conventions for biological reports and plan sheets are under development.

(c) *WSDOT Wetland Training*

The course titled *Wetlands: Recognition, Regulation, and Resource Value* (Course Code: BKS) is available for WSDOT employees as part of WSDOT's Automated Training Management System (ATMS).

This course is designed to give class participants an understanding of the value of wetlands as a resource; their regulation by local, state, and federal agencies; and methods of wetland identification. Mitigation and wetland policy is discussed, as well as how these environmental issues affect the WSDOT processes for project development.

- Upon completion of the course, participants will be able to:
- Describe the types of wetlands and their significance and values in the environment
- Recognize the steps of the concept of mitigation sequencing and be able to identify mitigation practices
- Determine essential permits and regulations
- Describe the WSDOT wetland policy

(d) *WSDOT Wetland Strategic Plan Implementation (WSPI)*

The Wetland Strategic Plan Implementation (WSPI) project was funded in response to WSDOT's 1997 Wetlands Strategic Plan. The purpose of WSPI was to look at specific ways of improving the wetland mitigation process. Primary issues addressed were wetland preservation, mitigation banking, incentives and coordination, and function assessment. Information on WSPI products and accomplishments is online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Watershed Management,, then Wetlands Strategic Plan.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/WetlandHA.pdf

(e) WSDOT Partnering Guidance Document

Partnering guidance originated through WSDOT's Wetland Strategic Plan Implementation (WSPI) Program. WSDOT supports partnerships for joint environmental mitigation and watershed-focused projects to provide for more efficient use of mitigation funds and to support better environmental management. Combined funding for solving watershed problems and coordination with the needs of people in different organizations are central to WSDOT's partnering practice. Partnering guidance can be viewed online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Watershed Planning, Environmental Policy, Process Streamlining (under Browse this site by type of information); then WSPI (under Related Activities).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/watershed/wspi/WSPI.htm

(f) WSDOT Technical Guidance Web Site

Several useful links and WSDOT information on wetland monitoring and mitigation are provided at the following web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/bio_wetdelmit.htm

(g) WSDOT Funding Sources Database

This database is a compilation of loans, grants, and technical assistance programs for restoration, public infrastructure, and recreation that are available for work in Washington State. Database information is searchable by:

- Eligible entities (such as non-profit, local government, state agency).
- Program focus (such as wetlands).
- Program type (such as grant, loan, and technical assistance).

The database is online at:

http://www.wsdot.wa.gov/eesc/environmental/

Look under Funding.

(2) *Wetland Inventory Discipline Report*

Avoiding wetlands or minimizing impacts to wetlands must be considered in all WSDOT projects. The Wetland Inventory Discipline Report checklist (**Exhibit 437-10**) is used to identify wetland resources early enough that changes to project alternatives can be considered. The Wetland Inventory Report is prepared by a WSDOT wetland biologist or qualified consultant. It is submitted to the WSDOT Regional Environmental Coordinator and a copy is sent to the WSDOT Project Engineer. The report is used as part of the data for initial development of project design alternatives.

As illustrated in the WSDOT flowchart (**Exhibit 437-9**), the Wetland Inventory report is integrated with the initial transportation engineering project planning process and is used to develop transportation project alternatives.

The Wetland Inventory Discipline Report includes:

Introduction – This part requires information on the location and physical condition of the site and its vicinity, field review, and maps.

Affected Environment – A description (which does not have to include a formal wetland delineation) is required for each wetland identified in the introduction. The description should include connection to other aquatic systems, and data from WDFW's Priority Habitat and Species (PHS) and Natural Heritage Program.

Wetland Map – The location of all identified wetlands, streams, and other surface waters must be clearly shown on a map.

Summary – The summary should include enough detail so it can be used with only minor changes in an EIS or in project designs. It should present recommendations for preliminary impact avoidance and minimization.

(3) *Wetland/Biology Discipline Report*

This report is prepared after specific project designs and alternatives have been developed. Although this report includes some of the information from the Wetland Inventory Discipline Report, it provides a more detailed analysis than the previous report, and includes more specific information regarding plant and animal communities. This report accurately describes wetlands and other important resources and impacts to those resources for each alternative under consideration. Preparation of this report requires formal delineation of the wetland boundaries, followed by surveying. It identifies wetlands and other key biological resources, and evaluates the ecological significance of each project's potential impacts. This report serves as the starting point for the development of wetland categorization, wetland mitigation planning, and permit applications. **Exhibit 437-11** is a checklist used to guide preparation of the report.

(a) *Contents*

A standard wetland report template prepared by WSDOT's wetland biology staff will be accessed on the following web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then look under Related Information or Wetland Publications.

(b) *Reference – Wetland Functions Characterization Tool for Linear Projects (WSDOT)*

This tool uses Best Professional Judgement (BPJ) to assess wetland functions in consistently and rapidly. The document consists of a guidance section, references, and appendices containing a glossary, a key to wetland classification, and a set of blank forms.

This wetland assessment tool is not intended to substitute for or replace Ecology's *Methods for Assessing Wetland Functions* tool (listed in **Section 437.05(7)**). The WSDOT tool does not attempt to quantify wetland function, nor does it provide for comprehensive study of an entire wetland system. The Ecology function assessment model requires that quantitative data be gathered from each wetland in its entirety, which is unfeasible for WSDOT linear project evaluations due to right of way and site entry constraints, staff time requirements, and data collection requirements disproportional to the size of the impacts.

The WSDOT tool allows evaluation of hydrological functions such as water quantity and quality, biological functions such as wildlife habitat suitability and fish habitat, and general wetland attributes such as wetland classes and wetland quality. This tool will soon be available on the WSDOT web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then Wetland Functions BPJ Tool (under Related Wetland Publications).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/bpjtool.pdf

(4) Conceptual Mitigation Discipline Report

The Conceptual Mitigation Discipline Report Checklist (**Exhibit 437-12**) is used to produce the Conceptual Wetland Mitigation Plan, which is a rough guide to early mitigation site selection in projects with anticipated wetland impacts. The checklist should help provide enough information for WSDOT and resource agency personnel to agree upon or reject a mitigation proposal before a detailed analysis is done. Depending on the particular project and its potential impacts, the conceptual mitigation report is used either as an internal WSDOT document, or to coordinate with other agencies at an early stage of project development. Several reference documents to assist in preparing the Conceptual Mitigation Discipline Report are cited below.

(a) Contents

As illustrated in the WSDOT flowchart (**Exhibit 437-9**), projects with anticipated wetland impacts require a Conceptual Mitigation report to assist in evaluating location and design alternatives. Based on the Wetland/Biology and the Conceptual Mitigation reports, regulatory and resource agency comments on the preferred alternative and anticipated unavoidable wetland impacts should be obtained in writing at this stage of the project. The WSDOT Regional Environmental Coordinator is responsible for completing this analysis and for obtaining regulatory agency comment. (Permits and approvals that may be required are listed in **Section 437.06**.)

The Conceptual Mitigation Discipline Report includes:

Introduction – Background information on the site is presented, a general mitigation strategy is proposed, and potential problems that need to be resolved are revealed.

Wetland Impacts – This includes a summary table showing wetland characteristics and the acreage impacted.

Proposed Mitigation – This includes required mitigation ratios, site description, and general mitigation strategy such as creation, enhancement, or preservation.

Action Items – Problems and data needs are identified.

Figures – Large-scale vicinity maps, mitigation site maps, and sketches of proposed mitigation plans are included.

(b) References and Guidance on Mitigation Banking

Wetland mitigation banks are an important tool in providing compensatory mitigation for unavoidable impacts to wetlands. Federal, state, and local governments may authorize the establishment and use of public and private wetland mitigation banks. Terminology specific to wetland banking is included in **Exhibit 437-14**, and is also located online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Wetland Banking, then WSDOT Banking Definitions.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/Banking_Defn.doc

WSDOT wetland mitigation banking policies are currently under development. Completed policies will be added to this manual or the WSDOT web site.

Other state policies on wetland mitigation are also under development and current information can be viewed at:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental assistance, then Wetlands, then Wetlands Mitigation.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/wetlan.html

WSDOT participates in the Ecology-led Wetland Mitigation Banking Advisory Team. The advisory team is in the process of developing a rule for the certification, operation, and monitoring of wetland mitigation banks. The rule will include the following elements:

- Giving priority to banks providing for the restoration of degraded or former wetlands.
- Certifying banks involving the creation and enhancement of wetlands only when there are adequate assurances of success and that the bank will result in an overall environmental benefit.
- Possibly certifying preservation-only banks.
- Requiring mitigation sequencing, with avoidance and minimization of impacts, for projects proposing to use wetland bank credits.

(c) *Reference on Wetland Preservation*

Most federal, state, and local agencies allow the use of wetland preservation as a compensatory mitigation measure under specific conditions. The use of preservation as the sole compensation is discouraged; preservation should only be used when all other compensatory measures have been considered and stand-alone preservation is the best alternative. Concurrence from the permitting agencies is necessary.

WSDOT guidance on the use of wetland preservation as a mitigation tool is available in *Mitigation Tools for Special Circumstances: Preservation of High Quality Wetlands* (June 1999). The WSDOT guidance document includes proposed mitigation ratios when preservation is used. Criteria for selecting preservation sites include Ecology's four-tier wetland rating system. This document is available on the WSDOT web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then Preservation as a Mitigation Tool.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/Wetland_Preservation.doc

(d) *WSDOT Partnering Guidance*

Please see **Section 437.05(1)** for a description of WSDOT's partnering guidance, developed in part to coordinate joint mitigation efforts.

(5) *Wetland Mitigation Plan Discipline Report (Draft and Final)*

(a) *Draft Wetland Mitigation Plan*

After the site(s) for wetland mitigation have been identified for each alternative under detailed consideration, the WSDOT landscape architect and wetland biologist, in consultation with the Regional Environmental Coordinator and project engineer, prepare the Draft Wetland Mitigation Plan Discipline Report. The report is prepared after a preferred mitigation site has been selected but before detailed data collection or planning have taken place. Although some variation occurs between regions, the general mitigation report process is outlined in this manual.

The Draft Wetland Mitigation Plan Report is normally submitted with wetland-related permit applications. The WSDOT checklist (**Exhibit 437-13**) is a guide to preparing the draft plan. The Draft Wetland Mitigation Plan Report provides detailed information about the project, design measures taken to avoid or minimize wetland impacts, and the measures proposed to compensate for unavoidable impacts. The draft document includes enough detail for agencies to understand WSDOT's mitigation plans and to make suggestions regarding permits. This prevents investing too much in the design of a mitigation plan that may not meet regulatory or legal needs.

As illustrated in the WSDOT flowchart (**Exhibit 437-9**), the Draft Wetland Mitigation Plan is reviewed by regional or Olympia Service Center design, landscape architect, horticultural, maintenance, and real estate service/right of way offices before detailed discussion occurs with regulatory and resource agency

personnel. A maintenance estimate should accompany the draft document. WSDOT Region Environmental Manager is responsible for coordinating the appropriate review within the region.

A Wetland Mitigation Plan Discipline Report includes:

- ***Introduction*** – Overview of the Mitigation Plan.
- ***Document Sections*** – Project description, detail of design decisions made to avoid or minimize wetland impacts, and a detailed description of the affected wetlands and their functions.
- ***Proposed Compensatory Mitigation*** – Mitigation ratios required and actual acreage created, enhanced, or preserved.
- ***Description of Mitigation Site*** – Detailed site description and the rationale for choosing the site.
- ***Mitigation Strategy*** – Description of the mitigation strategy; must include objectives and standards of success.
- ***Construction and Planting Schedules*** – Monitoring plan, contingency plans, and maintenance provisions.
- ***References*** – Wetland rating systems, maps, and types of wetland classification used in the mitigation plan. (Many of these references also appear in the Wetland/Biology Report, which is attached as an appendix.)
- ***Figures*** – Vicinity and site maps, a grading plan, and a planting plan. Grading and planting plans may be in rough form in the draft report.
- ***Appendices*** – Plant scientific names, wetland data sheets such as wetland delineation forms, and the Wetland/Biology Report.

After WSDOT review and comment, regulatory and resource agency staff review the project proposal and the Draft Mitigation Plan. Copies of the Draft Mitigation Plan should be supplied to all agencies and parties concerned. For projects requiring an EIS, information from the Draft Mitigation Plan is incorporated into the DEIS for agency and public review. Regulatory agencies should provide written conditional approval of the Draft Mitigation Plan before work proceeds any further. Coordination and effective communication at this stage speed up the permit review process. An on-site review of the project and discussion of proposed wetland mitigation is also advisable in most cases.

At the same time that the Draft Mitigation Plan is supplied to regulatory and resource agencies, the Regional Environmental Coordinator initiates permit applications. While complete information on impacts and mitigation is not available until after review of environmental documents, initial information supplied at this time will assist in starting the permit process. The July 30, 1993, Working Agreement with the COE (**Exhibit 431-2**) and the July 1, 1993, Implementing Agreement with Ecology (**Exhibit 437-7**) promote and support this "phased" approach to permit processing. Permits required by local jurisdictions should also be applied for at this stage. Permits and approvals that may be required are listed in **Section 437.06**.

(b) *Reference on Success Standards*

The WSDOT publication *Developing Success Standards for Wetland Mitigation Projects: A Guideline* (August 1999) provides assistance in the developing objectives and standards of success for wetland mitigation projects. Guidelines include elements of a well-defined project, overview of mitigation planning projects, selecting performance objectives, writing success standards, monitoring methods, and contingency measures. The publication can be viewed online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Biology, then Wetlands, then Wetland Mitigation Success Standards (under Related Wetland Publications).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/success.html.doc

(c) *Description and Reference on Mitigation Monitoring*

When activities such as excavation, grading, or hydrology modification occur, a wetland response is difficult to predict because wetlands are dynamic systems where plant communities can evolve rapidly as conditions change. Consequently, wetland creation, restoration, and enhancement projects are challenging to monitor.

Static monitoring plans do not adequately address the possibility of dynamic change in the plant communities they are intended to measure. As a result, the WSDOT Monitoring Program uses the principles of adaptive management to guide monitoring activities.

Adaptive management can be regarded as a process with two key components. One component is that monitoring is appropriate only if opportunities for change in management activities exist. The second component is that monitoring is driven by objectives. The performance objective describes the desired condition, and management activities are planned to meet the performance objective for that site. Monitoring activities are designed to determine if the objective has been achieved. Valid monitoring data is critical to making meaningful management decisions that help meet the objectives for the site.

Monitoring plans and strategies for measuring success standards are based on site conditions and plant community development. These factors are considered with performance objectives and success standards to develop site-specific monitoring plans at the beginning of each field season. Appropriate monitoring activities are used to make sure valid data is used to guide site management decisions.

Members of WSDOT's Wetland Monitoring Program are revising current monitoring protocols. A draft of the protocols is scheduled to undergo peer review during the summer and fall of 2001. The goal is to have a final version of the monitoring protocols available by early 2002. When available, the full text of the protocols will be found online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Wetland Monitoring

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/wetmon/wetmon.htm

(d) *Final Wetland Mitigation Plan*

The Final Wetland Mitigation Plan is the document of record for compliance with the permit conditions. Work on the Final Wetland Mitigation Plan should not begin until the appropriate review agencies have provided written conditional approval of the Draft Mitigation Plan. This approval is contingent on the following conditions:

- The Final Wetland Mitigation Plan will not be substantially different from the Draft Plan
- The Final Wetland Mitigation Plan will adequately demonstrate the likely success of the mitigation project.

The Final Wetland Mitigation Plan is completed only for the selected preferred alternative. In addition to including all elements of the Draft Mitigation Plan, the Final Plan must include a general grading plan and a revegetation plan. The WSDOT checklist (**Exhibit 437-13**) is a guide to preparing the final plan.

The following features must be included in both the draft and final plans:

- A contour map of the mitigation project. Provide sufficient information so water depths, open water areas, boundary areas, and other features can be visualized. Seasonal ground water and the sources of hydrology for the site should be evident.
- A list of native plants to be used and general planting plan to illustrate the planting concept for the site. Reviewers need to know what species will be planted, in what proportions, and their general locations.
- Construction sequence and schedule.
- Steps to be used to minimize damage to surrounding buffers or wetlands during site construction.
- Methods for controlling invasive species.
- A description and map of the plant communities that make up the wetland buffer.

Within a month of construction and planting, as-built plans should be sent to the lead agency, including an as-built topographic survey, plant species and quantities used, photographs of the site, and notes about any changes to the original approved plan. Also list the contractor's responsibility concerning plant replacement, fertilization and irrigation, protection from wildlife, and contingency plan requirements.

The maintenance plan submitted with the Final Wetland Mitigation Plan must describe planned maintenance activities, including erosion control and protection of plant materials from herbivores, repair of damage from vandalism, and other activities that may be required over time to maintain site viability.

Contingency plans should be developed in the event of failure or partial failure of mitigation measures. A contingency plan must outline the steps that will be taken if performance standards are not met.

After completing the Final Wetland Mitigation Plan, regional environmental staff supply the regulatory agencies with any remaining information required to complete permit applications. If coordination and involvement have taken place in the appropriate manner prior to this stage, permits should be granted with a minimum of delay.

As illustrated in WSDOT flowchart (**Exhibit 437-9**), a constructability review occurs when the design plan is about 30 percent complete. The constructability review serves to provide the opportunity for consensus among stakeholders.

After permits are received from regulatory agencies, the Mitigation Plan is finalized. The design plan is put in PS&E format after in-house review. Responsibility for this task rests jointly with the project engineer, regional environmental manager, and the regional landscape architect or landscape designer.

(6) Other WSDOT Technical Guidance

- *WSDOT Design Manual* (M 22-01), Section 240 (September 1990). Section 240 of the design manual lists a variety of environmental permits and approvals from government agencies, permit requirements, when to initiate the permits, and the applicable laws or rules. The wetland-applicable permits and approvals listed in the *Design Manual* are described in this chapter.
- *WSDOT Roadside Manual* (M 25-30) (May 1999). This describes procedures for coordination between all WSDOT partners responsible for roadside activities, including wetland protection.

(7) Ecology Technical Guidance

The following Ecology publications are useful sources of information for a range of wetland issues:

- Washington State Wetlands Rating System for Western Washington, #93-74.
- Washington State Wetlands Rating System for Eastern Washington, #91-58.
- Wetland Regulations Guidebook, #88-5. Revised 1994.
- Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals, #94-29.
- Washington State Wetlands Identification and Delineation Manual, #96-93.
- Wetlands Mitigation Replacement Ratios: Defining Equivalency, #92-8.
- Restoring Wetlands in Washington: A Guidebook for Wetland Restoration, Planning and Implementation, #93-17.
- Restoring Wetlands at a River Basin Scale: A Guide for Washington's Puget Sound. Operational Draft, #97-99.
- Methods for Assessing Wetland Functions Volume 1, Riverine and Depressional Wetlands in the Lowlands of Western Washington, Part 1, Assessment Methods, #99-115.
- Methods for Assessing Wetland Functions Volume 1, Riverine and Depressional Wetlands in the Lowlands of Western Washington, Part 2, Procedures for Collecting Data, #99-116.

Many of these and other wetland-related publications are available electronically at the web site below. The web site also gives information on how to order copies of the publications.

http://www.ecy.wa.gov/

Click on Publications, then Publications Index, then Shorelands and Environmental Assistance.

Or by direct link:

http://www.ecy.wa.gov/biblio/sea.html

(8) FHWA Technical Guidance

(a) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents. Wetland issues that should be addressed in the EIS include wetland identification and assessment, impacts to wetlands, evaluation of project alternatives, and identification of practicable measures to minimize adverse impacts.

If the preferred alternative is located in wetlands, the final EIS needs to contain a separate subsection entitled "Only Practicable Alternative Finding." The subsection should include a reference to Executive Order 11990 (referenced in **Section 437.03**), an explanation for why there are no practicable alternatives, an explanation for why the proposed action includes all practicable measures to minimize harm to wetlands, and a concluding statement that: "Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use."

The four WSDOT wetland discipline reports are structured to provide the information necessary to meet the requirements of FHWA's technical advisory. For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FWHA Directives and Policy Memorandums, then FHWA Technical Advisories, the T6640.8A.

Or by direct link:

www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(b) FHWA Environmental Guidebook

FHWA's online Environmental Guidebook includes information on several federal wetland issues, including Section 404 permit requirements and agreements. Refer to FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook. Select Wetlands or Section 404 Permits.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

(c) *FHWA Wetlands*

The FHWA web site below includes information on the wetland analysis/design and permitting phase of project development; documents, brochures, and other products; a gallery of wetland pictures; and links to several other wetland web sites.

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Natural Environment, then Wetlands.

Or by direct link:

http://www.fhwa.dot.gov/environment/wetland/index.htm

(d) *FHWA Natural & Cultural Resources Wetlands*

The FHWA web site below includes abstracts for documents produced by or for the FHWA regarding wetlands. Many of the documents can be downloaded.

http://www.fhwa.dot.gov/environment/wetland/wet_abs.htm

(9) *USEPA Guidance*

The USEPA Office of Water provides information on wetland laws, regulations, and guidance at:

http://www.epa.gov/

Click on Programs, then Offices, then Office of Water. Under Wetlands, Oceans and Watersheds, select Wetlands, then click on Laws, Regulations, Guidance, and Scientific Documents.

Or by direct link:

http://www.epa.gov/owow/wetlands/laws/

437.06 Permits and Approvals

(1) *Introduction*

WSDOT makes every practical effort to comply with federal, state, and local regulations pertaining to wetland displacement and mitigation wherever transportation-related construction, maintenance, and operating activities impact wetland resource quality or quantity.

Protection of wetlands is generally the responsibility of one or more federal, state, or local agencies. Because agencies and wetland laws do not necessarily have uniform permit requirements, it is probable that the wetlands process for a typical WSDOT project will need to meet the requirements of more than one agency and/or local government.

The permits or approvals listed in this section give general guidelines for wetland permits. The permit source should be contacted for details about each permit. It should be noted that the USEPA has jurisdiction over all federal and tribal land.

(a) *Regulatory Agencies*

Regulatory agencies responsible for permitting and/or plan approval must be involved throughout the process in order to expedite approvals. Depending on regulatory authority, the following agencies may be involved in the wetland mitigation process:

- Local jurisdictions (city or county)
- Tribal Governments
- Federal Highway Administration
- National Oceanic and Atmospheric Administration Fisheries
- National Park Service
- Northwest Indian Fisheries Commission
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Forest Service
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources

(b) Permit Assistance

Ecology's on-line Permit Assistance Center provides questionnaires and other helpful information on environmental permits, including wetland-related topics such as work in or near wetlands. Available at:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/index.html

A good source for COE permits is available at the Seattle COE home page:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page

For information on COE research reports and projects potentially related to WSDOT's activities see:

http://www.nws.usace.army.mil/index.cfm

Click on Environmental Resources Section.

Or by direct link:

http://www.nws.usace.army.mil/ers/index.html

(c) Permit Extensions

On request, permit extensions or renewals may be granted by the issuing authorities. Permit extension forms may be required, depending on the agency. The extension process may include the issuance of a public notice. Requests for

permit extensions are usually submitted at least one month before permit expiration. The agency should be contacted for details of permit extension requirements.

(2) *Joint Aquatic Resource Permits Application (JARPA)*

Agencies Responsible – This joint application is used to apply for wetland COE permits (Section 10 and Section 404), Shoreline Management Permits from local governments, Approvals for Exceedance of Water Quality Standards (only for certain in-water work and aquatic pesticides) from Ecology, and Water Quality Certifications (Section 401) from Ecology. A project may also require a Coast Guard Bridge Permit, a DNR Aquatic Resources Use Authorization, and/or a WDFW Hydraulic Project Approval (HPA). These permits/approvals are also submitted by a JARPA form. More information on these permits/ approvals is provided under each separate permit headings in **Section 431.06**.

Requirements – The JARPA form, which can be obtained at the web site below, is accompanied by an instruction sheet that includes definitions of terms used and a checklist to determine which permits apply. The JARPA form is structured to lead the WSDOT applicant through the permit requirements.

JARPA submittals to the appropriate agencies must include readable copies of the completed application form, together with project drawings prepared in accordance with the drawing guidance in Appendix A. On the web site listed below). Proper project location maps, and cross-section and plan views showing crucial project elements, are essential for a successful JARPA application. Detailed engineering plans and specifications are not required; however the following project issues often require detailed description:

- Extent of excavation in wetlands
- Extent of fill (both volume and footprint)
- Methods of disturbance
- Mitigation plans

For assistance with questions, permit agency contact telephone numbers are provided in Appendix B.

Depending on the WSDOT project, other permits not covered by the JARPA application may be required.

Statutory Authority – Please refer to individual permits, certificates, or approvals.

The JARPA form, instructions and appendices are accessible at:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center, then Permit Applications, then Joint Aquatic Resource Permit Application.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/jarpa.html

Or from the COE Seattle District regulatory web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then Permits and Applicant Information, then Joint Aquatic Resource Permit Application.

(3) *Corps of Engineers (COE) Section 404 Permits*

Agency Responsible – COE Seattle District Regulatory Branch, and Portland District for port projects and bridge work over the Columbia River. The Coast Guard incorporates authorization for Section 404 impacts into Section 9/ Bridge Permits for bridges over navigable waters.

Regulated Activities and Requirements – A Clean Water Act Section 404 permit is required for discharging, dredging, or placing fill material within waters of the United States, including wetlands. The permit is submitted as part of the JARPA application form (see JARPA description above). The purpose of the permit is to prevent water quality degradation and to prevent the overall loss of wetlands. Activities regulated under the 404 program include water resource projects (such as dams and berms), and infrastructure development (such as highways and airports).

Any activity planned for the navigable waters or wetlands of Puget Sound, coastal areas, the Columbia River (except lower Columbia River port authorities), and Eastern Washington waters is processed by the Seattle office. Activities or projects undertaken by lower Columbia River ports (west of the Bonneville Dam) are processed through the Portland office.

In certain projects involving wetlands on agricultural land, the COE decides whether the Natural Resources Conservation Service (NRCS) has jurisdiction over wetland regulations. For more information on permits for projects on agricultural land, please see **Section 454.06.**

Certain activities and work can be authorized up-front by general 404 Nationwide permits (NWP), which are issued on a national, regional, or state basis for particular categories of activities (for example, minor road crossings and utility line backfill). General/Nationwide permits are usually granted for projects that have only minimal adverse effects on the waters of the state. Individual permits are usually required for activities that potentially have significant impacts. Both Individual and Nationwide permits require compliance with the ESA.

At a pre-application conference, held at a COE office or by telephone, WSDOT and the COE decide whether or not an Individual or Nationwide permit is required for a proposed project. A pre-application conference should be held for all controversial projects.

Information on COE permits can be viewed online at:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page

The web site above also provides information on dredged material characterization under Dredge Material Management.

(a) *COE Individual 404 Permits*

The program is administered jointly by USEPA and COE. In addition, USFWS, NOAA Fisheries, and state agencies have important review roles. Permits are submitted to the COE. Prior to issuance of a 404 permit, 401 Certification, and CZMA consistency if the project is in a coastal county, are required.

JARPA forms are used for the submittal of Individual 404 permits to the COE (see JARPA description above). Plans must be submitted on 8.5 by 11-inch paper because they are used for public notice.

Individual permits are required for Section 404 dredge disposal and filling project activities not covered by a NWP. An Individual Permit is processed through the public interest review procedures, including public notice and receipt of comments. Citizens may request COE to conduct a public hearing. The COE Statement of Finding document describes how the permit decision was made.

Please see **Section 431.04 (3)** for a general summary on the August 1996 "Section 404 Merger" agreement for 404 and NEPA/SEPA integration.

Statutory Authority – Section 404 of the Clean Water Act; 33 CFR 330.5 and 330.6.

(b) COE Nationwide Permits

Nationwide Permits (NWPs) may exempt WSDOT from applying for Individual 404 Permits when WSDOT conducts certain listed activities.

The following NWPs most commonly apply to WSDOT wetland projects:

14 – Road Crossing

18 – Minor Discharges

23 – Approved Categorical Exclusions

27 – Wetland Restoration Activities

33 – Temporary Construction and Access

Please see also **Section 431.06** for information on COE Nationwide permits.

Statutory Authority – Section 404 of the Clean Water Act; 33 CFR 330.5 and 330.6; and Section 10 of the Rivers and Harbors Act (33 USC 403).

Permit applicants can view the latest permit requirements and regional conditions on the Seattle COE web site:

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then 2002 Nationwide Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=NWP_2002

(4) Coastal Zone Management Certification (CZM)

Agency Responsible – Ecology Headquarters, Shorelands and Environmental Assistance Program.

Regulated Activities and Requirements – When applying for federal permits or funding, such as Coast Guard or COE Section 401 and 404 permits, WSDOT is required to certify that the activity will comply with the state's Coastal Zone Management Program (Shoreline Management Act of 1971, RCW 90.58). CZM is only triggered if a project is in one of the 15 coastal counties.

For a proposal to be consistent with Washington's CZM Program, it must meet the requirements of SEPA, State Shoreline Management Act, Federal Clean Water Act, and the Federal Clean Air Act. Ecology reviews proposed projects for consistency with the above laws and generally includes its CZM Consistency Response with its 401 Certification.

Any NWP used in a coastal county requires notice to Ecology with a statement that the project is consistent with the enforceable policies of the CZMA, and an explanation of how public notice has been given.

The CZM form (called Certification of Consistency with Washington's Coastal Zone Management Program for Federally Licensed or Permitted Activities**)** is a checklist to go along with the necessary information for federal consistency (see **Exhibit 452-1**). The CZM consistency form can be obtained from the COE. WSDOT prepares and submits the CZM certification when submitting a JARPA form by providing a project description, a brief assessment of the impacts, and a statement that the project complies with the CZM program. Ecology concurs with the CZM certification in writing. The JARPA application is described in **Section 437.06(2).**

Statutory Authority – Section 6217 of the U.S. Coastal Zone Management Act (CZMA) 16 USC 1451 *et seq*., and its regulations 15 CFR. Parts 923-930, RCW 90.58.

(5) Water Quality Certification (CWA Section 401)

Agency Responsible – Ecology Headquarters, Shorelands and Environmental Assistance Program, Federal Permits Unit. USEPA's Aquatic Resources Unit issues certifications on tribal and federal land.

Regulated Activities – Federal and state permits, such as COE Section 404 permits, that involve discharge into waters of the U.S. (including wetlands) are sent to Ecology for a certification of compliance with state water quality standards and other aquatic protection laws. The federal or state agency can request the 401 Certification on behalf of WSDOT following receipt of relevant permit applications, such as a JARPA form. The JARPA application is described above in **Section 437.06 (2).** Ecology also has the authority to issue administrative orders for projects not requiring 404 permits.

WSDOT notifies Ecology's Environmental Review Section of COE Individual 404 permits and Nationwide Permits (NWPs). WSDOT should notify Ecology early on when applying for a 404 Individual or Nationwide Permit so the Ecology 401 Certification review and 20-day public notice can start prior to issuance of a COE final permit decision.

Statutory Authority – CWA Section 401, WAC 173-225.

Please see COE Seattle District web site below to find current Section 401 conditions for new and revised NWPs.

http://www.nws.usace.army.mil/index.cfm

Click on Regulatory/Permits, then 2002 Nationwide Permits.

Or by direct link:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=NWP_2002

(6) *Shoreline Substantial Development Permit*

Agency Responsible – Local counties or cities. The Shoreline Management Act is implemented by local government, but Ecology ensures compliance and provides assistance. A new rule (WAC 173-26) that changes SMA requirements has been adopted (see web site listed below).

Regulated Activities and Requirements – A permit is required for projects that involve substantial development of waters or shorelines of the state. Substantial development includes any development that materially interferes with normal public use of the water or shorelines of the state. Areas within shoreline jurisdiction include lakes and reservoirs 20 acres or greater, streams with a mean annual flow of 20 cubic feet per second or greater, marine waters together with an area landward for 200 feet from the ordinary high water mark (OHWM), and all associated marshes, bogs, swamps, and deltas.

Application requirements are contained within the JARPA process. The JARPA application is described above. See **Section 452.06** for more details on the permit.

Statutory Authority – RCW 90.58; WAC 173-14 through 173-28.

SMA guidelines provide details on how local governments can achieve the level of protection required by the SMA. Current SMA requirements and guidelines can be viewed online at:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then look under Shoreline Management.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/shorelan.html

(7) *Water Quality Modification – Use of Herbicides for Noxious Weeds*

Agency Responsible – Ecology, Environmental Coordination Section.

Regulated Activities – This authorization is necessary for the application of herbicides to waters of the state to control noxious weeds at WSDOT-owned or managed sites including construction sites, wetland mitigation sites, and rights of way.

Requirements – Only herbicides approved in the authorization can be used. Approved methods of application must be followed and made by a licensed applicator. Special restrictions are required for publicly accessible areas. When making applications in, or adjacent to, fish-bearing streams, contact with WDFW is required. This authorization is negotiated annually, so the conditions are subject to change.

Water Quality Permit # DE99WQ-002. Use of Herbicides to Control Noxious Weeds on WSDOT Properties and Projects within the State of Washington. (See **Exhibit 431-10**.)

Statutory Authority – RCW 90.48.445, and WAC 173-201A-110.

(8) *Water Quality Modification – Use of Herbicides for Non-Noxious Weeds*

Agency Responsible – Ecology, Environmental Coordination Section, Federal Permit Manager for WSDOT.

Regulated Activities – This authorization is necessary for the application of herbicides to waters of the state to control non-noxious weeds at WSDOT-owned or managed sites including construction sites, wetland mitigation sites, and right of ways.

Requirements – Only herbicides approved in the administrative order can be used. Approved methods of application must be followed and made by a licensed applicator.

Special restrictions are required for publicly accessible areas. When making applications in, or adjacent to, fish-bearing streams, contact with WDFW is required. This authorization is negotiated annually, so the conditions are subject to change.

Administrative Order # DE99WQ-003. WSDOT Use of Herbicides to Control Non-noxious Weeds on WSDOT Properties and Projects within the State of Washington. (See **Exhibit 431-11**.)

Statutory Authority – RCW 90.48, and WAC 173-201A-110.

(9) Critical/Sensitive Areas Ordinances (CAO/SAO)

Agency Responsible – Local county or city.

Regulated Activities – These laws protect locally designated wetlands and other critical areas. Unless the local laws conflict with state law, WSDOT must be consistent with the requirements of local regulations. Local planning departments should be contacted to determine the local provisions that affect a particular sensitive area such as a wetland. In some cases, local regulations may include sensitive areas not covered by federal and state regulations, and the regulations may be more restrictive than federal or state regulations.

Statutory Authority – GMA (RCW 36.70A), and SMA (RCW 90.58); city and county codes; local land use permits or ordinances.

437.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, or permits that apply to road systems.

Rail – Because WSDOT does not own railroad tracks or rail right-of-way, regulatory requirements for rail projects are coordinated with Burlington Northern & Santa Fe Railway company.

Airports – Public-use airports must address wildlife issues, including wetlands that are hazardous on or near airports. These issues are addressed in the Federal Aviation Administration (FAA) Advisory Circular *Hazardous Wildlife Attractants on or Near Airports* (No: 150/5200-33), May 1, 1997.

This advisory circular provides guidance on land use practices, including wetlands, that have the potential to attract hazardous wildlife to the vicinity of airports.

- Section 1 describes types of hazardous wildlife attractants on or near airports, land use practices that attract wildlife, and siting criteria for airport projects.
- Section 2 provides information on land uses that are incompatible with safe airport operations. Wetlands are singled out because wetlands are attractive to many species of wildlife.
- Section 3 lists land uses that may be compatible with safe airport operations. Agricultural land is given special attention. Wetland areas may be associated with land uses such as landscaping, golf courses, and agricultural crops.
- Section 4 provides guidance on notifying the FAA about hazardous wildlife attractants, including wetlands.

The circular is online at FAA's web site:

http://www.faa.gov/

Click on FAA Offices (under How Do I…), then Airports (ARP); then Airport Compliance, then Advisory Circulars, then find 150/5200-33.

Or by direct link:

http://www.faa.gov/arp/ace/625/wildlife.htm

Or:

http://www.faa.gov/arp/pdf/5200-33.pdf

437.08 Exhibits

(1) Statutes and Regulations

Exhibit 437-1 – Preservation of the Nation's Wetlands, DOT Order 5660.1A.

Exhibit 437-2 – Protection of Wetlands, Governor's Executive Order 89-10.

Exhibit 437-3 – Protection of Wetlands, Governor's Executive Order 90-04.

(2) Policy Guidance

Exhibit 437-4 – U.S. Fish and Wildlife Service Mitigation Policy – Background and Commentary

Exhibit 437-5 – USEPA Region 10 404 Mitigation Policy.

Exhibit 437-6 – Protection of Wetlands Action Plan, WSDOT Directive 31-12.

(3) MOUs, MOAs, and IAs

Exhibit 437-7 – Implementing Agreement between the Washington State Department of Transportation and the Washington State Department of Ecology Concerning Wetlands Protection and Management. July 1, 1993.

Exhibit 437-8 – Washington State Department of Transportation Wetland Compensation Bank Program: Memorandum of Agreement. September 15, 1994. Appendix A and October 1998 Amendment.

(4) Wetland Process Flowchart and Wetland Discipline Reports

Exhibit 437-9 – Integrating WSDOT Transportation Engineering and Wetland Mitigation Design.

Exhibit 437-10 – Wetland Inventory Discipline Report Checklist.

Exhibit 437-11 – Wetland/Biology Discipline Report Checklist.

Exhibit 437-12 – Conceptual Mitigation Plan Checklist.

Exhibit 437-13 – Wetland Mitigation Plan Discipline Report Checklist (Draft and Final).

(5) Glossary

Exhibit 437-14 – Wetland Glossary.

Preservation of the Nation's Wetlands
DOT Order 5660.1A

Department of Transportation
Office of the Secretary
Washington, D.C.

DOT 5660.1A

8-24-78

SUBJECT: PRESERVATION OF THE NATION'S WETLANDS

1. PURPOSE. This order sets forth the Department of Transportation (DOT) policy that transportation facilities and projects should be planned, constructed, and operated to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable, and establishes procedures for implementation of the policy.

2. CANCELLATION. DOT 5660.1, Preservation of the Nation's Wetlands, of 5-21-75.

3. BACKGROUND AND AUTHORITY. This order is issued pursuant to the following executive order and statutes:

   a. Executive Order 11990, dated May 24, 1977, "Protection of Wetlands," establishes a national policy "to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." The order further provides that each agency shall provide leadership to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities, (2) providing federally undertaken, financed, or assisted construction and improvements, and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

   b. Sections 2(b) and 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. 1651 et seq.) provide that it is "national policy that special effort should be made to preserve the natural beauty of the countryside and the park and recreation lands, wildlife and waterfowl refuges, and historic sites."

   c. The National Environmental Policy Act of 1969 (NEPA) as amended (42 U.S.C. 4321 et seq.) establishes a national policy to "… promote efforts which will prevent or eliminate danger to the environment and biosphere and stimulate the health and welfare of man ..." NEPA requires preparation of an environmental impact statement (EIS) for any major federal action significantly affecting the quality of the human environment. Order DOT 5610.1B, "Procedures for Considering Environmental Impacts," of September 30, 1974, requires that information on impacts on fresh water and coastal wetlands be included in the EISs prepared pursuant to NEPA.

   d. Section 2 of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) provides for consultation with the U.S. Fish and Wildlife Services and the state wildlife resources

agency when "… waters of any stream or other body of water are proposed to be controlled or modified …"

e. The Water Bank Act (16 U.S.C. 1301) expresses the Congressional finding that "… it is in the public interest to preserve, restore, and improve the wetlands of the nation …."

f. The Coastal Zone Management Act (16 U.S.C. 145) establishes a policy to "preserve, protect, and develop natural resources of the coastal zone and where possible to restore them."

g. The Federal Water Pollution Control Act Amendments 1972 (33 U.S.C. 1151) establish a policy to "restore and maintain the chemical, physical, and biological integrity of the nation's waters."

4. DEFINITION.

a. "Wetlands" are defined as lowlands covered with shallow and sometimes temporary or intermittent waters. This includes, but is not limited to swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, and tidal overflows, as well as estuarine areas, and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist-soil vegetation are not included in the definition, nor are the permanent waters of streams, reservoirs, and deep lakes. The wetlands ecosystem includes those areas which affect or are affected by the wetland area itself; e.g., adjacent uplands or regions up and down stream. An activity may affect the wetlands indirectly by impacting regions up or down stream from the wetland or by disturbing the water table of the area in which the wetland lies. Attachment 1 references the wetlands classification system.

b. "New construction" for purposes of this order shall include any draining, dredging, channelizing, filling, diking, impounding, and related activities, and any structures or facilities, begun or obligated after the effective date of this order. This does not include routine repairs and maintenance of existing facilities.

5. POLICY. It is the policy of DOT to assure the protection, preservation, and enhancement of the nation's wetlands to the fullest extent practicable during the planning, construction, and operation of transportation facilities and projects. In accordance with E.O. 11990, new construction located in wetlands shall be avoided unless there is no practicable alternative to the construction and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such construction. In making a finding of no practicable alternative, economic, environmental and other factors may be taken into account. Some additional cost alone will not necessarily render alternatives or minimization measures impractical since additional cost would normally be recognized as necessary and justified to meet national wetland policy objectives.

6. RESPONSIBILITIES.

a. The Assistant Secretary for Policy and International Affairs (P-1) shall oversee the implementation of the policy set forth in this order, shall recommend any modifications of procedures that may be appropriate, and shall consult with the department of the Interior, the Council on Environmental Quality, and other agencies as appropriate concerning the Department's implementation of these policies.

b. Heads of operating administrations shall distribute this order or promulgate appropriate guidance consistent with this order the Executive Order and shall be responsible for the full implementation of the policies within their respective administrations.

c. The Assistant Secretary (P-1) and the heads of operating administrations jointly shall be resp0onsible for preparation and/or dissemination of appropriate guidance, informational materials, training programs, and other materials necessary to comply with the Executive Order's requirement that agencies provide leadership in the field of wetland protection. Such leadership should be particularly aimed at informing and guiding the actions of state and local transportation officials operating with the assistance of or subject to permits from DOT.

7. PROCEDURES. The following procedures should be integrated into existing environmental and public participation processes to the maximum extent feasible. The policy of this order applies to any project located in or having an impact on wetlands.

a. New authorizations or appropriations transmitted to the Office of Management and Budget will indicate, if a specific action to be proposed will be located in wetlands, whether the proposed action is in accord with E.O. 11990.

b. The impacts of new construction projects on wetlands should be identified and discussed in any submissions made to state and metropolitan Clearinghouses under Office of Management and Budget Circular A-95. Submissions to A-95 will not be required solely to address wetland issues. Appropriate opportunity for early review of proposals for new construction in wetlands should be provided to the public and to agencies with special interest in wetlands. This may include early public involvement approaches.

c. Any project which will have a significant impact on wetlands will require preparation of an EIS. Prior to the preparation of an EIS, agencies with jurisdiction and expertise concerning wetland impacts (U.S. Fish and Wildlife Service, state wildlife or natural resources agencies, and the Corps of Engineers, as appropriate) should be consulted for advice and assistance concerning the proposed undertaking.

d. An EIS (or negative declaration) on a proposal for new construction in wetlands should reflect the results of early coordination and should identify specific impacts of the project on the wetlands taking into consideration the matters listed in paragraph 6(f).

e. When federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way, or disposal to nonfederal public or private parties, the agency with jurisdiction over the lands should either (1) reference in the conveyance those uses that are restricted under this policy and other relevant federal, state, or local wetlands regulations; or (2) attach other appropriate restrictions to the use of properties by the grantee or purchaser and any successor, except where prohibited by law; or (3) withhold such properties from disposal.

f. In carrying out any activities (including small scale projects which do not require documentation) with a potential effect on wetlands, operating agencies should consider the following factors in implementing the Department policy relevant to a proposal's effect on the survival and quality of wetland:

(1) Public health, safety and welfare, including water supply, water quality, recharge and discharge, and pollution; flood and storm hazards; and sedimentation and erosion.

(2) Maintenance of natural systems, including conservation and long-term activity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish and wildlife, timber, and food and fiber resources; and other uses of wetlands in the public interest, including recreational scientific, and cultural uses as well as transportation uses and objectives.

g. Alternatives which would avoid new construction in wetlands must be studied, giving consideration to environmental and economic factors. If use of wetlands is proposed, the alternatives analysis for major actions should have demonstrated that there is no practicable alternative to the use of the wetlands and that all practicable measures to minimize harm to the wetlands have been included.

h. For any major action which entails new construction located in wetlands, a specific finding should be made by the affected operating administration that (1) there is no practicable alternative to construction in the wetland, and (2) that all practicable measures to minimize harm have been included. The proposed finding should ordinarily be included in the final EIS or negative declaration for the proposal.

8. APPLICABILITY.

a. All programs and projects proposed for direct construction, assistance, or permit by the DOT shall be reviewed for consistency with the policy of this order.

b. This order does not apply to projects presently under construction or to projects for which all funds have been obligated through fiscal year 1977, to projects and programs for which a draft or final EIS was filed prior to October 1, 1977.

c. Nothing in this order shall apply to assistance provided for emergency work essential to save lives and protect property or public health and safety, performed pursuant to sections 305 and 306 of the Disaster Relief Act of 1974 or pursuant to other emergency operations.

FOR THE SECRETARY OF TRANSPORTATION:

Alan Butchman
The Deputy Secretary

Further information concerning the type, number, and location of wetland areas may be obtained from Circular No. 39 of the Department of the Interior, Fish and Wildlife Service, or from the wetlands inventories maintained by the various states. The classification system presently contained in Circular No. 39 is being revised to provide uniformity in concepts and terminology throughout the United States. A notice of intent to adopt the classification system was published in the December 12, 1977, Federal Register. Copies of the new classification system may be obtained from the Fish and Wildlife Service, Suite 217, Dade Building, 9620 Executive Center Drive, St. Petersburg, Florida 33702.

The Fish and Wildlife Service is also developing a National Wetlands Inventory Maps which will be completed in 1981. They will display typical wetland information on U.S. Geological Survey base maps for all of the states and U.S. territories and possessions. Maps are currently available of coastal Texas and Louisiana. On new projects, Fish and Wildlife Service should be contacted to determine whether maps have been developed for proposed project areas.

STATE OF WASHINGTON

OFFICE OF THE GOVERNOR

BOOTH GARDNER
GOVERNOR

OLYMPIA
98504-0413

EXECUTIVE ORDER EO 89-10

PROTECTION OF WETLANDS

WHEREAS, wetlands:

(A) provide, protect and preserve drinking water supplies by purifying surface water and ground water;

(B) provide a natural means of flood and storm damage protection through the absorption and storage of water during high runoff periods, thereby reducing flood crests and preventing loss of life and property;

(C) often serve as transition zones between dry land and water courses, thereby retarding soil erosion;

(D) provide essential breeding, spawning, rearing, feeding, nesting and wintering habitats for a major portion of the state's fish and wildlife;

(E) provide special vegetation and vegetative communities;

(F) maintain surface waters through the gradual release of stored flood waters and ground water, particularly during drought periods;

(G) provide readily accessible outdoor biophysical laboratories, living classrooms, and training and educational resources; and

(H) provide ecological as well as economic benefits; and

WHEREAS, more than fifty percent of the state's original wetlands have been drained, dredged, filled or otherwise altered; and

WHEREAS, over ninety percent of the original saltwater wetlands in some urban estuaries of Puget Sound have been eliminated; and

WHEREAS, wetlands losses statewide are as much as two thousand acres annually; and

WHEREAS, in urban areas in the state of Washington, freshwater wetlands losses are estimated at seventy-five acres per month or more than nine hundred acres per year; and

WHEREAS, the loss of wetlands often leads to economic and ecological harm of the state; and

WHEREAS, wetlands conservation is a matter of state concern, since wetlands of one county may be affected by activities on rivers, lakes, streams, or wetlands of other counties and because they support migratory animal species which cross local government boundaries; and

WHEREAS, use of artificial structures, such as stormwater treatment systems, to provide wetlands functions and values may be more costly than protection of existing wetlands; and

WHEREAS, there is need for stronger state coordination to ensure wetlands protection;

NOW, THEREFORE, I, Booth Gardner, Governor of the State of Washington, by virtue of the power vested in me, do hereby order:

Section 1. It is the interim goal of my administration to achieve no overall net loss in acreage and function of Washington's remaining wetlands base. It is further the long-term goal to increase the quantity and quality of Washington's wetlands resource base.

Section 2. In the interest of preserving and protecting valuable resources, the Department of Ecology shall provide guidance and each affected state agency shall provide to the Governor an action plan, where appropriate, to lessen the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Section 3. Each affected state agency shall ensure that it avoids any activities that would adversely affect wetlands, and that unavoidable impacts are adequately mitigated.

Section 4. To meet the long-term goal of this order, each affected state agency, in pursuing its agency mandate, should seek opportunities for voluntary wetlands restoration and creation of additional wetlands.

Section 5. In carrying out the intent of this order, each affected state agency shall consider the ecologic and hydrologic benefits provided by wetlands. Each affected state agency shall strive to prevent environmental and economic harm that results from continuing loss of wetlands, consistent with human health and safety and the general welfare of the state.

Section 6. Each affected state agency shall encourage sensitive site design and planning on a watershed basis, where appropriate, to avoid or minimize damage to wetlands.

Section 7. Each affected agency shall, when possible, direct its agency-mandated activities not dependent upon wetlands locations to suitable upland locations.

Section 8. Nothing in this Executive Order shall apply to assistance provided for emergency work that is essential to save lives and protect property and public health and safety.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the State of Washington to be affixed at Olympia, this 11th day of December, A.D., nineteen hundred and eighty-nine.

(original signed by person named below)
Governor of Washington

BY THE GOVERNOR:

(original signed by Acting
Deputy for person named below)
Secretary of State

STATE OF WASHINGTON

OFFICE OF THE GOVERNOR

BOOTH GARDNER
GOVERNOR

OLYMPIA
98504-0413

EXECUTIVE ORDER EO 90-04

PROTECTION OF WETLANDS

WHEREAS, wetlands provide ecological as well as economic benefits to the state by protecting and preserving drinking water supplies; by providing a natural means of flood and storm damage protection; by serving as transition zones between dry land and water courses; thereby retarding soil erosion; by providing essential brooding, spawning, rearing, feeding, nesting, and wintering habitats for fish and wildlife; by providing special vegetation and vegetative communities; by serving important functions for surface and groundwater supplies of the state; and by providing outdoor training and educational resources; and

WHEREAS, as much as fifty percent of the state's original wetlands have been drained, dredged, filled, or otherwise altered and over ninety percent of the original saltwater wetlands in some urban estuaries of Puget Sound have been eliminated; and

WHEREAS, losses statewide are as much as two thousand acres annually; and

WHEREAS, loss of wetlands harms the economic and ecological welfare of the state; and

WHEREAS, local governments are in the process of planning for growth and for the protection of critical areas, including wetlands; and

WHEREAS, wetlands are among the most fragile of natural resources and must be protected by state agencies in their stewardship of lands and waters subject to the public trust; and

WHEREAS, it is in the public interest to protect the functions and values of wetlands;

NOW, THEREFORE, I, Booth Gardner, Governor of the state of Washington, by virtue of the power vested in me, do hereby order:

Section 1. All state agencies shall rigorously enforce their existing authorities to assure wetlands protection;

Section 2. All state agencies shall exercise their substantive authority under the State Environmental Policy Act (SEPA), to the extent legally permissible, to require mitigation of wetlands impacts for all

agency actions affecting wetlands. Such actions include, but are not limited to, rule development and any projects or actions requiring state licenses, permits, approvals, loans or grants. State agencies shall, when necessary, amend their permits, approvals, loans or grants. State agencies shall, when necessary, amend their SEPA policies to include wetlands protection components. The Department of Ecology, in its review of SEPA compliance documents, shall encourage and, to the extent legally permissible, require complete analyses of wetlands impacts, mitigation, and buffers;

Section 3. The Department of Ecology shall, to the extent legally permissible, exercise its authority under the Shoreline Management Act, to condition, deny or appeal permits to assure wetlands protection. In addition, the Department of Ecology shall develop a model wetlands protection element for local governments to consider when amending shoreline master programs under the Shoreline Management Act;

Section 4. (a) The Department of Ecology shall request the Division Engineer of the Army Corps of Engineers to assert discretionary authority and modify nationwide permit 26 to require individual permits or permit conditions for certain categories of activities, types of wetlands and specific geographical regions. Examples include natural heritage sites, wetlands associated with shorelines of statewide significance, and recorded locations of threatened and endangered species. In these instances, actions affecting wetlands will no longer receive automatic authorization;

(b) The Department of Ecology shall evaluate and recommend future actions to reduce impacts to wetlands under the Federal Clean Water Act; such as further modifications to nationwide permit 26. The Department of Ecology shall reevaluate section 401 certification of nationwide permits affecting wetlands at such time as these permits are revised by the Army Corps of Engineers or when the existing certification expires in 1992, whichever comes first;

(c) The Department of Ecology, to the extent authorized by law, shall condition or deny water quality certifications under section 401 of the Federal Clean Water Act to prevent the degradation of wetlands;

Section 5. The Department of Ecology, in its triennial review of water quality standards, shall revise the standards to incorporate provisions specifically designed to better protect wetlands;

Section 6. The Departments of Wildlife and Fisheries shall fully implement the authority granted under the Hydraulics Code and, to the extent legally permissible, condition or deny permits to protect fish life by assuring wetlands protection;

Section 7. The Puget Sound Water Quality Authority shall continue its efforts to ensure full implementation of the wetlands elements of the Puget Sound Plan. All state agencies, within available resources, shall use their authorities to assist in implementing applicable portions of the Puget Sound Plan wetlands program;

Section 8. The Department of Agriculture shall develop a permit system for application of pesticides on or near wetlands by licensed applicators in order to assist in evaluating the type, amount, and impact of pesticides used in wetlands. The Department of Agriculture shall also develop a program to assess the amount of pesticides applied by non-licensed persons on or near wetland areas through required reporting of sales volume of pesticide products not requiring licensure for purchase;

Section 9. The Forest Practices Board, with assistance from the Department of Ecology, is encouraged to amend both the forest practices rules and the best management practices for forest practices to protect wetlands in a manner consistent with this executive order;

Section 10. The Department of Community Development shall adopt standards establishing wetlands protection criteria for administration and issuance of funds through its public works trust fund,

community development block grant program, and housing trust fund; and the Department of Trade and Economic Development shall work with the Community Economic Revitalization Board (CERB) to develop and adopt wetlands protection criteria for administration and issuance of CERB loans and grants;

Section 11. The Department of Ecology shall give special consideration and allowance to those Centennial Clean Water Act grant proposals containing wetlands protection elements and shall condition any grant approvals to assure wetlands protection;

Section 12. All state agencies shall use the following definition of mitigation, in the following order of preference:

(1) Avoiding the impact altogether by not taking a certain action or part of an action;
(2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
(3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
(4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
(5) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments;
(6) Monitoring the impact and taking appropriate corrective measures;

Mitigation for individual actions may include a combination of the above measures;

Section 13. The Department of Ecology shall develop statewide policies and standards on wetlands rating systems, mitigation, buffers, restoration, and enhancements in consultation with other agencies and interested parties. These policies and standards shall be adopted to the extent legally permissible by all state agencies as part of their SEPA policies, and shall be applied where appropriate to all licenses, permits, approvals, grants and actions undertaken by state agencies;

Section 14. The Department of Ecology, in consultation with agencies and academic institutions with expertise, tribes, local governments, and other appropriate parties, shall coordinate wetlands inventory activities and develop inventory standards and strategies to standardize and maximize the efficiency and effectiveness of inventory efforts in the state;

Section 15. The Department of Ecology shall develop a wetlands impact assessment process in conjunction with the demonstration conservation plan required by RCW 90.54. The wetlands impact assessment process shall balance the public policies of wetlands protection and water use efficiency as set out in RCW 90.03. The Department of Ecology shall consult with other interested and affected parties, in order to assist in decision making regarding water use efficiency improvements and wetlands protection;

Section 16. The Department of Ecology shall provide technical assistance to the Department of Community Development in the development of wetlands protection policies and standards for the implementation of grants programs and to guide the development of local government comprehensive plans and development regulations under the growth management bill passed by the 1990 legislature;

Section 17. The Department of Ecology shall provide educational and technical assistance, within available resources, for local government implementation of the wetlands protection components of the Puget Sound Plan and wetlands protection components of the growth management bill passed by the 1990 legislature;

Section 18. All local governments in this state are requested and encouraged to make all of their actions consistent with the intent and goals of this executive order. The Department of Ecology, in consultation

with local governments, shall develop a model local government wetlands protection ordinance, and shall initiate and administer a local grants program, as funding permits, for the development of local wetlands protection programs;

Section 19. All appropriate state agencies shall continue to develop and implement wetlands education and outreach activities and to inform public and private interests regarding the provisions of this order;

Section 20. (a) There is hereby established an interagency Wetlands Review Board (Board) which shall consist of the directors or designees of the Department of Ecology, the Department of Fisheries, the Department of Wildlife, the Department of Agriculture, the Puget Sound Water Quality Authority, and the Department of Community Development. The Department of Transportation and the Department of Natural Resources are invited to become members of the Board. The representative of the Department of Ecology shall serve as chair and shall provide staff support when needed;

(b) The Board is empowered to develop means to implement and monitor agency compliance with this executive order. The Board shall submit regular reports to the Governor on actions taken under this order;

(c) The Board is authorized to ask for assistance from any department, office, division or agency of this state to supply data, personnel, or assistance as necessary to implement the directives of this executive order;

Section 21. Nothing in this executive order shall apply to assistance provided for emergency work that is essential to save lives or protect property and public health and safety.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the State of Washington to be affixed at Olympia, this 21st day of April, A.D., nineteen hundred and ninety.

(original signed by person named below)
Governor of Washington

BY THE GOVERNOR:

(original signed by the person named below)
Assistant Secretary of State

U.S. Fish and Wildlife Service Mitigation Policy Background and Commentary

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

U.S. Fish and Wildlife Service
Mitigation Policy; notice of Final Policy

AGENCY: U.S. Fish and Wildlife Service, Department of the Interior.

ACTION: Notice of Final Policy

SUMMARY: This Notice establishes final policy guidance for U.S. Fish and Wildlife Service personnel involved in making recommendations to protect or conserve fish and wildlife resources. The policy is needed to: (1) ensure consistent and effective Service recommendations; (2) allow Federal and private developers to anticipate Service recommendations and plan for mitigation needs early; and (3) reduce Service and developer conflicts as well as project delays. The intended effect of the policy is to protect and conserve the most important and valuable fish and wildlife resources while facilitating balanced development of the Nation's natural resources.

EFFECTIVE DATE: January 23, 1981.

ADDRESS: Comments submitted on the proposed policy may be inspected in Room 738, 1375 K Street, N.W., Washington, D.C. 20005, between 9 a.m. and 3 p.m. on business days.

FOR FURTHER INFORMATION CONTACT: John Christian, Policy Group Leader—Environment, U.S. Fish and Wildlife Service, Department of the Interior. Washington, D.C. 20240, (202) 343-7151.

[Note: This notice and the supplementary information on the following pages is reproduced from the *Federal Register,* January 23, 1981, pp. 7644 *et seq.,* as corrected in the *Federal Register* of February 4, 1981. The policy itself is online at

http://www.fws.gov/r9dhcbfa/HPMPOL.HTM.]

SUPPLEMENTARY INFORMATION:

BACKGROUND

The development and use of the Nation's natural resources continues in an effort to provide people with their basic needs and to improve their lives. Fish and wildlife and the intricate fabric of natural resources upon which they depend provide benefits to people in many ways. Fishing, hunting, and bird watching are basic benefits that come to mind immediately. These activities involve the direct use of these renewable "natural resources." Perhaps a greater benefit, although more difficult for some to understand, is the maintenance of the structure and function of the ecosystem that comprises all living species, including people. The presence of diverse, healthy fish and wildlife populations generally signals a healthy ecosystem which contains those elements necessary for human survival, including unpolluted air and productive land.

That fabric of natural resources called habitat is the supply for fish and wildlife renewal. The life requirements for plant and animal species are varied and complex. Each species requires a different set of environmental conditions for survival and vigorous growth. These conditions form the habitat of the various species. The development and use of natural resources leads to changes in environmental conditions that can redefine habitat and thus change the mix and abundance of plant and animal species.

A given change in habitat might increase or decrease overall habitat productivity or result in gains or losses of species that are valuable to people or ecosystems. In some cases, habitat modifications can also increase the numbers of species considered undesirable, and create a nuisance to people or crowd out more valuable species. Therefore, development actions can cause habitat changes that are considered either beneficial or adverse depending on the intended wildlife management objectives.

When professional biologists determine that a given development action will cause a change that is considered adverse, it is appropriate to consider ways to avoid or minimize and compensate for such adverse change or loss of public resources. This is commonly referred to as mitigation.

Fish and wildlife resources are public in nature. The Service has provided Federal leadership for over 40 years to protect and conserve fish and wildlife and their habitat for the benefit of the people of the United States. Under its legal authorities, the Service conducts fish and wildlife impact investigations and provides mitigation recommendations on development projects of all kinds. These efforts have been conducted through a full partnership with State agencies responsible for fish and wildlife resources, and since 1970, with the National Oceanic and Atmospheric Administration Fisheries of the U.S. Department of Commerce. The recommendations of the Service are considered by the Federal development and regulatory agencies for their adoption as permitted by law.

Over the years, the Service has reviewed innumerable project and program plans with the potential to adversely affect fish and wildlife resources. The mitigation recommended in recent years by Service personnel to prevent or ameliorate adverse impacts has been governed primarily by a broad policy statement on mitigation promulgated in 1974 and by specific guidelines issued as needed. Recent events have prompted the Service to make known its mitigation objectives and policies. Specific management needs include:

(1) Recent legislative, executive and regulatory developments concerning the environment which have led to a need to update and expand the advice within the 1974 Service policy statement;

(2) Increasing Service review responsibilities which require issuance of comprehensive guidance on mitigation to maintain the quality and consistency of Service mitigation recommendations;

(3) An explicit summary of Service mitigation planning goals and policies to be disclosed to developers and action agencies to aid their earliest planning efforts; and

(4) Finally, the current national need to accelerate development of energy resources which requires that early planning decisions be made that can minimize conflict between important environmental values and energy development.

For these reasons, it was determined to be necessary to fully outline the overall mitigation policy of the U.S. Fish and Wildlife Service. The final Service policy statement integrates and outlines the major aspects of current Service mitigation efforts. Intended as an overview document, its guidance is based on an analysis of current Service field recommendations and on the guidance contained in recent Service management documents.

This policy conditions only the actions of Service employees involved in providing mitigation recommendations. It does not dictate actions or positions that Federal action agencies or individuals must accept. However, it is hoped that the policy will provide a common basis for mitigation decisionmaking and facilitate earlier consideration of fish and wildlife values in project planning activities.

Finally, it should be stressed that this Service policy outlines mitigation needs for fish and wildlife, their habitat and uses thereof. Others interested in mitigation of project impacts on other aspects of the environment such as human health or heritage conservation may find the Service policy does not fully cover their needs. There was no intent to develop a mitigation policy that covers all possible public impacts except those stated. However, the Service strongly believes that preservation and conservation of natural resources is a necessary prerequisite to human existence.

DISCUSSION

The following items are included to provide a better understanding of the policy's relationship to other guidance and to improve the understanding of its technical basis.

1. Relationship of Service Mitigation Policy to Other Service Planning Activities.

The final policy is designed to stand on its own. However, for a clearer perspective of the relationship of the policy to the goals and objectives of the U.S. Fish and Wildlife Service, it can be read with the Service Management Plan and the Habitat Preservation Program Management Document.

The Service Management Plan describes the overall direction of the Service and the interrelationships of the four major categories, including Habitat Preservation, Wildlife Resources, Fishery Resources, and Federal Aid-Endangered Species.

The Habitat Preservation Program Management Document outlines what the Service will do over a one- to five-year period to ensure the conservation and proper management of fish and wildlife habitat. It provides guidance to Service personnel and other interested parties on the goals, objectives, policies, and strategies of the Habitat Preservation Category of the U.S. Fish and Wildlife Service. It includes a discussion of important resource problems that the Service believes require priority attention.

2. Relationship of the Mitigation Policy to any future Fish and Wildlife Coordination Act (FWCA) Regulations and the National Environmental Policy Act (42 U.S.C. 4321-4347) (NEPA).

The Service mitigation policy outlines internal guidance for Service personnel for all investigations and recommendations for mitigation under relevant Service authorities, including the FWCA and NEPA. However, the coverage of the policy is basically different from that of any future

FWCA regulations as was explained in the preamble to the proposed policy (September 9, 1980) (45 FR 59486-59494). Any future FWCA regulations will principally recommend procedures for all affected agencies to ensure compliance with the Act before and after they receive fish and wildlife agency recommendations. In contrast, the Service mitigation policy only applies to Service personnel and outlines mitigation planning goals and policies for impact analyses and recommendations.

The relationship of the mitigation policy to NEPA requirements is also a complementary one. The regulations implementing NEPA (43 FR 55978-56007) recognize "appropriate" mitigation recommendations as an important element of the rigorous analysis and display of alternatives including the proposed action (40 CFR Part 1502.14). The NEPA regulations later specify that Service impact analyses and mitigation recommendations shall be used as input to preparation of draft environmental impact statements (DEIS) as follows:

"Th the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and execu5tive orders." (40 CFR 1502.25(a)).

These provisions provide clear direction that NEPA requirements are not duplicative of or substitute for mitigation recommendations developed under the Fish and Wildlife Coordination Act and other Service authorities. In fact, the NEPA regulations require that Service recommendations be fully integrated into the NEPA process as vital information necessary to comply with NEPA.

3. Focus of the Policy on Habitat Value.

The policy covers impacts to fish and wildlife populations, their habitat and the human uses thereof. However, the primary focus in terms of specific guidance is on the mitigation of losses of habitat value. Population estimates are considered by many to be unreliable indicators for evaluating fish and wildlife impacts. Sampling errors, cyclic fluctuations of populations and the lack of time series data all contribute to the problem. Therefore, the Service feels that habitat value, by measuring carrying capacity, is a much better basis for determining mitigation requirements. However, the use of population information is not foreclosed by the policy. In fact, concern for population information is not foreclosed by the policy. In fact, concern for population losses led to formulation of the "General Policy" section to "… seek to mitigate all losses of fish, wildlife, their habitat and uses thereof …" The Service agrees that mitigation of population losses is a necessary aspect of this policy, for example, when habitat value is not affected but migration routes are blocked off as in the case of dam construction on a salmon river.

Mitigation of human use losses of fish and wildlife resources is also a necessary aspect of the policy. However, if mitigation of habitat value occurs, then in the majority of cases, losses of human use are also minimized. But, in some cases, public access to the resource may be cut off by the project and significant recreational or commercial benefits may be lost.

In those cases where mitigation of habitat value is not deemed adequate for losses of fish and wildlife populations or human uses, the Service will seek to mitigate such losses in accordance with the general principles and concepts presented in the policy. However, in the majority of cases, the Service feels that mitigation of impacts on habitat values will assure a continuous supply of fish and wildlife populations and human use opportunities.

The Service has recently revised and updated its *Habitat Evaluation Procedures* (HEP). It can be used, where appropriate, to determine mitigation needs based on habitat value losses. In some cases, the project may not be deemed appropriate for applying the methodology as in the case of activities

conducted on the high seas under the Outer Continental Shelf (OCS) leasing program. In such cases, the use of other methods to describe habitat value impacts is clearly acceptable, including the best professional judgment of Service biologists. Other limitations related to the use of HEP are outlined in the Ecological Services Manual (100 ESM 1). The HEP are available upon request from the Chief, Division of Ecological Services, U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240.

4. Acre for Acre Loss Replacement Is Not Necessarily Recommended by the Policy.

As explained above, the policy focuses on habitat value. The habitat value of an acre of habitat can vary considerably depending on the type of vegetation and other physical, biological or chemical features. Service recommendations, therefore, will be based on the habitat value adversely impacted, as opposed to strictly acreage. For example, loss of one acre of a specific type of wetland might result in recommendations for replacement of less than one acre of a different type of wetland of greater habitat value. If the habitat value of the wetland available for replacement was equal to that lost, then recommendations could be on an acre-for-acre basis.

5. Rationale for Mitigation Planning Goals.

In developing this policy, it was agreed that the fundamental principles guiding mitigation are: 1) that avoidance or compensation be recommended by the most valued resources; and 2) that the degree of mitigation requested correspond to the value and scarcity of the habitat at risk. Four Resource categories of decreasing importance were identified, with mitigation planning goals of decreasing stringency developed for these categories. Table 1 summarizes all categories and their goals.

Table: Resource Categories and Mitigation Planning Goals

Resource Category	Designation Criteria	Mitigation Planning Goal
1	High value for evaluation species and unique and irreplaceable	No loss of existing habitat value
2	High value for evaluation species and scarce or becoming scarce	No net loss of in-kind habitat value
3	High to medium value for evaluation species and abundant	No net loss of habitat value while minimizing loss of in-kind habitat value
4	Medium to low value for evaluation species	Minimize loss of habitat value

POLICY HISTORY

The policy statement integrates and outlines the major aspects of current service mitigation efforts. Intended as an overview document, its guidance is based on an analysis of over 350 Service field

recommendations and on the guidance contained in recent Service management documents. The proposed policy was published in the Federal Register on September 9, 1980 (45 FR 59486-59494). A correction notice which corrected insignificant formatting and typographical errors was published on September 19, 1980 (45 FR 62564). A notice extending the comment period on the proposed policy to November 10, 1980, was published on October 8, 1980 (45 FR 66878). The final publication is based on full and thorough consideration of the public comments as discussed below.

RESPONSE TO COMMENTS

Over 90 sets of comments were received on the proposed policy. All comments were thoroughly analyzed and cataloged and considered. Many commentors expressed agreement with Service publication of the policy, sensing a more consistent and predictable Service approach to mitigation recommendations and a resultant decrease in the degree of conflict with developers. Many felt the policy represented a rational approach to fish and wildlife resource management, and that it would provide for adequate protection and conservation of the Nation's fish and wildlife resources. The underlying concept that the degree of mitigation requested should correspond to the importance and scarcity of the habitat at risk was also supported by many commentors. Numerous commentors also praised its scope, cohesiveness and clarity, and stressed that it should provide valuable guidance for Government personnel providing technical and project planning assistance.

Detailed responses to significant comments follow:

GENERAL COMMENTS ON THE PROPOSED SERVICE MITIGATION POLICY

Comment: Although the Service prepared an Environmental Assessment and, from its findings, concluded that policy issuance did not constitute a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act (NEPA), a few commentors disagreed with the Service's conclusion that an Environmental Impact Statement (EIS) was not necessary for the proposed action.

Response: During policy development, the Service took action to determine if preparation of an environmental impact statement under NEPA was required. Although section 1508.18 of the Council on Environmental Quality's (CEQ) Regulations for implementing the procedural provisions of NEPA classified adoption of an official policy as a "Federal action," it remained unclear as to whether this action was "major," or whether it would "significantly" affect the quality of the human environment, since policy implementation would not result in or substantially alter agency programs. As was stated in the preamble, this policy is basically a distillation of approaches and policy currently being practiced by Service field personnel in providing mitigation recommendations.

In order to resolve this uncertainty, an Environmental Assessment was prepared for the proposed and final policy. By doing so, the Service has complied with one of the major purposes of the NEPA regulations, which is to have NEPA applied early in the decisionmaking process.

The NEPA regulations do not, in the opinion of the Service, require that the agency speculate on future, possible events without any relation to actual, existing impacts of an action. Section 1502.2 of the NEPA regulations directs that an EIS is to be analytical, however, the Service action simply does not create any impacts capable of such analysis. Thus, there is no reasonable or scientific way for the Service to analyze any environmental impacts, significant or otherwise, as discussed in §§ 1502.16 and 1508.27.

This problem is particularly vexsome when those impacts depend on future contingencies and can be more appropriately analyzed when those contingencies occur. Even § 1502.4, which discussed EIS's in

terms of broad agency actions, does so in the context of specific impacts caused by the action. In the opinion of the Service, it has fully complied with the letter and spirit of NEPA and its regulations.

Comment: One commentor felt that the preamble statement that an EIS would be premature at this time contradicted a finding of no significant impact.

Response: The Service sees no contradiction with a finding of no significant impact and the statement that an EIS is premature. The finding of no significant impact derives from an analysis showing that the policy has no significant impacts amenable to analysis at the present time. However, when in the future the Service does apply the policy in developing mitigation recommendations for a major Federal action which might significantly affect the quality of the human environment, then the environmental impacts associated with the implementing those recommendations which are considered justifiable by the development agency can be analyzed by that development agency. The Service has no way of predicting which of its recommendations will be accepted by the developer; therefore, analysis of impacts of accepted mitigation recommendations is the responsibility of the developer.

Comment: One commentor was of the opinion that an EIS "should be prepared for the Service's proposed mitigation recommendations on each project." Moreover, the commentor felt that a significant portion of these EIS's should be devoted to analysis of economic impacts.

Response: Mitigation recommendations and actions cannot be meaningfully analyzed except in the context of the development action initiating them. And, since an EIS would be required for any major Federal action which would significantly affect the quality of the human environment and whose alternatives would include consideration of mitigation, a separate EIS would not be necessary for mitigation actions.

Under the FWCA, the action agency which makes the ultimate decision is to include all "justifiable mitigation means and measures" in project formulation. The burden of analyzing the economic impacts of "justifiable" mitigation measures therefore rests primarily with the project sponsor, who will likely use the Water Resources Council's Principles and Standards to assist in the analysis.

Comment: The substantive requirements of the Service mitigation policy should be consistent with the requirements of the National Environmental Policy Act's implementing regulations and the Water Resources Council's Principles and Standards.

Response: We agree. The proposed and final policy have been developed consistent with the substantive and procedural requirements of these regulations.

Comment: The Environmental Assessment identifies as one of the advantages of the proposed mitigation policy the establishment of "... minimum performance standards for FWS recommendations (which) would serve as benchmarks by which the FWS and developers or action agencies ... could assess individual Service mitigation proposals." However, neither the Federal Register notice nor the Environmental Assessment identify or discuss these "benchmarks."

Response: The term "benchmarks" referred to the mitigation goals and planning procedures. Both the proposed policy preamble and its Environmental Assessment discussed these guidelines, explaining their derivation and importance to policy purposes. However, a point of clarification is needed regarding these guidelines. It is the recommendations made by Service personnel that would be measured against these standards, not the mitigation implemented by an action agency. The final policy makes this point explicit.

Comment: Many commentors argued that the proposed policy goes beyond that authorized by law. Specific concern was expressed over the use of words that were mandatory in tone (e.g., "require" and "must") as opposed to advisory. In addition, some commented that the Service has no authority to support or oppose projects as stated in the policy.

Response: The Service agrees that the legal authorities for the mitigation policy do not authorize the Service to exercise veto power over land and water development activities. That understanding was implicit in the proposed policy. Appropriate changes have been made in the policy to more explicitly recognize and signify the advisory nature of the Service responsibility.

However, it should be clearly noted that the Fish and Wildlife Coordination Act places clear mandatory requirements on Federal development agencies falling under the Act's authority to (1) consult with the Service. National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and State agencies responsible for fish and wildlife resources; (2) incorporate such reports and recommendations in one overall project report; (3) provide "full consideration" of the "reports and recommendations;" (4) include in the project plan "such justifiable means and measures for wildlife purposes as the reporting agency finds should be adopted to obtain overall maximum project benefits;" and (5) other requirements related to funding and land acquisition.

The clear intent of Congress was that recommendations developed by the U.S. Fish and Wildlife Service, NOAA Fisheries, and State agencies responsible for fish and wildlife resources be taken seriously, and we know of no law which prohibits the Service from taking a position for or against a project when making mitigation recommendations.

Comment: The policy will adversely impact developmental interests.

Response: The goal of the policy is to provide for equal consideration of fish and wildlife conservation while facilitating development.

Congress has clearly stated that "wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs" (Pub. L. 85-624, Fish and Wildlife Coordination Act). This advice is further amplified in Senate Report 1981 on the FWCA (84th Congress, 2nd Session (1958)). The Congress recognized that in some instances, the level of dollar benefits to some purposes might have to be diminished "in some slight degree" in order to accomplish the fish and wildlife conservation objectives of the Act.

However, policy issuance should benefit developmental interests. By providing developers with a clear picture of Service mitigation concerns and priorities, the policy will allow developers to anticipate Service mitigation recommendations prior to final decisions on project design and location. By reducing a developer's planning uncertainties, the policy will result in lowered project costs and fewer project delays and conflicts.

Comment: Does the policy present general guidance or minimum required standards? The Service appears to be trying to establish required standards.

Response: The final policy sets out mitigation goals and planning guidance to guide the development of Service mitigation recommendations. It does not require absolute strict adherence to a required standard. Changes have been made to reflect this.

Comment: No mention is made of the State role in mitigation planning to assure a compatible approach. The States' authorities and decisionmaking prerogatives with respect to fish and wildlife resources should be denoted and the States' roles in mitigation should be emphasized further.

Response: A compatible approach is desirable. We have included appropriate changes. However, the policy is solely for Service personnel. There is no intent to infringe on the States' prerogatives.

Comment: The policy should require full public disclosure of Service mitigation analyses, determinations, and recommendations.

Response: We agree that full disclosure of Service analyses, determinations and recommendations during the mitigation process would serve the public interest. All public documents associated with Service recommendations for mitigation on specific land and water developments are available for review in Ecological Services field offices. No change in the policy is necessary.

Comment: The Service should specifically address the acid rain problem in its policy. In particular, the policy should address the impact of Federal policies and programs that support power plant conversions to coal.

Response: The Service currently reviews such Federal actions under NEPA, since these policies and programs are likely to require an EIS. Because acid rain has been highlighted as an Important Resource Problem (IRP) by the Service, environmental analyses which do not adequately address acid rain problems will receive particular attention by Service reviewers. Our comments will be technically reinforced by Service research already being conducted in this area. Since the policy already covers this issue, no change is necessary.

Comment: Could the mitigation policy call for a recommendation as extreme as reflooding of the Mississippi River Valley?

Response: The mitigation policy would not lead to so extreme a recommendation because it does not apply to development actions completed prior to enactment of Service authorities or exempted by those authorities. In those situations where the policy does apply, there will be no recommendations for mitigation over and above the level of impacts associated with a project. This policy acts to minimize impacts of projects, not reverse them.

Comment: Which agency enforces this policy and what power does it have?

Response: This is a policy that applies only to Service personnel. It does not redetermine the actions of other federal agencies, nor the actions of state agencies or developers. Although the policy statement is not judicially enforceable, the Service will administer the policy by monitoring the mitigation recommendations made by its own personnel.

Comment: Too often land acquired for mitigation does not provide the spectrum of resource values previously available because the managing agency's philosophy prevents it from managing the land for a mix of goals.

Response: Lands acquired for mitigation purposes must provide the specific mitigation benefits for which they were intended. Secondary land uses, such as provision of timber, oil and gas exploration, or recreational benefits, could be attempted where these uses are compatible with the mitigation lands' primary purpose. This concept has been added to the policy.

SPECIFIC COMMENTS ON THE MITIGATION POLICY

(These comments are keyed to reactions of the proposed policy.)

Purpose

Comment: Why is this policy apparently unconcerned with flora?

Response: Mitigating for fish and wildlife losses necessarily means dealing with the plant communities on which all animal life indirectly depends. When habitat is preserved, it is the plant communities that are the vast bulk of the living material of that habitat.

Plants *per se* are addressed by other authorities of the Service which are not within the scope of this policy, such as the Endangered Species Act and associated regulations.

I. Authority

No significant comments.

II. Scope

Comment: How does the policy affect projects already completed or under construction?

Response: Appropriate changes in the Scope section have been made to clarify policy coverage with regard to completed projects or projects under construction.

Comment: Since Federal permit renewals will result in no new effects on the environment, they should be exempt from the policy.

Response: The permit or license renewal process provides an opportunity to re-evaluate the project. Depending on new scientific information concerning impacts, the adequacy of past developer mitigation efforts, or new authorities, new mitigation recommendations may be necessary.

Not infrequently, permit or license holders use the renewal process as a convenient occasion to seek changes in their permits. Any changes in permit or license holders' activities have to be evaluated to determine whether or not they necessitate new mitigation recommendations.

This policy, therefore, will be used by the Service in permit or license renewal proceedings, keeping in mind that Service recommendations are advisory to action agencies. Appropriate changes were made in the policy to reflect this position.

Comment: Does this policy apply to man-induced wetlands?

Response: Where the Service has the authority and responsibility to recommend mitigation for these habitats, the tenets of the policy shall apply.

Comment: There is a need for a mechanism for evaluating enhancement and a means to differentiate it from mitigation.

Response: Although enhancement is an important concern of the Service, the Service mitigation policy should not serve as the primary vehicle for discussing enhancement. The final policy does differentiate between enhancement and mitigation recommendations by defining enhancement to include measures which would improve fish and wildlife resources beyond that which would exist without the

project and which cannot be used to satisfy the appropriate mitigation planning goal. As for evaluating enhancement, it would appear likely that many of the procedures that can be used to evaluate mitigation can be used to evaluate enhancement.

Comment: What is the basis for the policy position that enhancement cannot occur until all losses are compensated? There is no legislative history for this.

Response: Unfortunately, the term "enhancement" suffers from wide differences in semantic usage. The proposed policy used the term to be synonymous with improvements beyond the achievement of full mitigation. This strict interpretation appears to spark controversy.

The final policy incorporates a different usage of the term. Enhancement is used to describe measures not necessary to accomplish mitigation purposes.

Comment: The policy should credit towards mitigation goals those habitat value increases associated with areas of the habitat which are enhanced by the project. Habitat value should be computed for enhancement activities, and the inclusion of habitat enhancement factors would provide for a more accurate estimate of the project's impact on the environment.

Response: Use of the term "habitat enhancement" to describe development or improvement efforts is confused by this comment. The mitigation policy does not cover enhancement as we have described it. However, where habitat improvement or development caused by a project will result in habitat value increases, it may be considered as mitigation when consistent with the resource category designation criteria and the appropriate mitigation planning goal.

Comment: There should be a clear statement that all opportunities for enhancement of fish and wildlife resources be thoroughly considered and included in project plans to the extent feasible.

Response: We agree. Appropriate changes were made.

IV. Definition of Mitigation

Comment: Some commentors indicated concern over the definition of mitigation as used in the policy. Specific concern was expressed that those aspects of project planning that include avoidance or actions to minimize impacts should be considered good project planning and that mitigation should be confined solely to actions to compensate for resource losses.

Response: The Service agrees that avoidance or actions to minimize impacts should be part of the early design of projects and not just an afterthought. Some consider mitigation to be a separate and distinct process that occurs after project planning has been completed. The legally binding definition of mitigation as used in the regulations to implement the National Environmental Policy Act (NEPA) can have the effect of altering this notion through incorporation of all those actions that can lessen project impacts throughout the planning process.

The policy has been modified to more clearly state that the Service supports and encourages incorporation of features that will reduce adverse impacts on fish and wildlife resources as part of early planning and project design in order to avoid delays or conflicts. But without the emphasis on avoidance and minimization provided by the NEPA regulations' definition, there would be little incentive for development agencies to incorporate such features. The Service, therefore, supports and adopts that definition.

V. Mitigation Policy of the U.S. Fish and Wildlife Service

Comment: A number of documents are referred to in the draft policy. They are essential to the functioning of the policy and should be published as an appendix and otherwise made available for public comment, including public hearings.

Response: The preamble to the proposed policy clearly indicated that the policy was designed to stand on its own. The referenced documents are not essential to the functioning of the policy. For instance, even though Service field personnel will rely basically on the *Habitat Evaluation Procedures* in conducting project analyses, the policy indicates that other methods can be used where appropriate and available. The concept of habitat value has been recognized throughout the history of fish and wildlife management. It is not new.

Regardless of the fact that the policy stands on its own, the referenced documents have undergone varying degrees of public scrutiny independent of the mitigation policy. For instance, a notice of availability and request for public comment was published in the **Federal Register** for the Service Management Plan and Program Management Document on September 29, 1980 (45 FR 64271-64272). A habitat-based evaluation methodology has been under active development in the Service since 1973. The first document officially called the *Habitat Evaluation Procedures* was published in 1976 with the most recent revision in 1980. During this 7 year period, the Nation's top wildlife biologists have been consulted, both within the government and outside. The procedures have been presented at numerous public conferences and have been the subject of intense scrutiny.

Finally, the referenced documents were made available to reviewers. Over 75 requests were made and immediately filled to allow commentors the full benefit of this information in preparing comments, including the group providing this comment. Minor changes were made in the policy to more clearly indicate that the policy can stand on its own.

A. General Principles

Comment: Pursued to its logical conclusion, the concept of fish and wildlife as public trust resources could lead to serious restrictions on the use and management of private lands.

Response: When the concept of personal property rights is exercised in such a way as to jeopardize the interests of the public in fish and wildlife resources on public or private lands, the government may use its authorities to see that any damage to those interests is prevented or mitigated.

The Service does and will attempt to fulfill its duties within its authorities and in a reasonable manner. It is certainly cognizant of the fact that pursuing any concept to its logical extreme may lead to unreasonableness, and will continue to strive to prevent this from happening in its mitigation activities.

Comment: What does "equal consideration" of wildlife conservation mean within the context of the Fish and Wildlife Coordination Act and this mitigation policy?

Response: "Equal consideration" was not defined in the Act or this policy, and has no particular meaning in the context of this policy. This policy only covers Service recommendations, not action agency requirements.

Comment: The proposed Service policy now absolutely precludes support for non-water dependent projects within or affecting waters of the United States. This should be modified to conform to the requirements of Federal regulatory agencies such as the Army Corps of Engineers (COE) and the Environmental Protection Agency (EPA).

Response: The Service policy clearly does not exercise veto power over development actions. Moreover, the Service will execute its responsibilities fully within the context of existing laws and regulations governing environmental reviews. However, the Service feels that wetlands and shallow water habitats should not be subjected to *needless* development because of the public values of these areas. The Service policy statement does not include water dependency as the "sole" criterion for its recommendations. Other factors, including the likelihood of a significant loss, are considered prior to a Service recommendation for support of a project or the "no project" alternative.

The provisions of the policy have been modified to make such recommendations discretionary.

Comment: Congress, not the Service, is the entity that has the authority to require and fund compensation for Federal projects.

Response: We agree. The policy has been modified.

Comment: Mitigation should not be required for an indefinite period of time.

Response: Mitigation is appropriate for the entire time period that habitat losses persist, which includes the life of the project and as long afterwards as the impacts of the project continue to exist. The policy reflects this position.

Comment: Under "General Principles," the policy should seek and endorse novel or imaginative approaches to mitigation.

Response: The Service fully supports development of novel and imaginative approaches that mitigate losses of fish and wildlife, their habitat, and uses thereof, and has been in the forefront of such development. No change is necessary.

Comment: An Indian tribe strongly supports the Department of the Interior's recognition of the role of Indian tribal governments in mitigation planning.

Response: Our national heritage and, in some cases, the livelihood of Indian tribes, can be directly linked with the conservation and use of fish and wildlife resources. Therefore, the U.S. Fish and Wildlife Service will continue to recognize and support Indian tribal governments' efforts to mitigate impacts on these resources.

B. U.S. Fish and Wildlife Service Mitigation Goals by Resource Category

Comment: The mitigation goals for the resource categories were characterized as: reasonable, too strict, or not strict enough.

Response: As was explained in the preamble to the draft policy, the resource categories and their mitigation goals were abstracted from an analysis of actual field recommendations. The designation criteria for the resource categories (replaceability, scarcity, and value for evaluation species) are the basic decision factors used by Service personnel to assess relative mitigation needs. The mitigation goals represent reasonable mitigation expectations for projects, viewed in the light of our two-faceted goal—(1) to conserve, protect and enhance fish and wildlife and their habitats, and (2) to facilitate balanced development of our Nation's natural resources

Numerous comments were received commending us on the balanced approach embodied in this policy. Since its tenets derive from field recommendations and comments, the credit belongs entirely to our field staff.

Some commentors criticized the mitigation goals. One group felt that one or several of the mitigation goals were too strict. These commentors objected to what they considered to be unreasonably high goals for fish and wildlife mitigation. In contrast to this first group, another set of commentors felt that the goals were not strict enough, and called attention to our legislative responsibility to seek protection for all fish and wildlife resources.

Our response is that the mitigation goals represent the best professional judgment and cumulative experience of Service field supervisors in developing mitigation proposals that would satisfy our legislative mandates, operate under time and money constraints, and assist in maximizing overall social well-being. The basic concept, therefore, is unchanged in the final policy, although minor changes were made to improve understanding based on the comments.

Comment: Rather than rely on strict inflexible mitigation goals, the Service should use "tradeoff" evaluation procedures in developing mitigation proposals.

Response: It is the responsibility of the Federal action agency to use tradeoff evaluation procedures consistent with the Water Resources Council's Principles and Standards, where applicable, to select a mitigation alternative that will assist in maximizing overall project benefits. The Fish and Wildlife coordination Act specifies that "the project plan shall include such justifiable means and measures for wildlife purposes as the *reporting agency* (emphasis added) finds should be adopted to obtain maximum overall project benefits." The role of the Service is to represent those public trust resources under its jurisdiction. The proposed policy outlined a system wherein the highest valued resources would be subject to the most protective mitigation recommendations. Few, if any, commentors have disagreed with this valuation perspective. Therefore, no changes were made.

However, many commentors have questioned the reasonableness of a seemingly uncompromising system that did not appear to allow occasional deviations from these goals.

The system is not rigid. As stated in the Purpose section of the policy, the policy advice will be used as guidance for Service personnel, but variations appropriate to individual circumstances are permitted.

Comment: Numerous commentors raised the issue of the somewhat subjective nature of identifying certain species as "important" for the purposes of the policy. In addition, commentors indicated that such distinctions could lead to mis-classification of habitats in terms of resource categories and that clear criteria were needed. Finally, many commentors felt that the artificial distinction of certain species as "important" was both a violation of the public trust and Service legal authorities.

Response: People perceive some species to be more important than others. In the context of biology and ecology, al species are important, serving a useful purpose within the confines of their biological niche. The mitigation policy must address *both* the needs and desires of human society *and* the ecosystem perspective. This is a difficult task. But human decisions concerning fish and wildlife resources in the face of a development action require judgment about the values of what will be lost and the need to avoid or minimize and compensate for loss of such values.

The specific criteria for such determinations are also exceedingly difficult to frame in a National policy context. The importance of a species to society depends on a complex, changing mix of factors. The importance of a species within an ecosystem is also subject to many dynamic factors. But human decisions about the level and type of mitigation necessary for development actions must be made in the absence of perfect information concerning these factors. In addition, the Service biologist reviewing project impacts has severe constraints on the number of species and ecosystem linkages that can be analyzed given funding, personnel and time limitations. Somehow, choices must be made.

We have deleted the term "important species" from the policy and replaced it with a more precise term, "evaluation species." The criteria for selection of evaluation species still includes those species of high resource value to humans or that represent a broader ecological perspective of an area. Other changes have been made related to the determination of resource categories to allow for additional public input and resource agency coordination into such determinations, where appropriate.

The effect of this change is not intended and shall not be interpreted to broaden the scope or extent of application of this policy. But it does remove the implication that species can be ranked against each other in terms of their overall importance to society, which many considered quite beyond the capability of human beings.

Comment: The wording of the policy should clearly indicate that species selected for analysis should only be those demonstrated to actually utilize an area.

Response: We agree, except for situations where fish and wildlife restoration or improvement plans have been approved by State or Federal resource agencies. In that case the analysis will include species identified in such plans. Appropriate clarification has been added to the definition of evaluation species.

Comment: The proper focus of the policy should be the ecosystem rather than particular species.

Response: Aside from the very real technical problems of applying a complex concept such as the ecosystem to mitigation planning, the authorities underlying this policy deal with fish and wildlife and their habitat, rather than ecosystems.

Ecosystems are addressed under this policy in two ways. First, one criterion in the selection of an evaluation species is the biological importance of the species to the functioning of its ecosystem. Secondly, when habitat loss is mitigated, the part of the ecosystem comprising that habitat is itself protected. No changes have been made.

Comment: Recreational use losses may at times have to be directly mitigated. The goal statements should reflect this need.

Response: We agree. Appropriate changes were made.

Comment: In addition to assessing conditions of scarcity from a biogeographical viewpoint, i.e., ecoregions, the policy should also use geopolitical subdivisions, e.g., state boundaries.

Response: As a Federal agency, the Service perceives its major responsibility to be to protect those fish and wildlife and their habitat that are valuable and scarce on a national level, whether or not they transcend state boundaries. However, should State resource agencies wish to outline relative scarcity on a more local basis, Service personnel would certainly assist, whenever practicable. This point has been added to the policy.

Comment: The policy should scale the relative need to achieve a particular mitigation goal to the degree a particular habitat will be impacted. For example, if a half-acre of important habitat is affected by a project and it is part of a one-acre plot, this circumstance should lead to a mitigation recommendation different from the situation where the same half-acre is part of a ten thousand acre area. As drafted, the policy does not reflect the differences in these situations.

Response: The Purpose section of the policy states that it will be used as guidance for Service personnel, but variations appropriate to individual circumstances will be permitted. The relative need to

achieve a particular mitigation goal depends primarily on the perceived value of the habitat, its scarcity, and the replaceability of the threatened habitat. Other factors, such as scaling considerations, can combine to modify this general Service perspective on what constitutes appropriate mitigation.

Comment: The resource categories and mitigation goals are general, lack definition, and provide no guidance on habitat value. These categories are all subject to interpretation by the Service field personnel.

Response: It would be counterproductive, if not impossible, for a national policy to be worded as precisely as the commentor suggests and still be implemented in a reasonable manner under numerous and diverse local circumstances. Words used to describe resource categories and mitigation goals do have generally understood meanings. It is essential that field personnel be allowed to exercise professional judgment in applying resource categories and mitigation goals to specific activities. However, numerous clarifying changes were made based on the comments to increase comprehension and understanding.

Comment: It is essential to other agencies' review to know what general types of habitat will be most important in the U.S. Fish and Wildlife Service mitigation policy. At a minimum, some examples of the types of habitat within each category should be given.

Response: The final policy does give guidance on areas that will be generally considered for Resource Category 1 or 2. Providing examples for all resource categories could be misleading since the same type of habitat may fall into several different resource categories, depending on, among other factors, its relative scarcity and quality from one locale to another across the nation.

On the other hand, field professionals are generally familiar with the quality and abundance of a given type of habitat that is in their area, so it is preferable not to burden them with potentially inappropriate guidelines of this nature.

Comment: The policy should clearly distinguish between upland habitats and the more valuable wetland habitats.

Response: In some cases, upland habitats may be determined to have resource values equal to or greater than wetland habitats, so a policy that solely favored one habitat type over the other would not be in the best public interest. However, the policy has been changed to indicate that certain habitats within Service-identified Important Resource Problems (IRPs) and special aquatic sites should be given special consideration as Resource Category 1 or 2. The IRPs contain a predominance of wetland coastal areas.

Comment: If you build something in a habitat, it just changes it to another habitat that some other animal or fish lives in—including the human being, although the Service does not seem to appreciate that. For example, if you build a highway, it is bad for dogs, rabbits, opossums and field rats and such that get run over by cars and trucks, but it is good for crows and buzzards that eat dead meat.

Response: The Service has not come across many instances where crows and buzzards could be considered scarce, but when such a circumstance can be documented and verified, the Service will certainly try to protect and enhance valuable highway habitat.

- **Resource Category 1**

Comment: A literal interpretation of the Resource Category 1 mitigation goal would require absolutely no habitat loss—not even a nature trail. Resource Category 1 should be deleted.

Response: Not all environmental changes are adverse to the habitat of a fish and wildlife resource. If a nature trail resulted in an insignificant impact on habitat value that was determined not to be adverse, then the Service would not recommend against it. The policy has been clarified to reflect this point.

Comment: Endangered and threatened species should be included as part of Resource Category 1.

Response: It would be inappropriate to expand the scope of the Mitigation Policy to include threatened and endangered species. The treatment of these species is addressed in an extensive body of complex and detailed legislation and regulation. The Congress has legislated very specific and precise law with regard to threatened and endangered species. Inclusion of these species under this policy would only confuse the issue and compound the difficulties involved in implementation of the Endangered Species Act and its associated regulations. Other reasons are discussed in the scope section of the final policy.

Comment: For all practical purposes, Resource Categories 1 and 2 adopt a "no growth" policy.

Response: The U.S. Fish and Wildlife Service is not advocating a "no growth" mitigation policy. The means and measures to achieve mitigation for Resource Categories 1 and 2 are designed to provide some flexibility so that limited growth can occur in an environmentally prudent manner. The policy reflects the national consensus that some habitats are of exceptional public value and should be carefully conserved, as evidenced in the Wild and Scenic Rivers Act (Pub. L. 90-542), the Wilderness Act (Pub. L. 88-577), and the National Trails System Act (Pub. L. 94-527).

- **Resource Category 2**

Comment: It is ill-advised to support in-kind replacement involving trading habitat for lesser value habitat which is then improved to support the species affected by the project. It takes too long, and in the meantime, populations supported by the habitat on the project site are lost.

Response: If the period required for improving the replacement habitat to the appropriate condition was exceedingly long, this may be one indication that the habitat at risk was unique or irreplaceable and actually belonged in Resource Category 1. In that case in-kind replacement through improvement of lesser quality habitat would be an inappropriate mitigation recommendation. Also, additional measures aimed at population restoration could be recommended to restock the area, provided suitable habitat was available to support the stocked species. No changes were made.

Comment: One commentor was perturbed by an apparently rigid insistence by the policy of in-kind replacement of lost habitat. The commentor pointed out that there could be occasions in which in-kind habitat was not available to a project sponsor.

Response: The policy guideline for Resource Category 2 includes an exception when "... in-kind replacement is not physically or biologically attainable." No change was necessary.

Comment: The policy appears to insist upon "acre-for-acre" replacement of in-kind habitat.

Response: The policy does not insist on "acre-for-acre" replacement of in-kind habitat. The mitigation planning goals involving in-kind replacement specifically ask for replacement of in-kind habitat *value*. This point has been further clarified in the definitions section, throughout the policy, and in the policy preamble.

- **Resource Category 3**

Comment: The mitigation goal for Resource Category 3 is not authorized by law and will be difficult to implement due to professional disagreement on satisfactory achievement.

Response: Under the Fish and Wildlife Coordination Act, the Service has the responsibility to recommend compensation for the loss of fish and wildlife resources. The Act does not restrict compensation to in-kind compensation. By recommending out-of-kind compensation under certain circumstances, the Service increases the range of options that developers may use to mitigate project impacts to include development and improvement of marginal resources different from those lost. However, modifications have been made in the policy to indicate that in-kind replacement is preferred for source Category 3.

Comment: The mitigation goal for resource Category 3 should emphasize that in-kind habitat value replacement is preferable to out-of-kind replacement.

Response: We agree. This point has been brought out in the final policy statement.

Comment: Although out-of-kind placement is acceptable for Resource Category 3 losses and, under certain circumstances, may be accepted for resource Category 2 losses, the policy should advise against replacement of rare habitat types for more common habitat types.

Response: We agree with the commentor's point and expect that service field personnel will recommend mitigation alternatives that incorporate this concept, to the extent practicable. The Service is entirely in favor of preserving and/or promoting habitat diversity. No changes were necessary.

- ***Resource Categories 4 and 5***

Comment: Compensation should be included as a means for satisfying the mitigation goal for Resource Category 4.

Response: Appropriate language changes have been made to allow for such recommendations.

Comment: Habitats encompassed by resource Categories 4 and 5 are the only areas wherein significant increases in fish and wildlife can be realized through habitat improvement. Yet, the mitigation goals for these categories allow continual loss of these areas which possess great potential for improvements in carrying capacity.

Response: The Service appreciates the significance of areas with relatively low existing habitat values with respect to their potential for carrying capacity improvements. In fact, the Service may recommend improvement of these areas' habitat values to mitigate for unavoidable losses in Resource Categories 2 and 3. In addition, where these areas are included in a project planning area and are not appropriate or mitigation efforts, the Service will recommend that all opportunities for enhancement of these areas be thoroughly considered and included in project plans, where practicable.

We have amended the policy to include the above guidance.

Comment: Resource Category 5 is confusing and unnecessary. All habitat has some value, no matter how low. It should be redefined or deleted.

Response: We agree. This resource category has been deleted from the final policy.

C. Mitigation Planning Procedures

1. *Mitigation Goals*

Comment: Developers, Federal resource agencies, and the public should participate with the Service and State agencies in making Resource Category determinations and in developing mitigation proposals.

Response: Developers, as well as other members of the public, may provide information that will assist the Service in making Resource Category determinations. This opportunity has been noted in the final policy statement. Moreover, where these parties' inputs will significantly aid in development of mitigation proposals that will adequately satisfy mitigation planning goals, the Service will welcome their input.

Comment: It is hoped that reclassification of habitats in Resource Category 3 to Resource Categories 2 or 1 can be readily employed if and when certain habitats become more scarce.

Response: Resource Category determinations are made on the basis of conditions likely to occur without the project. If those conditions later change, the Resource Category of a given habitat can be redetermined.

However, once a mitigation plan in connection with a given project has been agreed upon, the U.S. Fish and Wildlife Service will not provide new or additional recommendations except under limited circumstances as outlined in the policy under the scope section.

2. *Impact Assessment Methods*

Comment: The policy does not appear to recognize that development activities may also show positive environmental effects. For example, cleared spaces beneath power lines can provide browsing areas for wildlife. Such positive effects should be factored into the mitigation assessment process.

Response: We agree. This point has been included in the final policy statement. The final policy further indicates that the Service and other State and Federal resource agencies shall make the determination of whether a biological change constitutes a beneficial or adverse impact. However, when determining mitigation needs for a planning area, the Service will utilize these policy guidelines to determine whether these positive effects can be applied towards mitigation.

Comment: The draft policy indicates "no net loss" as a goal for certain Resource Categories but it is unclear in defining the time period allowed to restore the land to its original value as in the case of strip mining operations. Maintenance of "no net loss" throughout the life of a long-term operation is not possible.

Response: The policy states that the net biological impact of a specific project proposal is the difference in predicted habitat value between the future with the action and the future without the action. This is based on the procedures established by the Water Resources Council's Principles and Standards. The future with the project determination includes consideration of losses during the life of the project. Under the policy, if the disturbed habitat is of sufficient value for evaluation species to warrant a Resource Category 2 or 3 level determination, the Service will provide recommendations for "no net loss" over the life of the project. The ability of the project sponsor to achieve this goal depends on many factors that cannot be predicted in advance. In many cases, it will be possible to achieve this goal. No change was necessary.

Comment: The with and without analyses should make allowances for human activities and natural species successions which can reasonably be expected to take place in the project area.

Response: We agree. Appropriate changes have been made in this policy.

Comment: Many commentors disagreed with the emphasis place don the Habitat Evaluation Procedures (HEP) within the Service policy statement. Some commentors felt it should be de-emphasized, whereas others felt it deserved further emphasis.

Response: Although references to the more technical aspects of HEP have been deleted, the methodology itself remains on e of the Service's more important impact assessment tools. The policy does not recommend exclusive use of HEP, since time or resource constraints may, in some cases, show alternative methods to be more practical. Where HEP habitat value assessments do not fully capture important biological characteristics within a planning area, Service personnel will use supplemental data, methodologies, and/or professional judgment to develop appropriate mitigation proposals.

Comment: What are the "other habitat evaluation systems" alluded to in the policy's section on impact assessment methods? This reference is very vague.

Response: Other systems can include the Habitat Evaluation System (HES) developed by the Department of the Army, and the Instream Flow Incremental Methodology (IFIM) of the U.S. Fish and Wildlife Service. Additional systems are referenced by the Water Resources Council in a draft document entitled, "Analysis of Wetland Evaluation Procedures" and other publications. This information is not appropriate for inclusion into the policy so no change was made.

Comment: If other methodologies are found to be more appropriate for use than the Instream Flow Incremental Methodology (IFIM) for measuring flow impacts, they should be used.

Response: We agree. The final policy does state, however, that consideration should be given to the use of the IFIM.

Comment: Hopefully, this policy will stop the piecemeal destruction of valuable habitat, especially in areas like the Florida Keys where insidious lot-by-lot development continues in low wetland sites with the concurrence of the U.S. Fish and Wildlife Service.

Response: The Service does not concur with piecemeal development where significant resource losses will occur. Cumulative impacts are addressed by this policy. The Service is sensitive to this loss of habitat and will seek mitigation consistent with this policy. No change was necessary.

Comment: Population information should be included as an additional factor in determining mitigation requirements.

Response: We agree. Although population mitigation was an implicit part of the proposed policy, further language clarifying this point has been added to the final policy statement.

Comment: Professional judgment should be used as an alternative method for assessing project impacts.

Response: We agree that this is a valuable method that has been in use for many years. It is difficult to improve on informed and considered scientific judgment by an expert. The Service will continue to rely heavily on this approach. The policy was changed to reflect this emphasis.

3. *Mitigation Recommendations*

Comment: Service recommendations should be timely.

Response: The proposed and final policy specifically require Service personnel to present mitigation recommendations "... at the earliest possible stage of project planning to assure maximum consideration." This point has been echoed throughout Service management documents. Service personnel can generally provide timely guidance provided developer make a point of notifying them of proposed projects still in the planning stage and provided Federal action agencies supply sufficient transfer funding with which to conduct environmental investigations. Under Section 2(e)(of the Fish and Wildlife Coordination act, Federal action agencies are authorized to transfer funds to the Service "... as may be necessary to conduct all or part of the investigations required to carry out the purposes of ... (Section 2 of the Act)." The Service uses these transfer funds to conduct project-specific investigations.

Comment: Requiring field biologists to consider cost-effectiveness in providing mitigation recommendations is beyond their capability and may conflict with the lead agencies' role as the determiner of overall public interest. Habitat protection should be a higher priority than cost-effectiveness.

Response: The proposed policy did not require a cost-effectiveness analysis by Service biologists in a formal sense. We fully agree that Service personnel must perceive their responsibility to be analysis and recommendations based on the biological aspects of project proposals. There is no intent to require Service biologists to do a formal economic analysis for which they are not trained nor for which there is clear legislative direction. However, the Service has a responsibility to the public to give consideration to cost while recommending ways to conserve fish and wildlife. The policy has been changed to reflect this need for consideration of other factors.

Comment: The Federal action agency should have the option of non-Service expertise to develop mitigation measures in those instances where the Service cannot meet lead agency program requirements.

Response: Although the Service cannot prevent other agencies from utilizing biological expertise from non-Federal sources to develop mitigation plans, the Fish and Wildlife Coordination Act specifically authorizes the Secretary of the Interior to prepare a report and recommendations on the fish and wildlife aspects of projects, including mitigation. This report and recommendations are to receive "full consideration" by the development agency. If the federal action agency involves the Service early and provides sufficiently transfer funds, then the Service should be able to meet their needs. No change in the policy was necessary.

Comment: Several mitigation proposals should be prepared for each alternative structural or non-structural plan.

Response: The Service is willing to prepare multiple proposals provided funds and time area available.

Comment: Some commentors felt that concurrent and proportionate funding of mitigation may not always lead to optimal mitigation and should not be a rigid requirement. Other commentors strongly supported concurrent and proportionate funding.

Response: The Water Resources Council's Principles and Standards require "... *at least* concurrent and proportionate implementation with other major project features, except where such concurrent and proportionate mitigation is physically impossible" (emphasis added).

We agree with the Council, and endorse expenditure of funds at an earlier stage of project planning when this will lead to more effective mitigation. Appropriate changes to the policy on this matter have been made.

Comment: Mitigation costs should include the cost of managing the acquired land for the life of the project, and the value of present and future timber and crops on acquired land. In addition, an environmental benefit/cost analysis should be developed for each project, and Congress should not authorize a project unless the project plan includes the proposed mitigation program and all its costs, including the cost of lost timber productivity and other resources.

Response: Costing of projects is determined by the Water Resource Council's Principles and Standards and is therefore beyond the jurisdiction of this policy. We point out that Service policy does not preclude timber harvest or other resource recovery operations on mitigation lands when the activity is compatible with fish and wildlife management objectives.

Comment: The Service mitigation policy should more clearly note that fee-simple land acquisition should be a measure of last resort.

Response: The policy statement has undergone further modification to more clearly stress the conditions when land acquisition is to be recommended by Service personnel. In the future, the Service will place far greater emphasis on developing mitigation recommendations that avoid, minimize, or rectify impacts in order to reduce the need for compensation lands. Amplification of this point may be seen in the section on mitigation planning procedures.

Comment: If some interest in land must be acquired, areas of marginal productivity should be considered first. Such underdeveloped land would benefit from better management of its productive capacity and respond more vigorously than land already at higher levels of production.

Response: We agree that special consideration should be given to marginal lands, and have changed the policy accordingly.

Comment: Who owns land acquired for mitigation purposes?

Response: Depending on the individual circumstances of the project, land acquired through fee-simple title is usually owned either by the Federal or State government and administered by appropriate Federal or State resource agencies. Where wildlife easements are acquired, the land belongs to the property owner, and the easement right to the Federal or State government.

Comment: The policy should require Service personnel to identify the authority to be used in implementing any mitigation recommendations that are made.

Response: The final policy clearly identifies the legal authorities under which the Service is expected to develop mitigation recommendations. In addition, the policy only applies to Service recommendations and is not an instrument directing legal research in individual circumstances. It would be inappropriate to instruct our personnel to identify the implementing authority for the development agencies which are fully aware of the authorities available to implement Service recommendations. In the case of projects to be authorized by Congress, authorities to implement mitigation can be, and increasingly have been, spelled out.

Comment: The policy neglects to indicate the necessary process if an agency does not agree with Service mitigation recommendations.

Response: This process has already been established for most Federal agencies. If the project planners and the Service field office cannot agree on a modified or substitute proposal for mitigation, the matter often is referred upwards to the next highest level. Higher management levels are then generally able to resolve the issue quickly, although the Federal action agency has the final say. No change was necessary.

Comment: Mitigation recommendations should ensure that habitats which are preserved are adequate in size and contiguous to ensure species survival and ecosystem functioning.

Response: We agree. This point has not, however, been added to the policy since it is standard operating procedure at the field level.

Comment: Improvement of public use prospects within a project area should not be considered mitigation for habitat value losses. Development of public access is legitimate mitigation only when public uses are lost as a result of project action.

Response: We agree. Construction of public access facilities does not replace habitat lost or degraded and may even reduce wildlife habitat and invite degradation by making an area more accessible to more people. Construction of public use facilities may be in the public interest but should not be disguised as mitigation for loss or degradation of wildlife habitat. This point has been added to the policy.

4. *Follow-up*

Comment: The Service should imitate post-project evaluation studies, as well as encourage, support, and participate in these studies.

Response: We agree and will do so within the constraints of time, personnel and cost. The Service will initiate, additional follow-up studies when funds are provided b the Federal action agency. The policy has been changed to reflect this.

Comment: Follow-up studies must be designed so as to separate the effects on fish and wildlife populations of implementing mitigation recommendations from other causes of changes in species numbers. This has not been the case in past studies.

Response: We agree in principle, but point out that this is a very difficult task technically, and that the conclusions in this regard rarely withstand vigorous analysis.

Nonetheless, distinguishing the true causes of population changes should be one of the goals of the follow-up study.

Comment: The policy should indicate what actions would occur if post-project evaluation shows mitigation recommendations are not being achieved as agreed to by the developer.

Response: We agree. The policy now includes provisions instructing Service personnel to recommend corrective action in such situations.

Appendix A

No significant comments.

Appendix B

Comment: Why not include more intensive management of remaining habitat as a way of reducing net habitat loss?

Response: We agree, and have modified the policy accordingly in the Means and Measures section, which as since been integrated into the body of the final policy.

The section clearly places priority on increased habitat management as a means of replacing habitat losses, and additionally stresses use of existing public lands to accomplish these ends.

Comment: A mitigation recommendation of "no project" is not logical or valid as a mitigation measure.

Response: The Council on Environmental Quality's definition of mitigation, which has been adopted in this policy, clearly states that mitigation includes "… avoiding the impact altogether by not taking a certain action or parts of an action …" Obviously, a mitigation recommendation of "no project" falls under this subset of the definition, since a project's impact can be avoided altogether by a decision not to construct a project.

Appendix C

Comment: The definition of the word "practicable" should be amended to denote that the burden of identifying alternative mitigation measures and of conducting a searching inquiry into their practicability rests with the Service as well as the Federal action agency.

Response: The policy indicates that the Service will strive to provide mitigation recommendations that represent the best judgment of the Service on the most effective means and measures to achieve the mitigation goal, including consideration of cost.

Comment: A definition for "developments" (as used in Section V.A., "General Principles") should be provided in Appendix C.

Response: "Development" is a general-purpose term encompassing those activities falling under the scope of Service mitigation authorities cited within this policy. For example, if timber harvesting activities require preparation of an EIS, or involves waters of the U.S. and requires the issuance of a Federal permit or license, the Service would provide mitigation recommendations consistent with the policy.

NATIONAL ENVIRONMENTAL POLICY ACT REQUIREMENTS

The Service has prepared an Environmental Assessment of this final policy. Based on an analysis of the Environmental Assessment, the Director of the U.S. Fish and Wildlife Service has concluded that the final action is not a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347). Thus the policy does not require an Environmental Impact Statement (EIS).

The Environmental Assessment and Finding of No Significant Impact will be furnished upon request.

REGULATORY ANALYSIS

This policy statement has been issued in conformity with the Department of the Interior's rulemaking requirements, which apply to actions meeting the broad definition of a rule set forth in the Administrative Procedures Act, 5 U.S.C. 551(4) and 43 CFR Part 14.2(e) (1980). This statement is not intended to be judicially enforceable. It will not be codified. It does not create private rights. It only guides internal Service administration and is not to be inflexibly applied by Service personnel. The Department had previously determined that the proposed policy was not a significant rule and did not require a regulatory analysis under Executive Order 12044 and 43 Part 14. No significant changes were made in the final policy that required a new determination.

ACKNOWLEDGEMENTS

The primary author of this final policy is John Christian, Leader, Policy Group—Environment, U.S. Fish and Wildlife Service, (202) 343-7151. Primary support for policy development was provided by policy analyses Nancy Chu, Scott Cameron, and Peter Ciborowski; and Ecological Services Washington Office and field personnel. Manuscript preparation was accomplished by Roberta Hissey, Karen Baker, Carol Prescott, and Jinethel Baynes.

Accordingly, the mitigation policy of the U.S. Fish and Wildlife Service is set forth as follows:

The policy is online at http://www.fws.gov/r9dhcbfa/hpmpol.htm

US EPA Region 10
404 Mitigation Policy

Purpose and Need

This document establishes EPA Region 10 policy on mitigating adverse environmental impacts of projects permitted under Section 404 of the Clean Water Act (33 U.S.C. §1251 et seq.). This policy will: (1) help ensure consistent mitigation recommendations, allowing the Corps of Engineers and 404 applicants to anticipate EPA recommendations and plan for mitigation early in the permit process; (2) help avoid project delays and ensure proper consideration of aquatic resources prior to 404 application submittals; (3) provide guidance to Region 10 personnel during project review. This policy incorporates sufficient flexibility to allow variations in mitigation recommendations as required by differences in individual project proposals. This mitigation policy will be modified as necessary to reflect compliance with new laws, national EPA policy or significant new information.

Authority

This policy is established in accordance with the following major authorities:

A. Clean Water Act (33 U.S.C. §1251 et seq.)

1. Section 1251: "The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter …

   (1) It is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985 …."

B. The §404(b)(1) Guidelines (40 CFR Part 230) developed pursuant to §1344(b)(1) of the Clean Water Act.

1. 40 CFR §230.1(c): "Fundamental to these Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem, unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern."

2. 40 CFR §230.10(a): "… no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem …"

3. 40 CFR §230.10(b): "No discharge of dredged or fill material shall be permitted if it … causes or contributes … to violations of any applicable state water quality standard; … Jeopardizes the continued existence of species listed as endangered or threatened, or results in likelihood of the destruction or adverse modification of a habitat which is determined … to be critical habitat.

4. 40 CFR §230.10(c): "… no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States."

5. 40 CFR §230.10(d): "… no discharge of dredged or fill material shall be permitted unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem …"

C. The National Environmental Policy Act (42 U.S.C. §4321 et seq.) states, in part, "The Congress authorizes and directs that, to the fullest extent possible … all agencies of the Federal Government shall … Identify and develop methods and procedures … which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations …"

D. Environmental Protection Agency Statement of Policy on Protection of Nation's Wetlands (38 FR 10834; March 10, 1973):

> "Policy (b) It shall be the Agency's policy to minimize alterations in the quantity or quality of the natural flow of water that nourishes wetlands and to protect wetlands from adverse dredging or filling practices, solid waste management practices, siltation or the addition of pesticides, salts, or toxic materials arising from nonpoint source wastes and through construction activities, and to prevent violation of applicable water quality standards from such environmental insults."

Scope

This policy applies to all EPA Region 10 reviews of activities permitted by the Corps of Engineers under §404 of the Clean Water Act (33 U.S.C. §1344) and to EPA review of any other projects involving the discharge of dredged or fill material into waters of the United States. This policy, however, will not be used to approve permits for discharges of dredged or fill material which will cause or contribute to significant degradation of the waters of the United States, consistent with the requirements of 40 CFR §230.10(c) or for projects not otherwise in compliance with the §404(b)(1) Guidelines.

Definition

EPA Region 10 hereby adopts the definition of mitigation given in the CEQ regulations at 40 CFR §1508.20:

"Mitigation includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensation for the impact by replacing or providing substitute resources of environments."

Mitigation Policy Statement

EPA Region 10 will actively promote and support mitigation for all projects subject to Section 404 of the Clean Water Act, in accordance with the hierarchical system envisioned in the CEQ regulations (§1508.20), the U.S. Fish and Wildlife Service Mitigation Policy, the §404(b)(1) Guidelines (40 CFR §230.10), EPA national policy and the policy set forth below. Recommendations will be consistent with, but not limited to, the mitigative actions specified in subpart H of the §404(b)(1) Guidelines (40 CFR §§230.70-230.77). All mitigation plans must be implemented prior to or simultaneous with any construction activities.

I. EPA will seek mitigation in the following sequence:

A. EPA will actively promote project alternatives which avoid all adverse environmental impacts associated with the proposed action, consistent with 40 CFR §230.10(a). For proposed discharges of dredged or fill material for nonwater-dependent activities in special aquatic sites, the burden of proof shall be on the applicant to demonstrate that practicable, less environmentally damaging alternatives are not available. For all other proposed discharges, EPA will request information demonstrating the proposed action is the only available practicable alternative. In the absence of this information, EPA will recommend denial or modification of the §404 permit.

B. EPA will actively promote alternatives which reduce or minimize adverse environmental impacts. This may include recommendations to reduce the amount and extent of fill (or dredging), and to modify the timing and methods of construction.

C. For unavoidable adverse environmental impacts in waters of the United States, EPA will actively promote and support compensation by complete, in kind replacement of aquatic site functional values or the provision of substitute resources or environments of equal or greater value. In developing recommendations, EPA will give great weight to the resource categories and mitigation goals listed in the mitigation policy of the U.S. Fish and Wildlife Service (Federal Register, vol. 46, no. 15, pages 7644-63, January 23, 1981).

II. EPA will recommend no net loss of aquatic site functional value for all projects. EPA will actively promote and support in kind aquatic site replacement in close proximity to the project site. Functional values will be calculated using the Habitat Evaluation Procedures of the U.S. Fish and Wildlife Service (1981 or as subsequently amended), the Method of Wetland Functional Assessment of the Federal Highway Administration (March 1983 or as subsequently amended), any subsequent professionally-recognized aquatic site assessment document and/or the best professional judgment of designated representatives from EPA and appropriate state and federal resource agencies. While EPA will seek a one-for-one aquatic site functional values replacement, this may often translate into a greater than one-for-one acreage ratio because: (1) success rates of creation, enhancement and restoration projects are often less than 100% and (2) there is a transition interval for creation and enhancement projects before they fully provide their intended functions. There may also be circumstances under which a replacement acreage ratio of less than one-for-one is acceptable due to the higher functional values of the replacement aquatic site.

III. EPA will actively promote the inclusion of mitigation as an integral part of projects permitted under §404 of the Clean Water Act, either as part of the project description or as a condition of the §404 permits unless it is clear that the permitting authority (the State or Corps of Engineers) can revoke or suspend the permit for failure to implement the acceptable mitigation. EPA will consider elevation under §404(q) of the Clean Water Act for all projects proposed for permitting by the State or Corps of Engineers, which do not meet the mitigation requirements of the §404(b)(1) Guidelines or this policy.

IV. EPA will require information as delineated in 40 CFR §230.11 in order to evaluate the environmental impacts of and mitigation required for dredge and fill projects. EPA will then evaluate project compliance with the §404(b)(1) Guidelines. If the project does not include appropriate and practicable steps to minimize potential adverse impacts on the aquatic ecosystem, EPA will recommend denial of the §404 permit and shall state the reasons, in writing, to the permitting authority and the applicant. Where feasible, EPA will also recommend steps that may be taken to bring the project into compliance with the §404(b)(1) Guidelines, including appropriate mitigation.

V. EPA will automatically consider prohibiting the specification of the area as a disposal site pursuant to §404(c) of the Clean Water Act and, when appropriate, shall prepare the reports necessary for taking such action for aquatic sites with significant resource values (e.g., U.S. Fish and Wildlife Service Resource Category I; local, tribal, state or federally designated significant aquatic habitats; and EP identified high priority aquatic sites). The Regional Administrator will recommend action under §404(c) unless it can be demonstrated that the discharge of dredged or fill material will not have unacceptable adverse environmental impacts.

VI. EPA will maintain sufficient flexibility in its approach to allow for innovative solutions to compensate for unavoidable adverse impacts. In some circumstances, it may be desirable from an ecological perspective to mitigate one kind of aquatic site functional loss with a different aquatic site functional gain. The final recommendation will favor that alternative or mitigation plan which provides the greatest benefits to the functional values of the aquatic site.

VII. EPA does not subscribe to any resource value tradeoff calculation that may be provided in the scientific or regulatory literature. The ecological characteristics of each aquatic site are unique and can only be mitigated by resource value judgments tailored to the site. EPA will cooperate with other resource agencies in developing site-specific mitigation plans and will abide by mitigation decisions made by resource agency representatives, provided such decisions are consistent with the §404(b)(1) Guidelines and other statutory or regulatory requirements. EPA may recommend different or additional mitigative actions.

VIII. EPA will use where feasible the following functions and values in assessing project impacts and requiring compensation:

- Groundwater Recharge and Discharge
- Flood Storage and Desynchronization
- Shoreline Anchoring and Dissipation of Erosive Forces
- Sediment Trapping
- Nutrient Retention and Removal
- Food Chain Support
- Habitat for Fisheries
- Habitat for Wildlife
- Active Recreation
- Passive Recreation and Heritage Value

IX. EPA will actively pursue, through its authority under sections 308 and 309, mitigation and appropriate penalties for violations of §301 of the Clean Water Act in the following sequence:

A. Complete site restoration (removal of dredged or fill material with appropriate functional value replacement) and civil or criminal penalties.

B. Creation of a functionally equivalent aquatic site nearby (on-site, in-kind replacement) with civil or criminal penalties.

C. Creation of a functionally equivalent aquatic site or other aquatic site (out-of-kind replacement) at a distant (functionally separated) site with civil or criminal penalties. Recommendations may include aquatic site enhancement in conjunction with or in lieu of aquatic site creation.

D. Contribution to a mitigation banking fund of sufficient magnitude to purchase an aquatic site of comparable quality (i.e., functional value) to that lost to the unauthorized fill, with civil or criminal penalties.

E. Appropriate civil or criminal penalties. The magnitude of the penalty should be based upon the value of the lost resource and the previous knowledge of the applicant. Where feasible, resource values will be based upon the contribution of the aquatic site over its natural lifetime to ecosystem functioning.

X. EPA will actively promote and support monitoring and maintenance for all mitigative actions for aquatic site creation, enhancement or restoration. The period of monitoring will be determined on a case-by-case basis in consultation with appropriate state and federal resource agencies, and will be of sufficient length to adequately assess, and assure project success.

XI. EPA will actively promote and support site restoration for abandoned projects in order to minimize long-term adverse environmental impacts. Recommended actions could include, but are not limited to, fill removal, vegetative plantings, fish restocking, and creation of functionally equivalent wildlife habitat. Site restoration must be a part of the project, a condition of the permit or the subject of an agreement between the applicant and an appropriate state or federal resource agency.

XII. EPA will actively promote and support pre-permit mitigation agreements between applicants and appropriate state and federal resource agencies for projects otherwise in compliance with the §404(b)(1) Guidelines. These agreements must provide for complete replacement of aquatic site functional values. EPA will recommend that such agreements be made a condition of the §404 permit.

XIII. EPA will actively promote and support the preservation of existing aquatic resources separate from any specific project proposals. When reviewing projects for compliance with the §404(b)(1) Guidelines, preservation of aquatic resources will not be considered mitigation for aquatic functional values to be damaged by construction projects. Such a policy would sanction an irretrievable net loss of aquatic resources.

XIV. EPA will actively promote and provide technical support for research on unproven but promising mitigation methods.

XV. EPA will recommend pilot studies for any mitigative action which has not been scientifically demonstrated to be successful and/or about which there is significant resource agency uncertainty. The pilot studies must be completed, the results reviewed, and the mitigation plan accepted as viable by EPA and appropriate state and federal resource agencies before EPA will agree to the proposed discharge.

XVI. EPA will recommend and actively promote the fee title transfer of mitigation sites to the state or federal resource agency with management responsibility for the created or preserved aquatic resource.

XVII. EPA will actively promote and support mitigation banking and will provide technical assistance to federal and state agencies seeking to establish a banking program. EPA will not support the use of a mitigation bank to justify a project which is not otherwise in compliance with the §404(b)(1) Guidelines.

XVIII. EPA will coordinate mitigation activities with the U.S. Fish & Wildlife Service, the National Oceanic and Atmospheric Administration Fisheries, the Corps of Engineers, and appropriate tribal, state and local agencies in order to maximize consensus and avoid duplication of effort.

XIX. EPA will work with the Corps of Engineers and appropriate federal, state, tribal and local agencies to identify in advance acceptable dredged material disposal sites and appropriate mitigation pursuant to 40 CFR §230.80.

XX. EPA will actively promote pre-application conferences and field inspections to develop acceptable mitigation proposals, including the exploration of reasonable alternatives which avoid or minimize adverse environmental impacts on the aquatic ecosystem.

(original signed by person named below)	September 4, 1985
Ernesta B. Barnes	Date
Regional Administrator	

March 1990

Effective Date

(original signed by person named below) August 1, 1990
Secretary of Transportation

Washington State Department of Transportation
Protection of Wetlands Action Plan

I. Introduction

A. Purpose

To provide policy and guidance for the protection and preservation of wetlands; to ensure no net loss of wetlands caused by department actions; and to increase the quantity and quality of wetlands in the long term.

B. References

1. Executive Order 89-10, "Protection of Wetlands," December 11, 1989

2. Executive Order 90-04, "Protection of Wetlands" April 21, 1990

3. Environmental Procedures Manual 31-11, Section 3-2

C. Definitions

1. *Buffers*: Buffers are areas that surround a wetland and provide protection from adverse impacts to the integrity and value of a wetland and its ecosystems. Wetland buffers:

   a. Moderate the rate and volume of surface water runoff into wetlands;

   b. Stabilize soil and prevent erosion and sedimentation in wetlands;

   c. Filter suspended solids, nutrients, and harmful or toxic substances;

   d. Protect wetland wildlife habitat diversity and/or integrity;

   e. Minimize adverse human impacts in wetlands.

2. *Mitigation*: Mitigation is an established environmental impact minimization process. The theme of mitigation policies underscores

avoidance of adverse impacts as a preference, since avoidance has the greatest reliability and is the simplest and most effective way to minimize wetlands impacts.

In the following order of decreasing preference, mitigation is:

a. Avoiding the impact altogether by not taking a certain action or part of an action;

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

f. Mitigation monitoring is evaluating the development of a constructed resource to determine its rate of maturity in replacing the function and value of the impacted resource and taking appropriate corrective measures. Mitigation for individual actions may include a combination of the above measures; (EO 90-04, Section 12).

3. *Wetland Inventory*: A wetlands inventory is a data collection process during which information about the presence, approximate extent, and in some cases the characteristics of wetlands are collected. Inventories can be general (i.e., aerial photographs) or site-specific (through field inventory work).

4. *Wetlands*: For purposes of implementing the policies as stated in the Executive Order(s) (EO), the wetland definition of the U.S. Fish and Wildlife Service is used.

   "Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must have one or more of the following attributes: (1) at least periodically, the land supports predominantly hydrophytes, (2) the substrata is predominantly undrained hydric soil, and, (3) the substrata is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year."

The definition includes: swamps; marshes, bogs, ponds, stream beds, riparian corridors, mudflats, pools, other unvegetated wetlands, open water areas, coral reefs, vegetated shallows, riffle pools, and other aquatic habitats. For regulatory purposes, the definition in M 31-11, "Environmental Procedures Manual" applies.

II. Policy

It is WSDOT's policy to provide cost-effective, safe, efficient, dependable and environmentally responsive transportation facilities and services.

WSDOT policy is to avoid, where practical, any activities that would adversely affect wetlands in designing, constructing, and maintaining the state transportation system. Where it is not possible to avoid wetlands, WSDOT will take appropriate action to minimize wetland impacts and to adequately mitigate impacts that cannot be avoided.

WSDOT supports the goals of the Governor's Executive Order 89-10, "Protection of Wetlands," dated December 11, 1989. The interim goal of the executive order is "To achieve no overall net loss in acreage and function of Washington's wetlands resource base." A long-term goal of the executive order is to increase the quantity and quality of Washington's wetlands resource base. WSDOT recognizes the importance of wetlands as a unique and valuable component of the state's natural environment. As the manager of over 100,000 acres of land in the state transportation system, WSDOT reaffirms its responsibility to protect and preserve wetlands in and adjacent to those lands. WSDOT will continue to plan and conduct its activities to lessen the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

In compliance with the Governor's Executive Order 90-04, Section 13, WSDOT adopts the statewide policies and standards on wetlands rating system, mitigation buffers, restoration, and enhancement as a part of the State Environmental Policy Act (SEPA) (WAC 468-12) to the extent legally permissible. The adopted policies shall be applied where appropriate to all licenses, permits, approval, grants, and department actions undertaken.

In compliance with Section 7 of the EO, WSDOT, within available resources, shall use its authority to assist in implementing applicable portions of the Puget Sound Plan wetlands program as developed by the Puget Sound Water Quality Authority (PSWQA) in compliance with Section 7 of the EO.

Elements of WSDOT's implementation plan include: developing methods and procedures for inventorying wetlands on its transportation properties, doing physical inventorying of wetlands; researching wetland mitigation methods; using wetland banking to achieve a net increase in wetlands; entering into cooperative agreements with resource agencies; and conducting training and public awareness programs.

A brief report will be given to the Governor's Office by WSDOT annually, describing the Action Plan tasks completed, and discussing major milestones, problem issues, and new strategies to meet the desired goals. The first report will be submitted by June 30, 1991.

Nothing in this action plan shall apply to: emergency work that is essential to save lives or protect property and public health and safety; and artificial wetlands created in roadside ditches.

III. Responsibilities

A. Assistant Secretary for Program Development

Develop the department's Wetland Protection Action Plan and its implementing procedures.

B. Assistant Secretaries for Marine Transportation and Operations; District Administrators

Implement provisions of Executive Order 89-10 and department's Action Plan and Procedures in the design, construction and maintenance activities of the department (see Appendix 1).

IV. Appendices

1. Action Plan for Implementation of Protection of Wetlands

Appendix 1
Action Plan for Implementation
of Protection of Wetlands

Program Development

I. Impact Identification

The following is a list of program development activities that could adversely impact or reduce the effectiveness of a wetland:

a. Proposed project activities.
b. Unresponsiveness to national and state legislation, regulations, and trends.

II. Implementation

Wetland Inventory

a. Action: Conduct an inventory of wetlands within and abutting highway right of way and department owned capital facilities using the standards and strategies developed by Ecology.
b. Timeline: Complete inventory by June 1995.
c. Contact: Department Biologist.
d. Coordination: State and federal resource agencies and local agencies and applicable department divisions.

Project Prospectus

a. Action: Identify potential wetland impacts at project scoping stage and document in project prospectus.
b. Timeline: Project scoping stage.
c. Contact: District Project Development Engineer.
d. Coordination: Biologist and District Environmental Coordinator.

Agency SEPA Policy

a. Action: Revise WAC 468-12 to adopt to the extent legally permissible the statewide policies on wetlands developed by Ecology in compliance with EO 90-04.
b. Timeline: December 1991.
c. Contact: Environmental Program Manager.
d. Coordination: Ecology.

Wetland Mitigation Banks

a. Action: Develop program and procedures for establishing wetland mitigation banks as mitigation for multiple small wetland impacts.
b. Timeline: June 1992.
c. Contact: Environmental Program Manager.
d. Coordination: Federal and State resource agencies and applicable local agencies and department divisions.

Wetland Management Agreements

a. Action: Where appropriate and cost-effective, establish cooperative management and maintenance agreements with resource agencies for management of WSDOT owned wetlands.
b. Timeline: December 1995.
c. Contact: Environmental Program Manager.
d. Coordination: State and local agencies and applicable department divisions.

Wetland Research

a. Action: Develop research proposals related to wetlands and transportation.
b. Timeline: July 1991.
c. Contact: Environmental Program Manager.
d. Coordination: Federal and state resource agencies.

Wetland Buffers

a. Action: Develop procedures to identify, establish, and protect buffer areas abutting wetlands according to standards developed by Ecology in compliance with EO 90-04, Section 13.
b. Timeline: July 1992.
c. Contact: Environmental Program Manager.
d. Coordination: Department of Ecology, districts, and applicable department divisions.

Wetland Education Programs

a. Action: Develop training programs for design, construction, and maintenance personnel on wetland values and department wetland policy. Actively communicate department policy and wetland preservation program to the public.
b. Timeline: June 1991.
c. Contact: Environmental Program Manager.
d. Coordination: State resource agencies and applicable department divisions.

Design

I. Impact Identification

The following is a list of highway design activities that could adversely impact or reduce the effectiveness of a wetland:

a. Location of new highways or realignment of existing highways within wetlands or buffer areas.
b. Fill placed in wetland or buffer zone to provide suitable foundation for highways or bridge approaches.
c. Excavation or fill that alters water table or flow to a wetland.
d. Damaging or eliminating essential vegetation in a wetland or designated buffer zone by widening lanes or safety improvements such as guardrail removal and/or slope flattening.

II. Implementation

Project Design Alternative Analysis

a. Action: Develop project design alternatives that take into consideration public health and safety while avoiding or minimizing direct or indirect impacts to or loss of wetlands.
b. Timeline: Include project biology reports, and environmental and design documents.
c. Contact: District Project Development Engineer.
d. Coordination: Resource agencies, Department Biologist, and District Environmental Coordinator.

Biology/Wetland Analyses and Reports

a. Action: Conduct biology/wetland analyses of projects likely to affect wetlands and develop recommendations for proposed mitigation of wetland impacts.
b. Timeline: Include in each project in proximity of wetlands.
c. Contact: Department Biologist.
d. Coordination: Resource agencies and applicable department divisions.

Environmental Documents

a. Action: Identify and quantify wetland impacts of alternatives and include a conceptual description of proposed mitigation.
b. Timeline: Include in each project affecting wetlands.
c. Contact: District Project Development Engineer.
d. Coordination: Resource agencies and applicable department divisions.

Project Design Documents

a. Action: Develop project designs that include best management practices including:
   - Preserving plant life within a wetland;
   - Using native erosion control mixes and plant materials;
   - Treating storm water runoff through grass swales and sedimentation ponds;
   - Driving piles for bridges or other structures from barges, work area platforms on filter fabric, or trestle to avoid permanent fills in wetlands.
b. Timeline: Include in each project design affecting wetlands.
c. Contact: District Project Development Engineer.
d. Coordination: Department Hydraulics Engineer and biologist, resource agencies and applicable department divisions.

Wetland Mitigation Plan

a. Action: Develop wetland mitigation plan to achieve the goal of no net loss of wetland functions and value.
b. Timeline: Prior to application of permits.
c. Contact: District Project Development Engineer.
d. Coordination: Resource agencies, Department Biologist, and applicable department divisions.

Permit Applications

a. Action: Incorporate detailed mitigation plan into permit application packages required when wetlands are affected for future construction or maintenance.
b. Timeline: Include in each project permit required for wetland impacts.
c. Contact: District Project Development Engineer.
d. Coordination: Department Biologist, permit agency, and resource agencies.

Land Management

I. Impact Identification

The following is a list of land management activities that could adversely impact or reduce the effectiveness of a wetland:

a. Disposing of surplus wetland properties.
b. No mapping of existing wetlands on WSDOT properties.
c. No procedure on dealing with disposition of wetlands.

II. Implementation

Wetland Preservation on Department Owned Properties

a. Action: Develop program and procedures for preserving wetlands on department owned properties surplus to department needs.
b. Timeline: June 1992.
c. Contact: Environmental Program Manager.
d. Coordination: Environmental Section, District Administrator, state resource agencies, applicable local agency, and other applicable department divisions.

Wetland Preservation Map

a. Action: Designate wetland properties to be preserved and retained in WSDOT ownership on right of way maps (e.g., surplus properties, capital facilities and sundry sites).
b. Timeline: December 1995.
c. Contact: Environmental Program Manager and Department Cartographer.
d. Coordination: State resource agencies and applicable department divisions.

Construction

I. Impact Identification

The following is a list of highway construction activities that could adversely impact or reduce the effectiveness of a wetland:

a. Filling in or wasting materials in wetland or buffer zones.
b. Significantly disrupting natural population of wildlife or eliminating habitat within the wetland by operation of equipment or location of the staging area.

c. Aggregate washing increasing sediment loading to the wetland.
d. Noise, air, or other impacts on wetland wildlife.

II. Implementation

Mitigation Implementation

a. Action: Follow wetland mitigation order of preference for construction activities in proximity of wetlands; i.e., avoid, minimize impacts, rectify impacts, reduce or eliminate over time, or compensate.
b. Timeline: Immediately.
c. Contact: Environmental Program Manager.
d. Coordination: Operations Engineer.

Disposal Sites

a. Action: Develop specifications and manage contracts to ensure upland sites are used by contractor for disposal of material.
b. Timeline: January 1991.
c. Contact: Roadway Construction Engineer.
d. Coordination: Environmental Program Manager.

Drainage Facility Construction

a. Action: Develop procedures and specifications to construct drainage ditches, culverts, and roadside contours for continued flow of water into existing or newly constructed wetlands.
b. Timeline: January 1992.
c. Contact: Roadway Construction Engineer and Environmental Program Manager.
d. Coordination: Applicable department divisions.

Pile Driving

a. Action: Develop procedures and contract specifications to require pile driving equipment within wetlands to be operated from barges, existing structures, work area platforms on filter fabric, or trestle as approved by permit agencies. Platforms and trestle must be removed after completion of work.
b. Timeline: January 1992.
c. Contact: Roadway Construction Engineer and Marine Terminal Construction Engineer.
d. Coordination: Environmental Program Manager and resource agencies.

Maintenance

I. Impact Identification

The following is a list of highway maintenance activities that could adversely impact or reduce the effectiveness of a wetland:

a. Filling or wasting with materials generated from ditch cleaning, pavement sweeping, shoulder repair, or other maintenance activity.
b. Revising drainage to modify or eliminate the water from a wetland.
c. Damaging or eliminating essential vegetation in a wetland or designated buffer zone by cutting, spraying, or grading.
d. Significantly disrupting natural population of wildlife within the wetland by operation of equipment or elimination of habitat.
e. Adversely altering nutrient levels of wetlands by introduction of runoff containing dead vegetation, fertilizers, pesticides, or other substances that may be detrimental.

II. Implementation

Mitigation Implementation

a. Action: Highway maintenance shall preserve, protect, and enhance wetlands within highway rights of way, and shall avoid adverse impacts unless there is no practical alternative. When maintenance activities result in adverse impacts, the mitigation shall follow the order of preference as defined under Mitigation (minimize impacts, rectify impacts, reduce or eliminate the impact over time, or compensate by replacing, enhancing, or providing a substitute).
b. Timeline: Immediately.
c. Contact: Chief Landscape Architect for Maintenance.
d. Coordination: All divisions, districts, outside agencies, and public interest groups.

Disposal of Waste Materials

a. Action: It is a policy of WSDOT Maintenance to dispose of waste materials, generated from ditch cleaning, pavement sweeping, shoulder repair, or other maintenance activities, in upland sites. Disposal of waste materials in wetlands, either on or off the right of way, shall not be allowed.
b. Timeline: Immediately.
c. Contact: Chief Maintenance Engineer.
d. Coordination: All districts, outside agencies, and public interest groups.

Roadside Management Planning for Protection of Wetlands

a. Action: It is a goal of the WSDOT Maintenance Office to develop Roadside Management Plans for all highways within the state. Recognition of wetlands along each roadside is an essential part of the roadside management process and shall be included in Roadside Management Plans along with special management requirements for maintenance and perpetuation of the wetlands.
b. Timeline: Start immediately, finish July 1998.
c. Contact: Chief Landscape Architect for Maintenance.
d. Coordination: All districts and department biologist.

4b:Dir 1

Implementing Agreement
between
The Washington State Department Of Transportation
and
The Washington State Department of Ecology
Concerning Wetlands Protection & Management

July 1, 1993

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Implementing Agreement
between
The Washington State Department Of Transportation
and
The Washington State Department of Ecology
Concerning Wetlands Protection & Management

I. Authority

This implementing agreement is being adopted pursuant to the Memorandum of Understanding (MOU) between the Department of Ecology (Ecology) and the Department of Transportation (WSDOT), dated August 4, 1988.

Ecology's responsibilities include statewide wetlands protection and management; the agency's regulatory authority derives from Sections 401 and 404 of the federal Water Pollution Control Act (the Clean Water Act), the federal Coastal Zone Management Act (CZMA), Chapter 90.48 RCW (Water Pollution Control), and Chapter 90.58 RCW (Shoreline Management Act of 1971). RCW 90.58.300 designates Ecology to administer the state responsibilities under the federal CZMA. Ecology is also responsible for overseeing implementation of the State Environmental Policy Act (SEPA – Chapter 43.21C RCW), which interacts with wetlands laws and regulations. Governor's Executive Order 81-18, revised in 1985, directs Ecology to be the state coordinator responsible for issuance of all state Water Quality Certifications under Section 401 of the federal Clean Water Act. Under the same Executive Order, Ecology is also responsible for the state's response on other activities under the federal Clean Water Act, National Environmental Policy Act (NEPA), and SEPA.

WSDOT is responsible for designing, constructing, and maintaining a safe, state multi-modal transportation system in a manner that complies and is consistent with environmental laws and regulations, including those pertaining to wetlands.

II. Purpose

The 1988 MOU states that the responsibilities of the two agencies require coordination of technical and environmental information to provide for a timely and efficient review of environmental documents and permit applications. Implementing agreements are intended as supplements to the MOU, to describe specific procedures to enhance coordination and cooperation.

WSDOT and Ecology recognize that this implementing agreement, which addresses only wetland protection issues, is one of several steps required to attain coordination and cooperation in all areas of environmental protection. Both agencies are committed to integrating stormwater control, habitat protection, fisheries, and other environmental issues into a coordinated procedure, either in subsequent agreements or through the appropriate permitting process(es).

The purpose of this implementing agreement is to clarify and promote interagency coordination in wetlands protection and management in the following areas: review of proposed projects, permit compliance, and wetland mitigation guidelines. This agreement includes guidelines for

standard information to be submitted with project proposals, which will allow for project review and permit decisions to occur in a timely manner. This agreement also institutes a wetlands training program to benefit staff from both agencies, and establishes a process for conflict resolution.

III. General Coordination Process

This section contains descriptions of the various meetings and field visits that will be used to effect interagency coordination in wetlands protection and management at the project level. The next section contains detailed procedures for coordination before, during, and after the permit application process.

To facilitate contacts between agencies, a list of staff positions involved in wetlands work, with telephone numbers, is included as Appendix A to this agreement. Normal procedure will be for WSDOT district staff to coordinate with Ecology Wetlands Section and Permit Coordination Unit staff assigned to the area where the project is located.* Section VII of this agreement outlines the procedure to be followed should the need arise to elevate contacts.

This agreement lists a series of meetings that will provide opportunities for staff from both agencies to review and discuss proposed projects that impact wetlands. In addition to these meetings, other contacts such as telephone calls and sharing of documents is encouraged.

The meetings progress from those that are general in nature and cover many projects, to meetings that are very specific, covering one, or a few, projects. The timing of the meetings provides sufficient time to revise a project if the wetland impact warrants a change, while still keeping the project on schedule. (It is understood that environmental concerns other than wetlands issues, if not addressed simultaneously, may affect the project's schedule.) The meetings are listed below in chronological order:

(a) **Biennial Project Review Meetings**: The purpose of these meetings is to discuss, in general terms, potential environmental impacts (including all wetland impacts) of proposed projects; and to provide an opportunity for resource agencies to supply information on affected resources that may influence a project's schedule or budget. These meetings will be held in even-numbered years when project prospectus and preliminary project budgets are being developed. The meetings are conducted by each WSDOT district, and attended by WSDOT staff from the headquarters Environmental Branch and district Project Development offices, Ecology Wetlands and Permit Coordination staff responsible for that area, and Shoreline Management Section staff. Staff from other resource management agencies may also attend. Ecology Permit Coordination staff will then brief other affected Ecology staff, if applicable.

(b) **Design Alternatives Meeting**: These meetings are held on an as-needed basis to discuss specific projects, and to revisit projects discussed earlier. The need for this meeting is based on the scope of the project and magnitude and type of wetland impacts. The

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* The Permit Coordination Unit within Ecology's Environmental Review Section is responsible for administering the water quality certification program pursuant to Section 401 of the federal Water Pollution Control Act.

wetland report prepared by WSDOT will be sent to Ecology for review prior to holding a design alternatives meeting. A field review and/or future meeting may be needed to complete the necessary coordination.

(c) **Pre-Application Meeting**: These meetings are held to review preliminary mitigation plan development and submittal of information needed by the Corps of Engineers and other agencies to make permit decisions. These meetings may be called by WSDOT, the Corps of Engineers, or Ecology, depending on project magnitude or type of permit. Other agencies, as appropriate, are invited to participate.

(d) **Pre-Construction Conference**: These meetings are held on an as-needed basis to discuss construction techniques for wetland creation, restoration, or enhancement, for individual projects. The need for such a meeting is based upon the degree of difficulty anticipated in constructing the wetland, the use of unconventional construction techniques, or contractor unfamiliarity with constructing wetlands. It is understood by the parties involved that this meeting is primarily for the benefit of the contractor, and that the contract cannot be changed. This meeting may be held as part of the WSDOT/Contractor Pre-Construction Conference conducted for all WSDOT projects, or it could be a separate meeting if the sub-contractor responsible for wetland construction has not been chosen by the time of the Pre-Construction Conference. If needed, the meeting will involve Ecology Wetlands and Permit Coordination staff responsible for the project area, and WSDOT district construction and biology staff.

IV. Project Coordination

The 1987 manual prepared by the U.S. Army Corps of Engineers for wetland delineation will be used for wetland projects requiring compliance with Sections 404 and 401of the Clean Water Act. Ecology requires use of the 1989 joint federal manual for wetland delineation for wetland projects requiring state approval under Chapters 90.58 RCW (the Shoreline Management Act) and 90.48 RCW (Water Pollution Control), or other applicable state laws.

The following procedure pertains only to wetland actions between WSDOT and Ecology. It is not meant to cover the coordination that is required with other Ecology programs, such as stormwater control or shorelands management, or with other state or federal agencies, and it does not pertain to non-wetland issues, even though these non-wetland activities may require a §401 water quality certification.

Appendix B is a flow chart entitled *Documents of the Project Development Process* that shows the engineering and wetland processes in parallel. This flow chart will serve as an aid in understanding the following procedure.

WSDOT	1.	WSDOT conducts the Biennial Project Review meeting (see above for more explanation).
Ecology	2.	Ecology attends the Biennial Project Review meeting.
WSDOT	3.	WSDOT submits the wetland inventory report to Ecology for review and comment. This report will be sent to Ecology when the following permits are required: §404 individual permit, §404 nationwide permit that needs

an individual water quality certification, or a shoreline permit. The report is submitted to the Ecology Wetlands Section, with a copy to the Ecology Environmental Review Section.

WSDOT 4. WSDOT conducts a Highway Design Alternatives meeting, if necessary (see above for more explanation). This meeting could be a conference call, or could be held in the field.

Ecology 5. Ecology attends the Design Alternatives meeting and provides written comments and recommendation on the wetlands inventory report and alternatives as soon as possible but within 30 days of the meeting. If a Design Alternatives meeting is not held, Ecology will respond within 30 days of receipt of the wetlands inventory report. This response may be a request for additional information or a request for a joint site visit. If Ecology requests additional information, Ecology will then have 15 additional days to comment after receipt of the information.

WSDOT 6. WSDOT submits the preliminary wetland mitigation plan with the wetland report and alternatives analysis to Ecology wetlands staff, with a copy to the Ecology Permit Coordination Unit, if a §404 permit is required, for review and comment.

Note: From this point on in the process, a distinction is made between §404 individual permits and nationwide permits requiring an individual water quality certification (WQC). The distinction is made because in the latter case, Ecology issues the public notice and coordinates the response to the project proposal. Also, it is understood that in both cases a project proposal can change between application submittal and issuance of the public notice.

Ecology 7.(a) If a §404 individual permit is required, Ecology Permit Coordination staff will respond within 45 days. During this 45-day review period, Ecology Permit Coordination staff will coordinate with other programs and agencies.

7.(b) If a §404 nationwide permit with an individual WQC is required, Ecology Wetlands staff will review the documents listed in No. 6 above, and respond in writing within 45 days.

The Ecology response may:

- Provide approval, conditional on the following factors: The preliminary mitigation plan package will not substantially change; the final detailed mitigation plan will adequately demonstrate the likely success of the mitigation project.
- Ask for more information.
- Ask for a pre-application meeting and/or field visit.

Both	8.	A pre-application meeting is held as needed. If an individual permit is required, the meeting may be conducted by the Corps of Engineers or WSDOT, depending upon the magnitude of project impacts. If the required permit is a nationwide permit with an individual WQC, the meeting will be conducted by the Ecology Permit Coordination Unit.
WSDOT	9.(a)	If a §404 individual permit is required, WSDOT submits the application to the Corps of Engineers with the final mitigation plan. A copy is sent to the Ecology Permit Coordination Unit.
	9.(b)	If a §404 nationwide permit with an individual WQC is required, WSDOT submits the permit application to the Ecology Permit Coordination Unit with the final mitigation plan. Ecology will issue the public notice within 5 working days of determining that the application is complete.
Ecology	10.(a)	If a §404 individual permit is required, the Permit Coordination Unit responds to the Corps of Engineers within 30 days of the Corps of Engineers Public Notice, either by issuing a Water Quality Certification and/or a CZMA consistency determination, or by requesting an extension. A request for extension may be necessary to: allow for review of additional information; meet requests of other state agencies; complete coordination with all Ecology programs and/or state agencies; and/or make a CZMA consistency determination. If an extension is requested, Ecology will notify WSDOT of the reasons for the request.
	10.(b)	If a §404 nationwide permit with an individual WQC is required, the Permit Coordination Unit will respond directly to WSDOT within 31 days of issuing the Public Notice. The response will either be issuance of the Water Quality Certification and/or determination of CZMA consistency, or a notification to WSDOT that unresolved issues still exist.
WSDOT	11.	WSDOT will coordinate with Ecology, and other agencies as necessary, to provide the information needed to address unresolved issues.
Ecology	12.	Under normal circumstances, the Ecology Permit Coordination Unit will issue the §401 Water Quality Certification to WSDOT as soon as possible after issuance of the Public Notice, but no later than within 120 days (for non-coastal counties) or 180 days (for coastal counties). (Note: The federal Clean Water Act authorizes states to issue §401 WQCs to §404 permits within a year of the Public Notice publication.) In those situations where Ecology is waiting for a local government to take action pursuant to the Shoreline Management Act, Ecology will issue the §401 WQC within 31 days of the local action for permitted uses, or within 31 days of the Ecology decision for Conditional Uses and Variances, if no appeals are filed. (The 31 days allow for the regulatory requirement of a 30-day appeal period under the state Shoreline Management Act and the CZMA consistency concurrence review.) If a local shoreline permit is

appealed, Ecology will issue the §401 WQC within 10 days of the State Shoreline Hearings Board decision, unless Ecology is a party to the appeal or Ecology appeals to the Superior Court. As applicable, Ecology will issue, instead of or in addition to a §401 WQC, a state concurrence or objection to a consistency certification under the Coastal Zone Management Act.

Information needed by Ecology to make decisions on permit matters is included in guidance documents made part of this agreement as Appendices C and D. WSDOT use of this guidance in preparing materials to be reviewed by Ecology will ensure that adequate information is provided at the appropriate step. This, in turn, will ensure a timely response from Ecology.

V. Wetland Mitigation

Both agencies agree that wetland mitigation is a series of steps followed in sequence to eliminate, reduce, and/or compensate for wetland impacts. The steps of mitigation, in decreasing order of preference, are as follows:

(a) Avoiding the impact altogether by not taking a certain action or part of an action;

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

(e) Compensating for the impact by replacing, enhancing, or providing substitute wetland resources or environments;

(f) Monitoring the mitigation by systematic evaluation of the development of a constructed wetland to determine success.

Both agencies agree that standard information on mitigation proposals is needed to fully understand the proposal and make informed decisions. Guidelines developed by Ecology for the contents of wetland reports and mitigation plans are included as Appendices C and D to this agreement.

Mitigation for unavoidable impacts to wetlands will be based on the ratios given in Appendix E. The ratios are intended to be used as a guideline under average conditions and may be altered on a case-by-case basis by joint agreement, if unique conditions are present at the impact site or the mitigation site.

The compensation ratios are based on the category of the wetland impacted (using the Department of Ecology Wetland Rating System) and the proposed category of the wetland to be created, restored, or enhanced. The ratios are for IN-KIND compensation only. Compensation for wetlands will be negotiated case-by-case for OUT-OF-KIND compensation, or if the

impacted wetland's vegetation is dominated (≥80% cover) by any of the invasive/exotic species listed in Appendix F.

The preliminary and final mitigation plans submitted by WSDOT will include a summary table showing how the ratios have been applied. The "category" of the impacted wetland will be listed, as will its Cowardin class and subclass, and the ratio applied from Appendix E. The plan will also include the information necessary to estimate the "category" of the mitigation site, using the Ecology rating system, when all performance standards have been met. Copies of completed data sheets from the rating system will be included, and brief comments justifying each answer are to be provided.

PRESERVATION may be used in combination with one or more of the following: restoration, creation, or enhancement, to have the net effect of reducing the ratios given in Appendix E. Preservation can be especially useful when there is not enough property on the project site to meet the replacement ratios, or there are some other difficulties in creating a wetland of sufficient size on site. A detailed explanation of how the preservation approach works is found in Appendix E.

Intentionally created wet areas constructed on non-wetland sites for the purpose of treating or conveying irrigation water, roadway drainage, or wastewater, or for surface water detention facilities, shall not be considered jurisdictional wetlands nor shall they be considered as sites for compensatory mitigation. This also includes grass lined ditches, filter strips, and active borrow pits. Documentation for these sites will be on labeled plan sheets on file at WSDOT.

VI. Mitigation Banking

Any mitigation banking activities will comply with the provisions of the mitigation banking agreement currently being developed by WSDOT, Ecology, and other agencies.

VII. Training

Ecology and WSDOT will provide training on the following topics to staff in both agencies:

- Field methods for wetland identification and delineation
- Techniques for assessment of wetland values and functions
- Design of mitigation plans; writing mitigation plan reports
- WSDOT project development process and procedures
- Corps of Engineers and Ecology permit processes

In addition, WSDOT will invite Ecology and other resource management agencies to participate in an annual field review and evaluation of WSDOT mitigation sites.

VIII. Conflict Resolution

In the 1988 MOU, WSDOT and Ecology agreed to "Resolve conflicts at the field level. In the event that issues cannot be agreed upon by field personnel, both parties agree to elevate the issues to equivalent levels within each organization, for further discussion and, if necessary, to the Director of Ecology and Secretary of DOT." The parties further agree that it is in the interest of both agencies to resolve conflicts in an interagency manner, according to the following procedure.

Level One: Conflict resolution is attempted by communication between the WSDOT headquarters and district biologist, or Environmental Manager, and the Ecology regional wetlands biologist, or headquarters wetlands biologist if the region does not have one. The Ecology Permit Coordination Unit will be notified of the situation.

Level Two: Conflict resolution is attempted by communication between the WSDOT Project Development Engineer, or equivalent, and the Ecology Wetlands Technical Unit Supervisor. WSDOT headquarters Environmental Branch personnel may be involved at this level. The Ecology Wetlands Section will notify the Ecology Permit Coordination Unit of unresolved conflicts. The Permit Coordination supervisor may assist in resolving the dispute.

Level Three: Conflict resolution is attempted by communication between the WSDOT District Administrator/Assistant District Administrator and the Ecology Shorelands & Coastal Zone Management Program Manager. The Ecology Program Manager will notify the Ecology Regional Director of the dispute.

Level Four: Conflict resolution is attempted by communication between the WSDOT Assistant Secretary for Program Development and the Ecology Assistant Director for Water and Shorelands.

Level Five: The conflict will be resolved by the Secretary of Transportation and the Director of Ecology, or their designees.

IX. Duration of Implementing Agreement

This Implementing Agreement will remain in effect until terminated. Either party may terminate this Agreement upon 30-day written notice to the other. Written notice of termination shall include the reasons for the termination.

X. Revisions to Implementing Agreement

Revisions to this Implementing Agreement may be initiated by either party and will become final after both parties are in agreement and appropriate signatures are attached.

XI. Execution

The undersigned hereby acknowledge and agree that the policies, procedures, and activities identified in this document will guide the parties in an effort of mutual support and cooperation, in order that WSDOT and Ecology may achieve full compliance in their designated activities, and initiate innovative strategies to protect and manage Washington State's wetland resources.

Washington State
Department of Ecology

by (original signed by person named below)
Mary Riveland
Director

Date 7/1/93

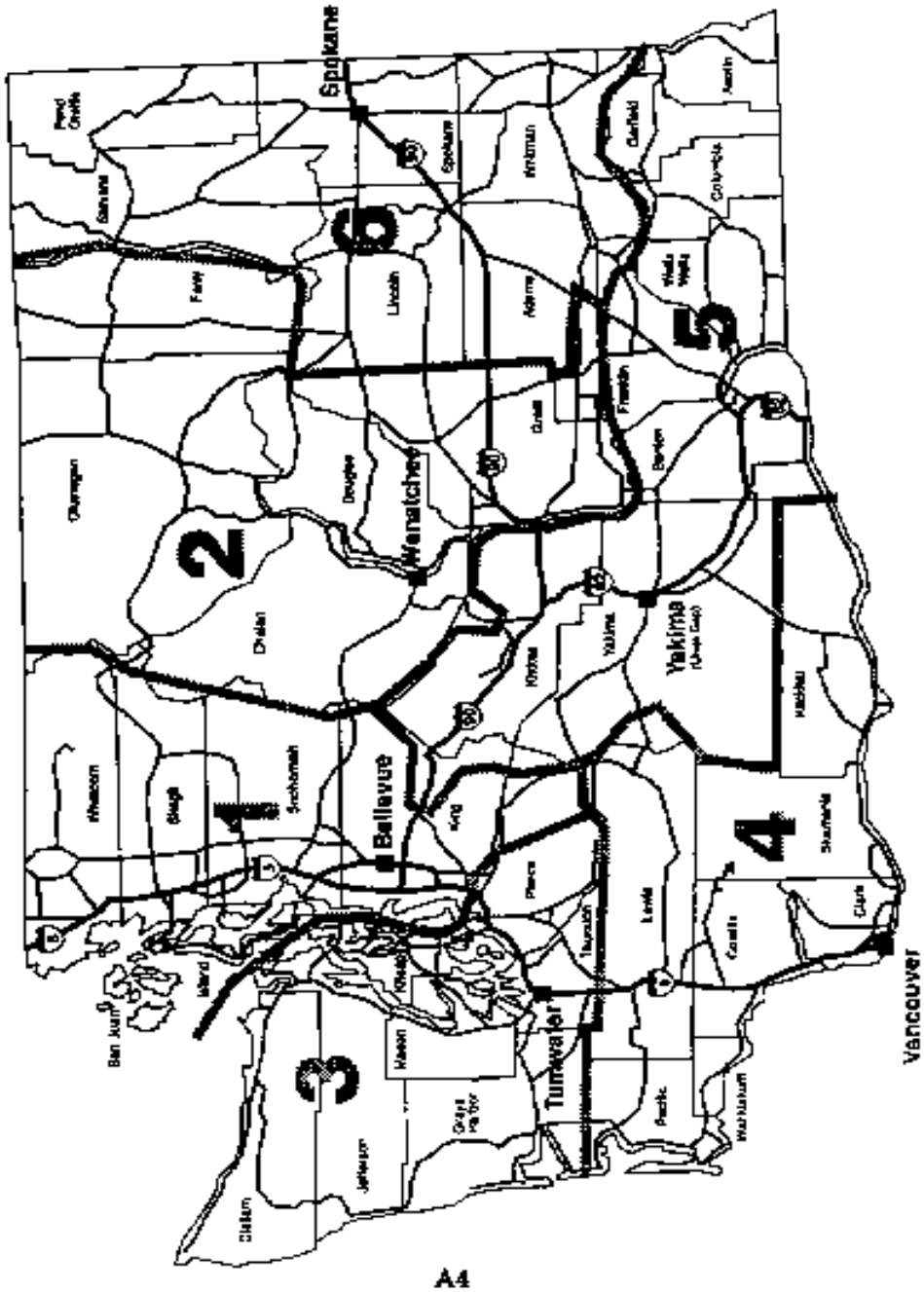
Washington State
Department of Transportation

by (original signed by person named below)
Sid Morrison,
Secretary of Transportation

Date 7/1/93

Appendix A

District Map



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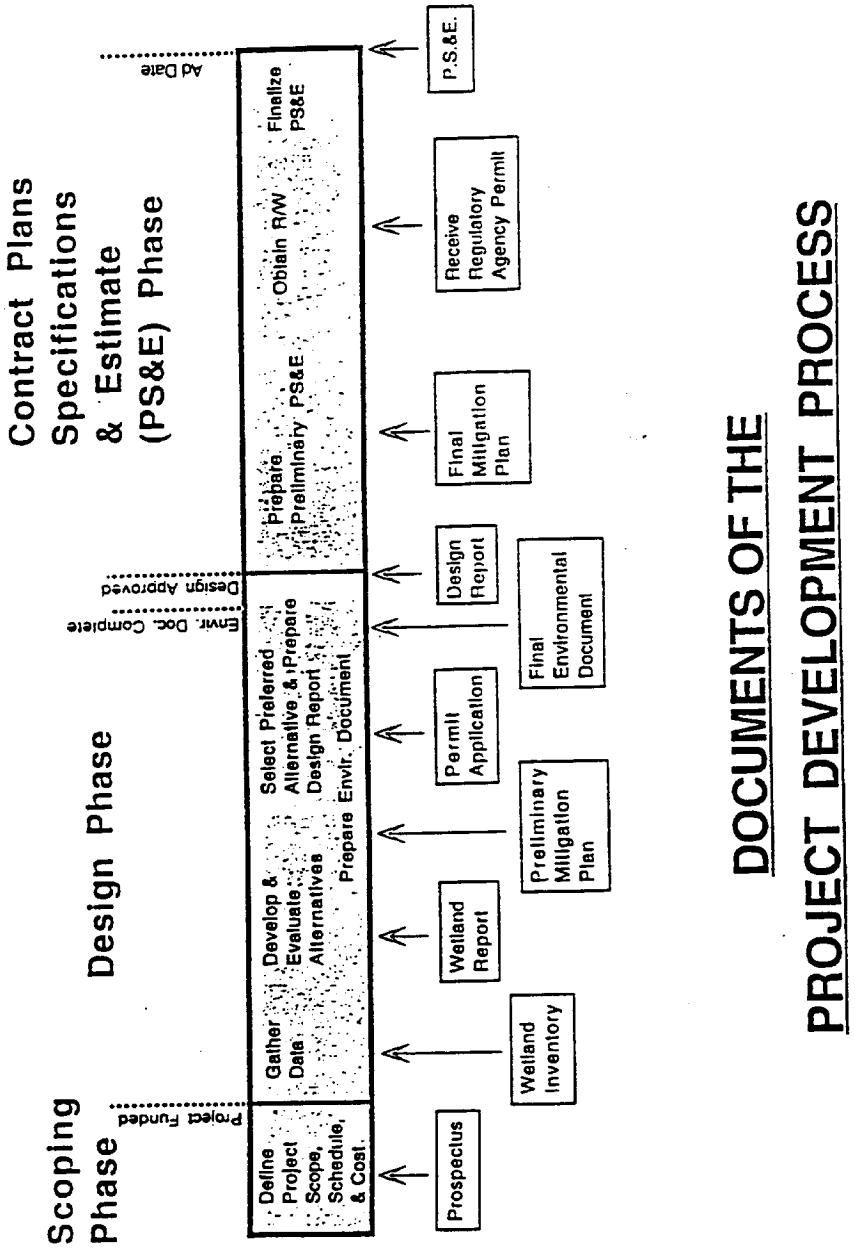
Appendix B

Appendix B



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Appendix C

WSDOT Guidelines for Wetland Reports

Wetland reports are required by regulatory agencies for projects where wetlands may be adversely affected during project construction. At WSDOT, the wetland report supplied to these agencies is composed of two separate elements: the Wetland Inventory Report and Wetland Biology Report. Used to describe and classify wetlands within the vicinity of a proposed highway project, they are requested from a WSDOT wetlands biologist at the earliest stages of project development. The Wetland Inventory Report provides early identification of wetland resources for the consideration of design changes which might avoid and minimize impacts to wetlands. After project alternatives are developed, the Wetland Biology Report is prepared to accurately describe wetlands and other important resources and impacts to these resources for each alternative under consideration. A typical report includes a wetland assessment, an impact assessment, and may include a mitigation proposal. The following sections describe information required in Wetland Inventory Reports and Wetland Biology Reports.

A. Wetland Inventory Report

This document identifies wetlands in the project vicinity at the earliest stages of project development and classifies and evaluates their functions and values. A WSDOT wetland biologist or qualified consultant prepares this report upon request from the District Environmental Manager.

The following information must be provided in a Wetland Inventory Report:

1. Project description

    a. Location

    b. Setting

    c. Geography

    d. Water resources located within the project area (lakes, streams, ponds)

    e. Published inventory information

    f. National Wetland Inventory Map

    g. Hydric soil map and soils information

    h. Aerial photo wetland interpretation (if available)

    i. Local jurisdiction inventory (if available)

    j. Washington Natural Heritage Program data on rare plants, or high quality wetlands

k. Department of Wildlife Nongame and Priority Habitat information

l. Federal Emergency Management Agency (FEMA) Flood Insurance Rates maps (if applicable).

2. Wetland identification and location

Each wetland community on the site should be described by including:

a. Species composition of each plant community including a map showing plant community boundaries

b. U.S. Fish and Wildlife (Cowardin) classification

c. Connection and proximity to nearby water bodies

d. Known or suspected wildlife use

e. Evidence of recent or historic disturbances

f. Habitat features

g. Characterization of wetland soil

h. A brief description of adjacent upland plant communities

i. A description of the wetland buffer

j. Approximate size of the wetland

k. A subjective determination of wetland functions and values

l. Its rating, based on Ecology's *Washington State Wetlands Rating System* (Rating system data sheets should be appended to the report.)

m. List of potential impacts to wetlands from project implementation if known

3. Wetlands identified within the project area should be mapped and numbered, with corresponding data sheets appended to the report. Wetland location should be listed with reference to milepost, engineers station, toe of slope, or other physical location related to project construction.

Note: statements concerning whether the wetland is isolated or associated are preliminary and are provided to give an indication of the function of the wetland in the landscape. The U.S. Army Corps of Engineers has the final authority to make this determination.

4. The wetlands identified should be presented in a table format that includes the following information:

a. Location of wetland by highway stationing or milepost

b. A subjective determination of wetland functions and values

c. Wetland category (Department of Ecology rating system).

The Wetland Inventory Report is submitted to the District Environmental Manager with a copy to the Project Engineer. It is used as part of the data for initial development of project design alternatives.

B. Wetland Biology Report

After project alternatives are developed, the WSDOT district requests a Wetland Biology Report from the Wetlands Biologist. The Wetland Biology Report details specific impacts associated with each proposed alternative. While it includes some of the information from the Wetland Inventory, it is far more specific regarding plant and animal communities. The Wetland Biology Report should provide detailed information on how wetland functions and values will be adversely affected by the proposed project. The report should discuss the effects of both direct impacts (e.g., filling, dredging, clearing, and alterations to wetland hydrology) as well as indirect impacts (increased intrusion, increased noise, light, and glare, etc.) on each wetland. Water quality impacts (e.g., sedimentation, nutrients, hydrocarbons, and toxics) should also be discussed. The report should estimate the area of each wetland. The Wetland Biology Report should also include specific information on how the boundary of the wetland was determined. The report must include the general information found in the Wetland Inventory Report in addition to the following information:

1. A complete set of the field data forms filled out during the wetland determination and delineation
2. The site map showing wetland boundaries and locations of all data points
3. Topographic map of the area
4. The site designation on a National Wetland Inventory map
5. The site designated on local wetland inventories (if available)
6. The site designated on a Soils Survey Report soils map

WSDOT project staff use the Wetland Biology Report to evaluate the location and design alternatives to avoid and/or minimize impacts to wetlands. Wetland acreage and areas of unavoidable impact are determined after the alternatives have been evaluated. This information is used as the basis for determining the size and type of wetland mitigation needed.

The Wetland Biology Report should include a discussion on how the project has been designed (and how it could be modified) to avoid and minimize adverse impacts to wetlands. An estimate of the amount and time of mitigation required to compensate for wetland impacts should be discussed.

Appendix D

WSDOT Guidelines For Wetland Mitigation Plans

The Washington State Department of Transportation (WSDOT) has developed these guidelines to provide format and contents requirements for wetland mitigation plans (WMP) and reports. The guidelines apply in the preparation of mitigation plans associated with regulatory agency permit requirements.

Agencies responsible for project review and permit certifications are developing guidelines for wetland mitigation reports, plans, and monitoring. The Department of Ecology, the U.S. Army Corps of Engineers (Corps), and the Environmental Protection Agency mitigation plan guidelines were considered in the preparation of these guidelines. WSDOT Wetland Mitigation Plan Guidelines are intended to meet the requirements of each of these regulatory agencies.

If wetlands are encountered in a project, the following activities are normally required: 1) a wetland report is prepared, identifying the location and value of wetlands in the project vicinity; 2) alternatives that would reduce or eliminate impacts to wetlands by changes in location or design of the project are analyzed; 3) a mitigation site is selected that will satisfy requirements for acreage needed for unavoidable wetland impacts; and 4) a wetland mitigation plan is written.

The Preliminary Wetland Mitigation Plan is prepared as the first action in the process of developing a WMP, followed by internal review and resource agency review. The Final Wetland Mitigation Plan is provided to agencies as part of the permit process. These guidelines explain the elements of mitigation plans and detail the essential coordination required.

I. Develop Preliminary Wetland Mitigation Plan

The Preliminary Wetland Mitigation Plan is a draft document for use in early coordination with in-house and resource agency staff. In this document, the project is described, the measures that will be taken to avoid wetlands and reduce impacts are discussed, and the measures proposed to compensate for the impacts are described.

Following are the elements of the Preliminary Wetland Mitigation Plan:

A. Description of the Project

Provide a brief outline of the project proposal, including the following site information:

1. Project name, short description, and location.
2. Wetland information. Include who conducted the delineation (e.g., WSDOT biologist, consultant), which manual was used (1987 or 1989), methodology (routine, intermediate, problem, or disturbed), date(s) field work was performed, data sheets used to establish the wetland boundary and general findings.
3. Vicinity map. U.S. Geological Survey (USGS) Quadrangle (1:1200), National Wetlands Inventory Map (NWI), or other will suffice. Range, Township, and Section should be shown.
4. A large scale map (not smaller than 1:400) and aerial photo if available.

B. Assessment of the Impacted Wetland

Description should be provided of the type and quantity of wetlands that would be impacted. Address vegetation (including canopy structure, indicator status, percent cover and wetland classes) hydrology (water depths, average seasonal flows and/or duration of saturation), soil characteristics, and functions and values. Impacted wetlands should also be rated according to the Department of Ecology's Washington State Wetlands Rating System, and include a qualitative description of how the wetland functions in the landscape.

This information is available in the Wetland Biology Report prepared for the project.

C. Evaluation of Mitigation Alternatives

The Preliminary Wetland Mitigation Plan should document all early project design changes made to avoid and minimize impacts to wetlands. This information is needed for both Preliminary and Final Wetland Mitigation Plans and demonstrates to reviewing agencies that WSDOT has avoided and minimized impacts to the extent practical. It should follow the mitigation sequence adopted by WSDOT and show how the development of the project design has:

1. Avoided the impact altogether by not taking a certain action or part of an action
2. Minimized impacts by limiting the degree or magnitude of the action and its implementation, using appropriate technology, or taking affirmative steps to avoid or reduce impacts
3. Rectified the impact by repairing, rehabilitating, or restoring the affected environment
4. Reduced or eliminated the impact over time by preservation and maintenance operations during the life of the project
5. Compensated for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation steps should be tracked and recorded throughout the project planning and design process. This information can then be incorporated into the Final Wetland Mitigation Plan.

D. Mitigation Project Goals, Objectives, and Performance Standards

Goals are broad statements that define the intent or purpose of the proposal.

Objectives are the direct actions necessary to achieve a specific goal. These should be measurable. Wetlands perform numerous important functions. However, if an objective of the mitigation is to create a function it must be one that can be accurately measured in the field, such as percent cover of wetland vegetation. Water quality improvement is an example of wetland function that is difficult to use as a measurable performance standard.

Performance standards are specific criteria used to evaluate whether the goals and objectives have been met. These must be developed on a site-by-site basis.

Performance standards should provide target criteria to be met each year, or every other year, based on reasonably paced progress toward measuring final success.

Describe the long-term goals of the mitigation project. Specifically, identify objectives in the following terms:

1. Size and classification of wetlands to be created, restored, enhanced, or preserved
2. Functions and values to be created, restored, enhanced, or preserved
3. Number of years it is likely to take for the long-term establishment of the proposed functions and habitats
4. The measurable performance standards that will be used to determine if an objective has been met.

E. Description of the Proposed Wetland Mitigation Site

1. Describe pre-construction conditions existing at the proposed site, including vegetation, wildlife and wetlands. Provide a description of the plant community, its cover, classes and structure, and make special note of exotic species and other management concerns that may affect site viability. Wetlands present at the mitigation site must be delineated, assessed and their location indicated on the site map using the format described for a Wetland Report.
2. Explain how hydrology will be provided for the proposed wetland mitigation, including expected seasonal water level fluctuations, seasonal depth to groundwater, or surface water source and water quality.
3. Describe soil classification and series at the site and any soil testing that has been done. Describe amenities that may be needed to improve the soil conditions at the site.
4. Describe how the planned mitigation will fit in the landscape. Discuss the location of the site in relation to its position in the watershed or adjacent upland or wetland habitats or other water resources.

F. Proposed Site Plans

Prepare a general grading and revegetation plan, including:

1. The shape and contour of the mitigation project. Provide sufficient information so that water depths, open water areas, boundary areas, and other features can be visualized. Seasonal ground water and the sources of hydrology for the site should be evident.
2. A list of plants to be used and general planting plan to illustrate the planting concept for the site. Reviewers need to know what species will be planted, in what proportions, and their general locations.
3. Information on the construction sequence and schedule.
4. Steps to be used to minimize damage to surrounding buffers or wetlands during site construction.

5. Methods for controlling invasive species.

6. A description and map of the plant communities which make up the wetland buffer, if a buffer is included in the mitigation design.

G. Maintenance Plan

Describe planned maintenance activities including erosion control and protection of plant materials from herbivores, repairing vandalism, and other activities that may be required over time to ensure that the site viability is maintained.

H. Contingency Plan

A contingency plan is required and must outline the steps that will be taken if performance standards are not met.

I. Mitigation Site Monitoring

A monitoring plan collects the data necessary to measure the success of the mitigation in meeting goals and performance standards established for the site. In the Preliminary Wetland Mitigation Plan, state that monitoring will be conducted for a period of 5 years or longer, if necessary, and that an annual report will be issued by WSDOT to the U.S. Army Corps of Engineers, Department of Ecology, and other federal, state and local resource agencies. A monitoring program must include measures of vegetation, hydrology, water quality, soils, and wildlife over time. Headquarters Biology conducts the actual monitoring and issues the *WSDOT Wetland Mitigation Monitoring Report*, which is sent to regulatory agencies each year.

II. Coordination

The Preliminary Wetland Mitigation Plan is intended to be reviewed internally by WSDOT Districts, Headquarters Design, Maintenance, and Right of Way staff before circulating to outside agencies. WSDOT District Environmental Managers should coordinate the appropriate review within the District.

The outside agency review follows the internal review. Comments and suggestions made to the Preliminary Wetland Mitigation Plan by outside agencies should be considered in the preparation of the Final Wetland Mitigation Plan.

III. Final Wetland Mitigation Plan

The Final Wetland Mitigation Plan is completed after the Preliminary Wetland Mitigation Plan has been circulated to agencies. It incorporates comments from agencies and the public (and comments from draft environmental documents, if applicable). The Final Wetland Mitigation Plan is the document of record.

IV. As-Built Plans

Within a month of construction and planting completion, as-built plans should be sent to the lead agency, including an as-built topographic survey, plant species and quantities used, photographs of the site, and notes about any changes to the original approved plan. Also list the contractor's responsibility concerning plant replacement, fertilization and irrigation, protection from wildlife, and contingency plan requirements.

Examples of Goals and Standards of Success

WSDOT's publication *Success Standards for Wetland Mitigation Projects – A Guideline* (August 1999) provides assistance in the development of objectives and standards of success for wetland mitigation projects. Guidelines include elements of a well-defined project, overview of mitigation planning projects, selecting performance objectives, writing success standards, monitoring methods, and contingency measures. The publication can be viewed at the following web site:

http://www.wsdot.wa.gov/eesc/environmental

Click on Wetland Delineation and Mitigation, then Wetland Mitigation Success Standards (under Related Wetland Publications).

Appendix E
Guideline For Compensation Mitigation Ratios

Compensation acreage depends on the category of the wetland impacted and the category of wetland to be created. WSDOT agrees to a no net loss policy. The type of mitigation proposed, and past history of creating or restoring these types of wetlands, will be taken into account when determining appropriate ratios for the project. Wetlands dominated by exotic species (>80%), or out of kind mitigation, will be negotiated on a case-by-case basis.

IMPACT	**TYPE OF MITIGATION***	
Wetland Category	**Restoration and Creation**	
	CAT II	CAT III
I	4:1	6:1
II	2:1	3:1
III	1 - 1.5:1	1.5 - 2:1
IV	.75 - 1.25:1	1 - 1.5:1

Enhancement

Enhancement of existing wetlands as compensation for the filling of other wetlands is an available option in some circumstances. Enhancement is the augmentation, or increase, of the functions and values of an existing wetland by direct action. If enhancement of an existing wetland is proposed, the ratios are greater than those used for restoration and creation of wetlands, since the wetland already provides some level of functions and values and a net loss of acreage will occur. Because of this, mitigation ratios for enhancement are generally twice that of ratios for restoration/creation. These ratios are only a guideline, the greater the increase in wetland functions and values provided by the enhancement, the lower the ratio can be. In some circumstances, enhancement of other aquatic resources and functions, such as stream or riparian areas, may be acceptable. In these instances, ratios will be negotiated on a case-by-case basis.

Preservation

Preservation may be used to reduce the ratios above for restoration and creation to a minimum of 1:1, and enhancement to a minimum of 2:1, as follows:

- The balance of the area required to meet the ratio in the above table is met by creating or enhancing a buffer around the mitigation site at a ratio of 5:1, or by preserving an existing buffer at a ratio of 10:1. For example, if the balance of the area required to meet the ratio is 1 acre, WSDOT can create a 5 acre buffer around the mitigation site.

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* Mitigation type is specified in the wetland mitigation plan.

- The balance of the area required to meet the ratio in the above table can be met by preserving a Category I wetland at a ratio of 5:1 or a Category II wetland at a ratio of 10:1, that is functionally linked (by habitat or hydrology) with the mitigation site in the same watershed. For example, if the balance of the area required to meet the ratio is 1 acre, WSDOT can preserve a 5 acre Category I wetland.

The highest priority should be given to creating and preserving buffers around mitigation sites. (Any preservation that is not on, or adjacent to, a mitigation site will be allowed only if adequate buffers are provided at the mitigation site.)

Appendix F
List of Invasive/Exotic Plant Species

SCIENTIFIC NAME	COMMON NAME
Agropyron repens	Quackgrass
Alopecurus pratensis, A. aequalis	Meadow foxtail
Arctium minus	Burdock
Bromus tectorum, B. rigidus, B. brizaeformis, B. secalinus, B. japonicus, B. mollis, B. commutatus, B. inermis, B. erectus	Bromes
Cenchrus longispinus	Sandbur
Centaurea solstitialis, C. repens, C. cyanus, C. maculosa C. diffusa	Knapweeds
Cirsium vulgare, C. arvense	Thistles
Cynosurus cristatus, C. echinatus	Dogtail
Cytisus scoparius	Scot's broom
Dactylis glomerata	Orchardgrass
Dipsacus sylvestris	Teasel
Digitaria sanguinalis	Crab Grass
Echinochloa crusgalli	Barnyard grass
Elaeagnus augustifolia	Russian Olive
Euphorbia peplus, E. esula	Spurge
Festuca arundinacea, F. pratensis	Fescue
Holcus lanatus, H. mollis	Velvet grass
Hordeum jubatum	Foxtail Barley
Hypericum perforatum	St. John's wort
Juncus effusus	Soft Rush
Lolium perenne, L. multiflorum, L. temulentum	Ryegrass
Lotus corniculatus	Birdsfoot trefoil
Lythrum salicaria	Purple loosestrife
Matricaria matricarioides	Pineapple weed

SCIENTIFIC NAME	COMMON NAME
Medicago sativa	Alfalfa
Melilotus alba, M. officinalis	Sweet clover
Phalaris arundinaceae	Reed Canary Grass
Phleum pratense	Timothy
Phragmites communis	Reed
Poa compressa, P. palustris, P. pratensis	Bluegrass
Polygonum aviculare, P. convolvulus, P. cuspidatum, P. Iapathifolium, P. persicaria	Knotweeds
Ranunculus repens	Buttercup
Rubus discolor, R. Iaciniatus, R. vestitus, R. macrophyllus	Non-native blackberry
Salsola kali	Russian Thistle
Setaria viridis	Green Bristlegrass
Sisymbrium altissimum, S. Ioeselii, S. officinale	Tumblemustards
Tanacetum vulgare	Tansy
Trifolium dubium, T. pratense, T. repens, T. arvense, T. subterraneum, T. hybridum	Clovers
Cultivated species:	Wheat, corn, barley, rye, etc.

Appendix G
Definitions

Buffer:	A designated area surrounding a wetland that reduces adverse impacts to wetland functions and values from adjacent development and/or land uses.
Preliminary Wetland Mitigation Plan:	A document that includes the transportation project description, project alternatives, wetland impacts from the preferred alternative, and discussion of the mitigation concepts.
Creation:	Actions taken to intentionally establish a wetland at a site where none previously existed (as far as can be determined from historical information).
Enhancement:	Actions taken to intentionally improve wetland functions, processes, and values of existing but degraded wetlands where all three defining criteria are currently met (i.e., hydrology, vegetation, soils). This includes actions taken on "problem" wetlands as identified in the 1989 Delineation Manual.
Final Wetland Mitigation Plan:	A document that includes description of all wetlands in the project area, wetland site plan, wetland revegetation plan, standards of success, operation and maintenance of the mitigation site, and the monitoring plan.
In-Kind Compensation:	Compensation that replaces the same wetland system and class as defined by Cowardin.
Out-of-Kind Compensation:	Compensation that replaces one wetland system and class as defined by Cowardin with another.
Preservation:	Setting aside of wetlands or buffers in their existing condition to protect them in perpetuity as part of a plan for compensatory mitigation.
Reference Site:	An existing wetland that is used as a model for a mitigation site, and that exhibits the same structure and functions as an impacted wetland (for in-kind replacement) or that has acceptable structure and functions (for other types of replacement).
Restoration:	Actions taken to reestablish a wetland area, including its functions and values, that has been eliminated by past actions.
§404 Permit:	A permit issued by the U.S. Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act (Clean Water Act), which authorizes an activity, i.e., discharge of fill

material into waters of the United States including wetlands.

Wetland or Wetlands: Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands, if permitted by the appropriate authority.

Wetland Banking: The off-site creation, restoration, or enhancement of wetlands to compensate for unavoidable wetland losses in advance of a project. A wetland bank is a net gain in wetlands to be drawn upon to offset small wetland losses from several sites or projects.

Wetland Inventory Report: A report that includes a wetland's description, classification, and extent, and its category and functional values.

References

Washington State Department of Ecology. *Washington State Wetlands Rating System for Western Washington.* Publication #91-57. Olympia, Washington: Washington Department of Ecology, October 1991.

Washington State Department of Ecology. *Washington State Wetlands Rating System for Eastern Washington.* Publication #91-58. Olympia, Washington: Washington Department of Ecology, October 1991.

Memorandum of Agreement
Wetland Compensation Bank Program

Washington State Department of Transportation
Wetland Compensation Bank Program
Memorandum of Agreement

September 15, 1994

Signatories

US Army Corps of Engineers
US Environmental Protection Agency
US Fish and Wildlife Service
National Oceanic and Atmospheric Administration Fisheries
Federal Highway Administration
Washington State Department of Ecology
Washington State Department of Fish and Wildlife
Washington State Department of Transportation

NOTE: This Exhibit presents only Appendix A and the amendment dated October 1998. All other sections can be viewed online at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Wetland Mitigation Banking, then WSDOT Memorandum of Agreement.

WSDOT is grateful to the following individuals who put forth a great amount of time and effort in the development of this document:

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Valerie Elliott -	NOAA Fisheries, Portland
Nick Iadanza -	NOAA Fisheries, Portland
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Ann Uhrich -	US Army COE, Seattle District
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Rob Tiedemann, Ecological Design, Inc., Facilitator

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WETLAND COMPENSATION BANK PROGRAM
MEMORANDUM OF AGREEMENT

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Appendix A – Sequence of Activities
Washington State Wetland Compensation Bank Program

WSDOT Activities

1. Identify and Select a Candidate Wetland Compensation Bank (WCB) Site.

- Develop rationale for the location of a Candidate WCB Site (see Section VI, A and B of the Agreement].
- If appropriate, develop rationale for exceptions to the locational requirements for a WCB Site (see the Agreement).

→

2. Develop preliminary development plan for the Candidate WCB Site including:

- A conceptual design plan (see Appendix B of the Agreement).
- A management plan (see Sections F, G, and H of Appendix B of the Agreement).
- A maintenance plan (see the Agreement).
- A protection plan which includes funding and legal instruments to protect both the Candidate WCB Site and the WCB Site (see the Agreement).
- Performance standards (see the Agreement).
- Performance standards (see the Agreement).
- Performance standards (see the Agreement).
- Analysis of risk (see the Agreement).
- Analysis of limiting factors (see the Agreement).

→

3. Review methodologies recognized in the Agreement, and if needed revise:

- Assessment methods (see Section 7 of the Agreement).
- Inspection schedule and checklist (see Appendix D of the Agreement).
- Monitoring schedule and protocol (see Appendix E of the Agreement).

→

4. Develop final development plan for the Candidate WCB Site.

Oversight Committee Activities

1. Oversight Committee reviews WSDOT activities #1 - #3 and provides recommendations (see the Agreement).

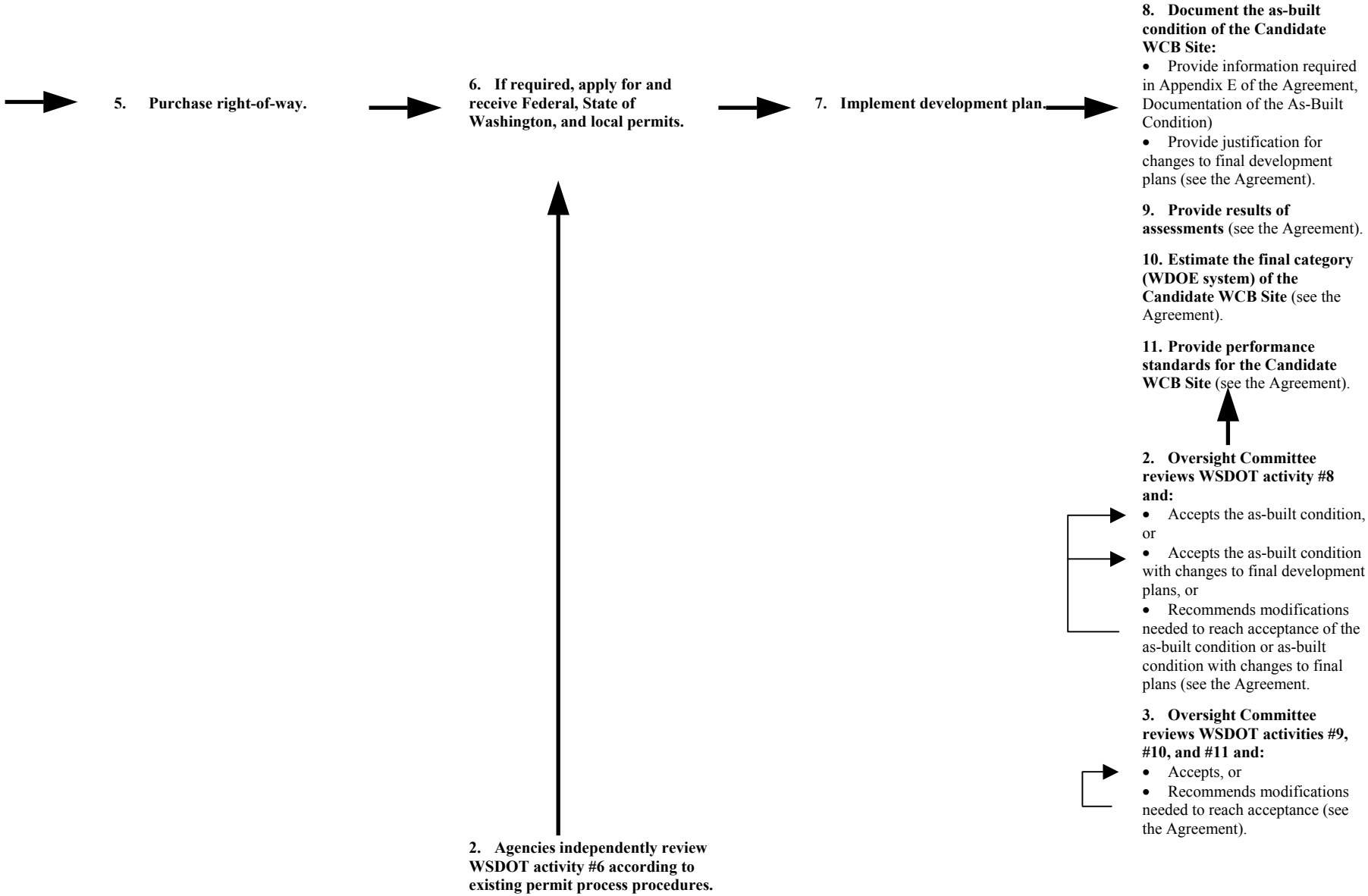
↑

Federal and State, Resource and Regulatory Agencies Activities

1. Agencies independently review WSDOT activity # 4 and provide recommendations.

↑

Appendix A – (Continued)



Appendix A – (Continued)

12. Implement monitoring plan (see Section III and IV of Appendix E of the Agreement).

13. Provide monitoring report (see the Agreement).

4. Oversight Committee agrees to allow use of 50% of the area of each wetland system/class within a WCB Site for compensation (see the Agreement).

14a. Use WCB Site to mitigate for adverse impacts to non-jurisdictional wetlands or for activity permitted by §404 General permit (see the Agreement).

Note: No Oversight Committee review.

14b. Propose use of WCB Site to mitigate for adverse impacts to wetlands requiring §404, Shoreline, or HPA Permit (see the Agreement).

15. Provide documentation to describe:

- Wetland adversely impacted by WSDOT activity (see the Agreement).
- Credits available at the WCB Site, and debits attributable to WSDOT activity (see the Agreement).

When appropriate provide documentation to explain:

- Rationale for use of out-of-kind compensation (see the Agreement).
- Use of currency other than area (see the Agreement).
- Rationale for use and size of preservation buffers (see the Agreement).
- Inclusion of preservation buffers in the calculation of credits (see the Agreement).
- Modification of credit ratios based on the results of assessments (see the Agreement).

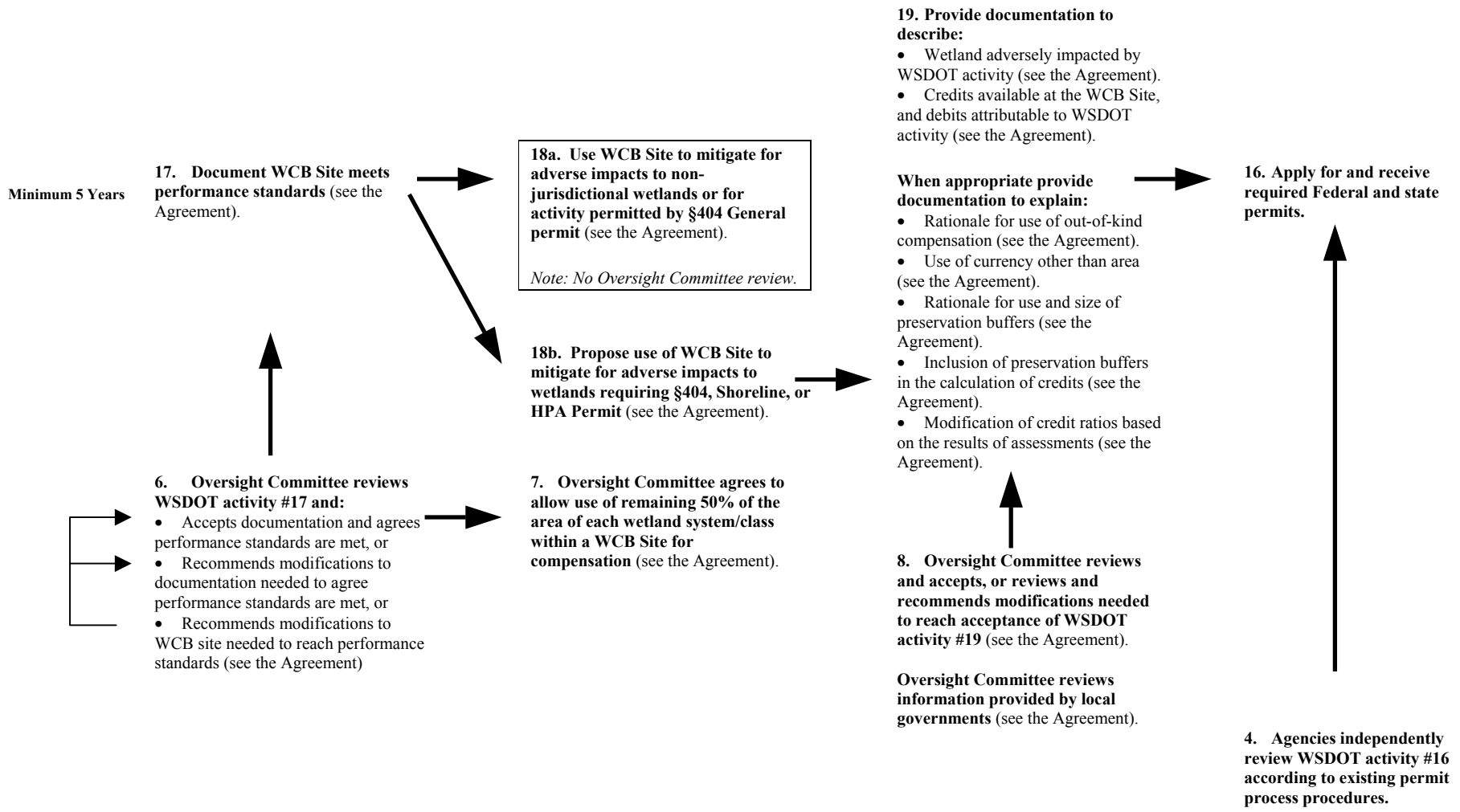
5. Oversight Committee reviews and accepts, or reviews and recommends modifications needed to reach acceptance of WSDOT activity #15 (see the Agreement).

Oversight Committee reviews information provided by local governments (see the Agreement).

16. Apply for and receive required Federal and state permits.

3. Agencies independently review WSDOT activity #16 according to existing permit process procedures.

Appendix A – (Continued)



Amendment to the WSDOT
Wetland Compensation Bank Program MOA

Purpose

This concurrence document has been developed to provide additional guidance on the development of compensatory wetland mitigation banks under the WSDOT Wetland Compensation Bank Program MOA (MOA) and amendments to that MOA. The following guidance may be utilized during the development of a WSDOT sponsored bank implementation plan.

This document is supportive of the signed 1994 MOA and its amendments. If the MOA is revised at a future time, the following amendments shall be incorporated into the revised MOA.

Guidance

Section numbers and titles in bold are from the MOA. New sections are noted in parentheses.

IV. Definitions

The definition of watershed is amended to read:

> Watershed – A three dimensional geomorphic or landscape unit defined by surface water flows and groundwater discharges to a common outlet over a specified time. Watershed Resource Inventory areas (WRIA) as defined in WAC 173-50040 shall be the baseline definition of watershed for bank service areas.

V. Oversight Committee
A. Members and Actions

> Local jurisdictions can become signatories on compensatory wetland mitigation bank implementation plans for wetland mitigation banks located within their jurisdiction.

VI. Establishment of Wetland Compensation Bank Sites
D. Management, Maintenance, and Protection of Wetland Compensation Bank Sites

> WSDOT may, upon consensus of the Bank Oversight Committee, transfer title and management of a compensatory wetland mitigation bank site to another entity after the bank has met its five year performance standards. WSDOT will maintain the transaction ledger for the bank.
>
> Deed restrictions on the compensatory wetland mitigation bank site shall be recorded which prohibit any site development activities which would conflict with the compensatory wetland mitigation bank's stated goals unless prior approval is given by the Oversight Committee. Specific deed restriction language shall be proposed to the Oversight Committee for concurrence prior to title transfer.
>
> WSDOT will continue to have the responsibility for submitting monitoring reports on the compensatory wetland mitigation bank site.

VIII. Currency, Credits, and Debits
C. Use of Credits to Compensate for Wetland Impacts
3. Availability of Credits and Compensation Ratios

The 1993 edition of the Washington State Department of Ecology's Wetland Rating System for Western Washington shall replace the 1991 edition for the assignment of wetland categories.

VIII. Currency, Credits, and Debits
C. Use of Credits to Compensate for Wetland Impacts
3. Availability of Credits and Compensation Ratios

Wetland replacement ratios for compensation used from a wetland mitigation bank prior to the successful attainment of all performance standards shall not be at a higher ratio than would be required for concurrent offsite mitigation.

VIII. Currency, Credits, and Debits
F. Selling of Credits. (New section proposed)

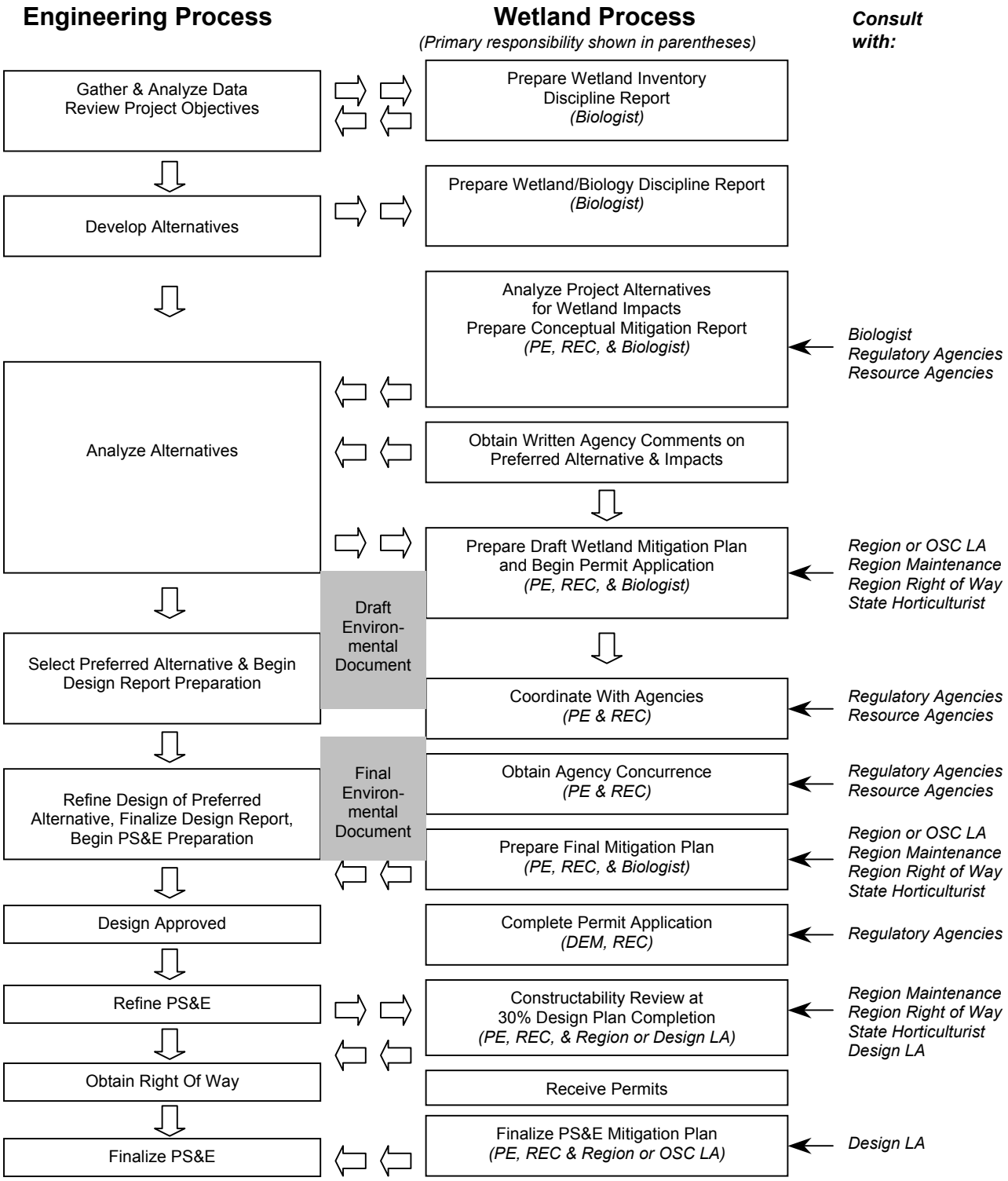
WSDOT may choose to sell mitigation bank credits. If credits are proposed to be sold, WSDOT shall notify the Bank Oversight Committee prior to sale of credits. It will be the responsibility of the credit purchaser to obtain the appropriate federal, state and local regulatory approvals to utilize any purchased mitigation credits.

Approved:

U.S. Army Corps of Engineers Date	Federal Highway Administration Date
U.S. Environmental Protection Agency Date	Washington Department of Ecology Date
U.S. Fish and Wildlife Service Date	Washington Department of Fish and Wildlife Date
National Oceanic and Atmospheric Administration Fisheries Date	Washington State Department of Transportation Date

October 1998

Integrating WSDOT Transportation Engineering and Wetland Mitigation Design



PE = Project Engineer
LA = Landscape Architect
PS&E = Plans, Specifications, and Estimates
REC = Regional Environmental Coordinator
OSC = Olympia Service Center

Washington State Department of Transportation

Discipline Report Checklist
Wetland Inventory

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

SAT	INC	MIS	N/A	
❒	❒	❒		A. Project limits (MP, KP, or other landmark).
❒	❒	❒		B. Site location map (i.e., state highway map or system map).
❒	❒	❒	❒	C. Include any known secondary project features (i.e., temporary detours, constructed work trestles, haul roads, staging stockpile or waste areas, safety clearing, stormwater runoff treatment, etc.)

Methods:

SAT	INC	MIS	N/A	
❒	❒	❒		D. Date(s) of field review of project.
❒	❒	❒		E. Pertinent weather conditions (i.e., normal precipitation or dry year, etc.).
❒	❒	❒		F. Survey area specified (all areas within 10 feet of toe of fill, all ROW, etc.).
❒	❒	❒		G. Specify regulatory authority (federal, state, and/or local as appropriate).

Project setting:

SAT	INC	MIS	N/A	
❒	❒	❒		H. Project setting briefly described. Include as appropriate, the physiographic region, general topography, dominant habitat and vegetation type(s), nearby water resources, mapped soils, and land use types.
❒	❒	❒		I. USGS Quad map of area showing project.
❒	❒	❒		J. Soil survey map of area.
❒	❒	❒		K. National Wetland Inventory (NWI) map of the project area.
❒	❒	❒	❒	L. Other published wetland inventory information may be included (i.e., local sensitive areas map, etc.).

II. Affected Environment

For each wetland identified, the description should include:

SAT	INC	MIS	N/A	
❒	❒	❒		A. Wetland name/ID No.: use a straight forward, logical naming scheme. We generally use letters to indicate individual wetlands and keep a sequential progression. Portions of large wetlands which extend into the project in several areas may be numbered separately but described together as one system if appropriate.
❒	❒	❒		B. Wetland location: reference to project stationing if available, otherwise use ROW stationing, mileposts, or other landmarks.
❒	❒	❒		C. USFWS (Cowardin) classification.
❒	❒	❒	❒	D. Preliminary rating according to Ecology's four-tier rating system.
❒	❒	❒	❒	E. Estimate of approximate wetland size.
❒	❒	❒		F. Dominant vegetation communities.
❒	❒	❒	❒	G. Soil conditions, if available or as published.
❒	❒	❒	❒	H. Wetland hydrology characterized.
❒	❒	❒	❒	I. Connection or proximity to other wetlands or surface waters.
❒	❒	❒		J. Priority Habitats and Species and Natural Heritage Program data.

III. Wetland Map

SAT	INC	MIS	N/A	
❒	❒	❒		A. Location of all wetlands identified must be shown on some graphic. These could be aerial photos or plan sheets, and should be to scale (not sketch maps).
❒	❒	❒		B. Graphic must clearly show wetlands, SR No., compass orientation.
❒	❒	❒		C. Large wetlands can be mapped as open ended polygons.
❒	❒	❒		D. Indicate streams and other surface waters.
❒	❒	❒		E. Areas NOT inventoried for wetlands should be indicated with cross hatching or other means, so these are not easily assumed to be without wetlands.

IV. Summary

The summary should include enough detail so that it can be included in the EIS with only minor modification. The summary should include:

SAT	INC	MIS	N/A	
❒	❒	❒		A. Provide preliminary recommendations, as appropriate, to reduce or eliminate the adverse effects of the proposed activity. These could include such things as clearing limitations, avoidance of specific areas, special construction techniques, etc.
❒	❒	❒		B. These should be clearly stated so they can be easily incorporated into the project design and/or contract specials.

General Comments: _____

_____

_____

_____

February 1999

Washington State Department of Transportation

Discipline Report Checklist Wetland/Biology

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

This report is prepared once specific designs and alternatives have been developed. It includes some of the information in the wetland inventory, but more detailed. Preparation of this report requires formal delineation of the wetland boundaries, followed by surveying. It identifies wetlands and other key biological resources, and evaluates the ecological significance of the project's potential impacts. This report serves as the starting point for the development of any wetland mitigation planning and permit application.

The Wetland/Biology Report should include the following information. The level of detail given should be commensurate with the effects of the action.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Include project limits (MP, KP, or other landmark).
❒	❒	❒		B. Site location map (i.e., state highway map or system map).
❒	❒	❒	❒	C. Include any known secondary project features (i.e., temporary detours, constructed work trestles, haul roads, staging stockpile or waste areas, safety clearing, stormwater runoff treatment, etc.)
❒	❒	❒	❒	D. Extent of clearing of vegetation (give acreage).
❒	❒	❒		E. All units of measurements must be given in metric with English units in parentheses, e.g., 2.5 ha (6.18 ac) or 30 m (98.43 ft).

Methods:

SAT	INC	MIS	N/A	
❒	❒	❒		F. Date(s) of field review of project.
❒	❒	❒		G. Pertinent weather conditions summarized (i.e., normal precipitation or dry year, etc.).

SAT	INC	MIS	N/A	
❒	❒	❒		H. Survey area specified (all areas within 10 feet of toe of fill, all ROW, etc.).
❒	❒	❒		I. Field methods indicated (i.e., wetlands identified by positive indicators of the three parameters, according to which delineation manual).
❒	❒	❒		J. Specify regulatory authority (federal, state, and/or local as appropriate).
❒	❒	❒		K. Project setting briefly described. Include as appropriate, the physiographic region, general topography, dominant habitat and vegetation type(s), nearby water resources, mapped soils, and land use types.
❒	❒	❒		L. USGS Quad map of area showing project.
❒	❒	❒		M. Soil survey map of area.
❒	❒	❒		N. National Wetland Inventory (NWI) map of the project area.
❒	❒	❒	❒	O. Existing local sensitive area maps, special aquatic, and natural resource site locations should be consulted.
❒	❒	❒		P. Natural Heritage Program data.

II. Affected Environment

For each wetland identified, the description should include:

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. Wetland name/ID No.: use a straight forward, logical naming scheme. We generally use letters to indicate individual wetlands and keep a sequential progression. Portions of large wetlands which extend into the project in several areas may be numbered separately, but described together as one system if appropriate. (Reference local sensitive area identifier where applicable.
❒	❒	❒	❒	B. Wetland location: reference to project stationing if available, otherwise use ROW stationing, mileposts, or other landmarks.
❒	❒	❒	❒	C. USFWS (Cowardin) classification.
❒	❒	❒	❒	D. Rating according to Ecology's four-tier rating system.
❒	❒	❒	❒	E. Rating according to any applicable local jurisdiction. (Include information on required buffers, if applicable.)
❒	❒	❒	❒	F. Wetland size (best if from survey, but estimate is usually okay.
❒	❒	❒	❒	G. Connection or proximity to other wetlands or surface waters.
❒	❒	❒	❒	H. Dominant vegetation communities described.

SAT	INC	MIS	N/A	
❒	❒	❒	❒	I. Soil conditions and evidence of hydric soils.
❒	❒	❒	❒	J. Wetland hydrology and evidence thereof.
❒	❒	❒	❒	K. Wetland functions provided by wetlands and their importance discussed.
❒	❒	❒	❒	L. Wetland rating forms should be completed and appended to report.
❒	❒	❒	❒	M. Wetland field delineation forms should be completed and appended to report.

Note: Analysis should be commensurate with the level of impact. Wetlands identified or delineated which will be completely avoided by project must still be shown on figures and discussed in report, but their descriptions may be less detailed than that of impacted wetlands.

III. Impacts

For each wetland, a discussion of impacts for each alternative should include:

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. Direct impacts (e.g., filling, dredging, alteration to hydrology source).
❒	❒	❒	❒	B. Indirect impacts (e.g., increased intrusion, degradation of buffer).
❒	❒	❒	❒	C. Discuss impacts to wetland functions.
❒	❒	❒	❒	D. Water quality impacts to wetlands (sedimentation, pollutants) should be discussed.
❒	❒	❒	❒	E. Table summarizing the impacts to various wetlands under each alternative and giving impact totals for each category of wetland and Cowardin type.
❒	❒	❒	❒	F. Discuss quantity and significance of buffer impacts if applicable.

IV. Fish and Wildlife

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. Streams and other aquatic habitats in vicinity described.
❒	❒	❒	❒	B. Terrestrial habitat types described.
❒	❒	❒	❒	C. Aquatic and terrestrial species likely to be present or observed (general discussion is okay).
❒	❒	❒	❒	D. Indicate any likely use by federal or state threatened, endangered, proposed, or protected species using PHS data or observations.

SAT	INC	MIS	N/A	
❒	❒	❒	❒	E. Indicate any likely use by anadromous fish species.
❒	❒	❒	❒	F. Type of use by the species in the vicinity.
❒	❒	❒	❒	G. Potential project impacts to these species and habitats identified, such as direct loss, degradation (e.g., through clearing, filling, noise, etc.), or fragmentation briefly discussed.

Note: A Biological Assessment may be required if the proposed project has federal involvement (i.e., funding or permits) and federally listed species are potentially present. This should be prepared under separate cover (see Biological Assessment section).

V. Wetland Maps

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. Location of all wetlands identified and delineated must be shown on plan sheets. Delineated wetlands must be surveyed.
❒	❒	❒	❒	B. Graphic must clearly show wetlands, SR No., compass orientation.
❒	❒	❒	❒	C. Graphic must clearly show existing and proposed design.
❒	❒	❒	❒	D. Graphic must clearly show areas of potential wetland impacts.
❒	❒	❒	❒	E. Large wetlands can be mapped as open ended polygons.
❒	❒	❒	❒	F. Indicate streams and other surface waters.
❒	❒	❒	❒	G. Areas NOT inventoried for wetlands should be indicated with cross hatching or other means, so these are not easily assumed to be without wetlands.
❒	❒	❒	❒	H. All wetland maps should follow standard WSDOT mapping conventions as attached.

VI. Recommendations

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. Provide recommendations, as appropriate, which could help reduce or eliminate the adverse effects of the proposed activity on wetlands, vegetation, streams, and fish and wildlife. Wetland mitigation must be in accordance with the department policy on mitigation sequencing. These could include such things as clearing limitations, avoidance of specific areas, special construction techniques, timing windows, etc.
❒	❒	❒	❒	B. These should be clearly stated so they can be easily incorporated into the project design and or contract specials.

VII. Mitigation

SAT	INC	MIS	N/A	
❒	❒	❒	❒	A. If unavoidable wetland impacts are anticipated, recommendations may be made regarding appropriate compensatory mitigation measures. These could include recommendations on the type of mitigation, potential sites observed, or other information of use for mitigation planning.

Note: Conceptual mitigation planning and mitigation design are generally outside the scope of this document and are addressed under separate cover (see Conceptual Mitigation section).

VIII. Summary

SAT	INC	MIS	N/A	
❒	❒	❒		A. Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.

The summary should include:

❒	❒	❒	A. The objectives of the project.
❒	❒	❒	B. Impacts of all alternatives including the no-build alternative.
❒	❒	❒	C. Recommended mitigation.
❒	❒	❒	D. Comparison of alternatives based on impacts and cost effectiveness of mitigation.

General Comments: _____

_____

_____

_____

February 1999

Washington State Department of Transportation

Discipline Report Checklist
Conceptual Mitigation Plan

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

The purpose of a conceptual mitigation report is to provide enough information so that WSDOT and resource agency personnel can agree upon or reject a mitigation proposal before a detailed analysis is done. The report is prepared after a preferred mitigation site has been selected but before detailed data collection or planning have taken place. The report should present background information on the site, propose a general mitigation strategy, and reveal potential problems that need to be resolved. Metric measurements should be followed by English in parentheses. Plant and animal names should be common names, not Latin.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Scope of work (general, e.g., add one lane, widen shoulders).
❒	❒	❒	❒	B. Expected ad date.

II. Wetland Impacts

SAT	INC	MIS	N/A	
❒	❒	❒		A. General wetland descriptions, including functions.
❒	❒	❒		B. Summary table showing.
❒	❒	❒		1. Wetland ID numbers (keyed to map).
❒	❒	❒		2. Cowardin classifications.
❒	❒	❒		3. Ecology categories.
❒	❒	❒		4. Hectares (acres) impacted.

III. Proposed Mitigation

SAT	INC	MIS	N/A	
❒	❒	❒		A. Table of mitigation ratios showing required acreage for creation and/or enhancement.
❒	❒	❒		B. General goals.
❒	❒	❒		C. Description of selected site.
❒	❒	❒		1. Location.
❒	❒	❒		2. Ownership.
❒	❒	❒		3. Land use.
❒	❒	❒		4. Ecological setting.
❒	❒	❒		5. Existing vegetation.
❒	❒	❒	❒	6. Soils.
❒	❒	❒	❒	7. Water resources (including wetlands) on or near site.
❒	❒	❒	❒	8. Constraints, if any.
❒	❒	❒		D. General mitigation strategy.
❒	❒	❒		1. Approximate creation, enhancement, and preservation hectares (acres).
❒	❒	❒		2. Hydrology source(s).
❒	❒	❒		3. Grading concept.
❒	❒	❒		4. Vegetation concept (community types, suggested species).

IV. Action Items

SAT	INC	MIS	N/A	
❒	❒	❒		A. Problems that need to be investigated.
❒	❒	❒		B. Data needs (e.g., monitoring wells, soil analysis, survey).

V. Figures

SAT	INC	MIS	N/A	
❒	❒	❒		A. Large-scale vicinity map.
❒	❒	❒		B. Mitigation site map (hand-drawn or aerial photo) showing relevant features, e.g.:
❒	❒	❒		1. Property boundary.
❒	❒	❒		2. Adjacent features.
❒	❒	❒	❒	3. Streams.
❒	❒	❒	❒	4. Wetlands.
❒	❒	❒	❒	5. Roads.
❒	❒	❒		6. Utility or other easements.
❒	❒	❒	❒	C. Sketch showing proposed wetland creation, restoration, and enhancement areas.

General Comments: _____

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February 1999

Washington State Department of Transportation

Discipline Report Checklist
Wetland Mitigation Plan — Draft and Final

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

The **Draft Wetland Mitigation Plan** is a draft document that is normally submitted with wetland-related permit applications. It includes both a report (normally prepared by a biologist) and one or more plan sheets (normally prepared by a landscape designer). This document provides detailed information about the project, design measures taken to avoid and minimize wetland impacts, the unavoidable wetland impacts, and the measures proposed to compensate for those impacts. After resource agency comments are received and addressed, the draft report and plan sheets are revised to produce the **Final Wetland Mitigation Plan**, which will be the document of record for compliance with the permit conditions.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Table of contents.
❒	❒	❒		B. Section headings.
❒	❒	❒		C. Page numbers.
❒	❒	❒		D. Metric measurements followed by English in parentheses.
❒	❒	❒		E. Plant and animal names should be common names, not Latin.

II. Document Sections

Project Description

Avoidance and Minimization of Impacts

SAT	INC	MIS	N/A	
❒	❒	❒		A. Detail all design decisions used to avoid and minimize wetland impacts.

Wetland Impacts

SAT	INC	MIS	N/A	
❒	❒	❒		B. Reference to Wetland/Biology report, which should be attached.

SAT	INC	MIS	N/A	
❒	❒	❒		C. General setting (e.g., physiographic region, vegetation zone, major features).
❒	❒	❒		D. Detailed wetland descriptions (can be excerpted from Wetland/ Biology report.
❒	❒	❒		E. Summary table showing.
❒	❒	❒		F. Wetland ID numbers (from Biology/Wetland report).
❒	❒	❒		G. Cowardin classifications.
❒	❒	❒		H. Ecology categories.
❒	❒	❒	❒	I. Local jurisdiction categories, if any.
❒	❒	❒		J. Hectares (acres impacted).
❒	❒	❒		K. Summary table of wetland functions provided by each impacted wetland.

III. Proposed Compensatory Mitigation

SAT	INC	MIS	N/A	
❒	❒	❒		A. Table of mitigation ratios showing required and actual acreage of creation, enhancement, and preservation.
❒	❒	❒		B. General goals, including functions to be provided by compensating mitigation.
❒	❒	❒		C. Ultimate ecology category of compensatory wetland, number of years to achieve.

IV. Description of Mitigation Site

SAT	INC	MIS	N/A	
❒	❒	❒		A. Rationale for choice.
❒	❒	❒		B. Location (include township, range, section, and SR and MP if appropriate).
❒	❒	❒		C. Ownership.
❒	❒	❒		D. Land use on and adjacent to site (historical, present, and future).
❒	❒	❒		E. Ecological setting.
❒	❒	❒		F. Wetlands, including delineation date and method (if applicable).

SAT	INC	MIS	N/A	
❒	❒	❒		G. Existing vegetation, including problematic species.
❒	❒	❒		H. Streams and other water resources.
❒	❒	❒		I. Soils.
❒	❒	❒		J. Existing wildlife or domestic animals, including problematic species.

V. Mitigation Strategy

SAT	INC	MIS	N/A	
❒	❒	❒		A. Landscape/watershed position of proposed site.
❒	❒	❒		B. General description of what will be done to site.
❒	❒	❒		C. Hydrology source(s).
❒	❒	❒		D. Expected seasonal water level fluctuations.
❒	❒	❒		E. Soil preparation.
❒	❒	❒		F. Vegetation (wetland and buffer areas).
❒	❒	❒		1. Community types.
❒	❒	❒		2. Table showing plants for each community.
❒	❒	❒		3. Control of invasive species (if applicable).
❒	❒	❒		4. Objectives and standards of success *(note: each objective must have a measurable or observable standard of success and a contingency in case standard is not met).*

VI. Construction and Planting Schedules

SAT	INC	MIS	N/A	
❒	❒	❒		A. Monitoring Plan
❒	❒	❒		1. Monitoring schedule.
❒	❒	❒		2. Method(s) used to measure each standard of success (include in appendix, provided by monitoring program at OSC).
❒	❒	❒		B. Contingency Plans
❒	❒	❒		C. Maintenance of the Mitigation Site
❒	❒	❒		1. Statement of protection in perpetuity.

VII. References

SAT	INC	MIS	N/A	
❒	❒	❒		A. Reference list.

VIII. Figures

SAT	INC	MIS	N/A	
❒	❒	❒		A. Vicinity map.
❒	❒	❒		B. Location of major features, including impacted wetlands, of proposed project.
❒	❒	❒		C. Mitigation site map (hand-drawn or aerial photo) showing relevant features, e.g.:
❒	❒	❒		1. Property boundary.
❒	❒	❒		2. Adjacent features.
❒	❒	❒		3. Streams.
❒	❒	❒		4. Wetlands.
❒	❒	❒		5. Roads.
❒	❒	❒		6. Utility or other easements.
❒	❒	❒		D. Grading Plan (*note: may be in rough form in Draft Plan*), including cross-sections showing seasonal water depths.
❒	❒	❒		E. Planting Plan (*note: may be in rough form in Draft Plan*).

General Comments: _____

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February 1999

Wetland Glossary

Compensatory Mitigation – The restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources expressly for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization have been achieved. (See also **Mitigation Bank**.)

Conceptual Mitigation Plan – A document that includes the transportation project description, wetland impacts, and discussion of the mitigation concepts.

Constructed Wetlands – Areas created or restored specifically to treat either point or nonpoint source pollution wastewater. Although a constructed wetland might look the same as a created wetland, different regulations apply. Design and maintenance of constructed wetlands is determined according to their stormwater and hydraulic functions. Vegetation is used to maximize the desired functions.

Created Wetlands – Wetlands that have been constructed on a nonwetland site specifically to compensate for wetland losses permitted under Section 404 of the Clean Water Act. Created wetlands can also be created to compensate for impacts under local permits or WSDOT directive. Wetlands can also be accidentally created as a result of construction activities.

Delineated Wetlands – Wetlands whose boundaries have been identified by a qualified biologist using a standard delineation methodology evaluating soils, vegetation, and hydrology. A right of entry might be required to formally delineate a wetland for project purposes if it does not occur entirely on WSDOT right of way. The delineated boundary is flagged in the field and surveyed. The biology report includes the delineation survey with flag locations and numbering.

Enhancement – Actions taken to augment one or more functions and societal values at an existing degraded wetland where wetland criteria are currently met, along with its associated upland buffer area.

Exotic Species – Species found in, but not native to, a particular area.

Final Wetland Mitigation Plan – A document that includes description of all wetlands in the project area, wetland site plan, wetland site plan, wetland revegetation plan, standards of success, operation and maintenance of the mitigation site, and the monitoring plan.

Function Assessment – Systematic method(s) designed to evaluate the presence and level of performance of wetland functions. Function Assessment methods include, but are not limited to, Reppert et al., Habitat Evaluation Procedure, Wetland Evaluation Technique, Indicator Value Assessment, WSDOT's BPJ Characterization Tool for Linear Projects, and Hydrogeomorphic methods.

Groundwater – Water that occurs below the surface of the earth, contained in pore spaces. It is either passing through or standing in the soil and underlying strata and is free to move under the influence of gravity.

Habitat – The environment occupied by individuals of a particular species, population, or community.

Hydrology – The science that relates to the occurrence, properties, and movement of water on the earth. It includes water found in the oceans, lakes, wetlands, streams, and rivers, as well as in upland areas, above and below ground, and in the atmosphere.

Impact – An action that adversely affects a wetland or other ecosystem; for example, road construction, timber clearing, or agricultural activities that result in wetland conversion or degradation.

Indicator – One of the specific environmental attributes measured or quantified through field sampling, remote sensing, or compilation of existing data from maps or land use reports, used to assess ecosystem condition or functions or exposure to environmental stress agents.

In-kind Compensation – Development of wetlands that are of the same system and class, as defined by Cowardin et al., (1979) in Classification of Wetlands and Deepwater Habitats of the United States, and that provide similar wetland functions and values as those wetlands adversely impacted by development activities.

Invasive Vegetation – Those (typically) nonnative plant species that often outcompete native plant communities.

Jurisdictional Wetlands – All naturally occurring wetlands, some wetlands unintentionally created as the result of construction activities, and those created specifically for the compensation of wetland losses. These wetlands are regulated by the Army Corps of Engineers and local jurisdictions. (Ditches created in non-wetland areas that support wetland vegetation are not usually considered jurisdictional wetlands.) Check with the Environmental Services Office for site-specific clarification.

Mitigation – Mitigation means sequentially avoiding impacts, minimizing impacts, and compensating for remaining unavoidable impacts. In the following order of decreasing preference, mitigation is:

a. Avoiding the impact altogether by not taking a certain action or part of an action. Avoidance has the greatest reliability and is the simplest and most effective way to minimize impacts.

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation Bank – A net gain in wetlands to be drawn upon to offset several small wetland losses from several off-site sites or projects. A property that has been protected in perpetuity, and approved by appropriate county, state and federal agencies, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts. The compensatory mitigation may be through restoration, creation, and/or enhancement of wetlands, and the preservation of adjacent wetland or stream buffers and other habitats.

Mitigation Bank Credits – The acres or other agreed upon unit of currency available at a mitigation bank site for use as compensation. A unit of trade representing the increase in the ecological value of the site, as measured by acreage, functions and/or values, or by some other assessment method.

Mitigation Bank Currency – The medium of exchange of credits for debits in a mitigation bank. The currency represents an amount of wetland area and functions and values.

Mitigation Bank Debits – The acres or other agreed upon unit of currency adversely impacted by development activities.

Mitigation Bank Implementation Plan – A plan under which each mitigation bank site must be explicitly authorized to document the following:

a. site selection
b. service area
c. preliminary design
d. final design and number of credits anticipated
e. as-builts and number of potential credits
f. mechanism for tracking credits (transaction ledger)
g. hydrology performance standards
h. other performance standards
i. schedule for credit release
j. contingency plans
k. maintenance and monitoring schedules
l. long term management of bank

Mitigation Bank Instrument – The documentation of agency and bank sponsor concurrence on the objectives and administration of a mitigation bank. The instrument describes in detail the physical and legal characteristics of the bank, including the service area, and how the bank will be established and operated.

Mitigation Bank Service Area – A designated geographic area (e.g., watershed, county) wherein a mitigation bank can reasonably be expected to provide appropriate compensation for impacts to wetlands and/or other aquatic resources.

Mitigation Bank Sponsor – Any public or private entity responsible for establishing and, in most circumstances, operating a mitigation bank.

Monitoring – The systematic evaluation of a mitigation site to determine the degree to which the site meets its performance standards and to determine if modifications in the maintenance or management of the site is necessary to achieve the performance standards.

Natural Wetlands – Wetlands that exist due to natural forces alone, or unintentionally developed through construction or management practices which alter hydrology. Natural wetlands can be found in unusual areas, including filled areas, some ditches, inactive borrow pits, ponds, and agricultural fields. Natural wetlands are protected by federal, state, and local regulations as well as WSDOT's internal policies.

Non-jurisdictional Wetlands – Non-jurisdictional wetlands include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, canals excavated in uplands, stormwater detention ponds, wastewater treatment facilities created in uplands, and certain agricultural activities and landscape amenities created in uplands. Grass-lined swales and wastewater treatment facilities can be constructed in wetlands but must be so designated and specifically designed for water treatment purposes. Mitigation is required to compensate for the wetland lost to such a facility. The Shoreline Management Act and Growth Management Act include as non-jurisdictional those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. WSDOT has a "no net loss" policy regarding wetlands and will mitigate impacts to wetlands created after that date.

Out-of-Kind Compensation – Compensation that replaces one wetland system and class, as defined by Cowardin, with another.

Performance Standards – Quantifiable standards capable of measuring the degree of success of a mitigation site when compared to previously established goals and objectives. An observable or measurable benchmark for a particular objective, against which a mitigation site can be compared. If the specified standard is met, the related objective is considered to be successful.

Preservation – Setting aside of wetlands in their existing condition to protect them in perpetuity as part of a plan for compensatory mitigation.

Restoration – Actions taken to intentionally reestablish wetland area, and functions and values where wetlands previously existed, but are currently absent due to the absence of wetland hydrology or hydric soils. Re-establishment of historic wetland types with high quality functions and values where degraded wetlands are currently present may also be considered restoration (e.g. conversion of diked palustrine wetland to estuarine wetland).

Wetland – Area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not usually include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate conversion of wetlands, if permitted by the appropriate authority.

Wetland Buffer – The area adjacent to a wetland that serves to protect the wetland from outside influences. Wetland buffers also contribute to the integral functions of the wetland. Regulated buffer widths vary depending upon the quality of the wetland and guidelines established by the local jurisdiction under the state Growth Management Act. Required buffer widths are identified in the project's wetland/biology report. Wetland buffers must be shown on contract plans sheets. No work may occur within an identified wetland buffer area unless it has been approved by the appropriate permitting agency.

Wetland Functions – Wetland functions are the physical, chemical, and biological processes or attributes that are vital to the integrity of wetland/upland landscape interrelationships (landscape systems).

Wetland Inventory – A wetland inventory is a data collection process during which information about the presence, approximate extent, and in some cases the characteristics of wetlands are collected. Inventories can be general (e.g., aerial photographs) or site-specific (through field inventory work).

Wetland Values – Wetland values are those attributes that, although not necessarily essential to the integrity of the landscape systems, are perceived as valuable to society (Adamus et al, 1991).

440.01 Introduction
440.02 Applicable Statutes and Regulations
440.03 Policy Guidance
440.04 MOUs, MOA, and IAs
440.05 Technical Guidance
440.06 Permits and Approvals
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440.08 Exhibits

Key to Icons

Web site.*
Memorandum of understanding, memorandum of agreement, or interagency agreement.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

440.01 Introduction

This section covers policy and procedures related to energy consumed in the operation of vehicles and maintenance of facilities, and energy invested in construction activities as well as resources such as materials used in construction.

(1) Summary of Requirements

Energy may be addressed in NEPA/SEPA documents in a section describing energy and fuel consumption. It is also addressed in the "Irreversible and Irretrievable Commitment of Resources" section, which discusses the commitment of natural, physical, human, and fiscal resources, including fossil fuels, labor, and highway construction materials (see **Section 480**).

According to FHWA technical guidance, for large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. The final EIS should include conservation measures to be included in the preferred alternative. For most projects, only general construction and operational energy requirements and conservation potential impacts need to be discussed.

WSDOT has no other specific requirements for addressing energy issues. For most projects, a Discipline Report is not required.

Unless reduction or minimization of energy consumption is a project goal, such as in mass transit or commuter travel enhancement projects, energy consumption is typically not a key decision making criterion. More often other project benefits such as reduction of congestion, improved travel time, and improvements in level of service are considered as important transportation project goals and reduction of energy consumption is a more implicit benefit.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) Abbreviations and Acronyms

None.

(3) Glossary

None.

440.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to hazardous materials are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) Other

None identified.

440.03 Policy Guidance

The Transportation Commission's Policy Catalog contains a specific policy on meeting environmental responsibilities related to energy: "Minimize, and avoid when practical, air, water and noise pollution; energy usage; use of hazardous materials; flood impacts; and impacts on wetlands and heritage resources from transportation activities."

The Commission also has a specific policy on use of non-renewable resources. Policy 6.3. acknowledges that present transportation systems and land use patterns, oriented to the single occupant vehicle, promote inefficient use of non-renewable energy resources.

The Commission's goal is to "improve the energy efficiency of the transportation system and reduce the consumption of and dependence upon non-renewable resources. The policy and action strategies are available from WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

In the future, the emission of greenhouse gases (such as carbon dioxide) that leads to global climate change may be considered a secondary impact from the construction of transportation infrastructure. Although emissions of carbon dioxide from the combustion of vehicle fuels/energy is currently unregulated, check with WSDOT's air quality unit for any additional regulations, policy changes, or environmental stewardship opportunities.

For additional information see the WSDOT web site at:

http://www.wsdot.wa.gov/Regions/Northwest/SpecialSvc/environmental/

Click on Air Quality, Acoustics and Energy.

Or directly at:

http://www.wsdot.wa.gov/Regions/Northwest/SpecialSvc/environmental/aae/default.htm

Also, see the USEPA web site at:

http://www.epa.gov/globalwarming/emissions/national/index.html

440.04 MOUs, MOAs, and IAs

None identified.

440.05 Technical Guidance

(1) Discipline Report

WSDOT has no formal Discipline Report for Energy at present. Following are guidelines for analyzing impacts on energy resources as part of an Environmental Assessment or Environmental Impact Statement.

(a) Affected Environment

Include existing energy consumption (if applicable).

(b) Impacts

Where the proposed project will cause no net increase in energy consumption, say so and briefly explain why. If the project will cause an increase in energy consumption, consider in terms of BTUs or quantities of fuel consumed:

- Direct energy consumed in operation of vehicles predicted to use the facility, compared to existing facility (if any). Identify pay-back period. Consider effects of increased or decreased smoothness of traffic flow.
- Energy consumed in maintenance of the facility, compared to existing facility (if any).
- Energy consumed in the region as a result of operation of the facility, compared to existing energy consumption. Consider effects of increased or decreased smoothness of traffic flow, vehicle miles traveled, and growth generated by the project.
- Impact on production of energy, if any.
- The combined impact of energy used during construction versus energy used (or saved) during operation. Does one affect the other? Are they substantial when added together?

(c) Mitigation

Describe:

- Mitigation measures and commitments during operation.
- Mitigation measures considered or available but not included, with reasons why.

(d) Construction Activity Impacts

All impacts associated with construction of the project are to be addressed in a Construction Activity Impacts section of the EIS. Provide the following information, as appropriate, for inclusion in that section.

Under “Impacts,” consider temporary construction effects, such as:

- The impact on local fuel availability during construction.
- Energy resources needed and source of energy invested in construction activities and materials used in construction.
- The need to develop additional energy sources during construction.
- Any impact on production of energy.

Under "Mitigation," describe:

- Mitigation measures and commitments during construction.
- Mitigation measures considered or available but not included, with reasons why.

(2) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically the sections on energy impacts. For most projects, the draft EIS should discuss the general construction and operational energy requirements and conservation potential of various alternatives under consideration.

For large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. Direct energy impacts refer to the energy consumed by vehicles using the facility. Indirect impacts include construction energy and such items as the effects of any changes in automobile usage. The alternative's relationship and consistency with a State and/or regional energy plan, if one exists, should also be indicated.

The final EIS should identify any energy conservation measures that will be implemented as a part of the preferred alternative.

For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(3) USDOT Guidance on Fuel Consumption and Air Pollution

Evaluation of a project's effects on energy supply and demand may not be considered necessary because of the availability of fuel in a worldwide economy. However, the impacts of energy consumption can be estimated in terms of fuel consumption effects on air quality.

Refer to USDOT Order 5610.1C, Attachment 2, Page 12; and the following documents:

Energy Requirements for Transportation Systems, USDOT, June 1980;

Procedure for Estimating Highway User Costs, Fuel Consumption, and Air Pollution, USDOT, March 1980.

440.06 Permits

None.

440.07 Non-Road Project Requirements

The requirements to address energy requirements for non-road projects are assumed to be the same as for road projects.

440.08 Exhibits

None.

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Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

446.01 Introduction

This section focuses primarily on environmental noise procedures for highways. See **Section 446.07** for information applicable to procedures for transit and park and ride facilities.

The level of noise (defined as unwanted sound) near state highways depends on six things:

- Traffic volume
- Speed of the traffic
- Percentage of trucks in the flow of traffic
- Distance to the highway
- Intervening topography
- Atmospheric conditions

Generally, traffic noise is increased by heavier traffic volumes, higher speeds, and a greater percentage of trucks.

WSDOT has several strategies for controlling highway noise:

- Preserve existing buffer zones. Work with stakeholders to retain lands owned by WSDOT and preserve beneficial topographic features.
- Work to reduce source emissions. Lobby for improved new vehicle and tire noise standards.
- Free communities from "unnecessary" intrusion. Support local jurisdictions in establishing principal routes for buses and trucks.
- Review local land use plans and advise local agencies to help achieve compatible development along highways.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

- Identify potential noise impacts and mitigation measures early in the planning and design stages of highway improvements
- Continually review technical periodicals related to noise abatement methods to stay abreast of developments.
- Maintain a prioritized listing of noise walls proposed for noise sensitive properties that were developed before acquisition of highway right-of-way.

For detailed information see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy.

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

(1) Summary of Requirements

A traffic noise analysis is required by law for federally funded projects and required by state policy for other funded projects that: (1) involve construction of a new highway, (2) significantly change the horizontal or vertical alignment of an existing highway, or (3) increase the number of through traffic lanes on an existing highway. **Exhibit 446-1** summarizes the noise analysis process.

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

dB	decibel
dBA	A-weighted decibels
EDNA	Environmental Designation for Noise Abatement
FTA	Federal Transit Administration
L_{eq}	Equivalent sound level
$L_{eq(24)}$	Equivalent sound level for a 24-hour period
L_{dn}	Day-night sound level
NAC	Noise Abatement Criteria

(3) Glossary

Abatement – Reduction in degree or intensity.

Background Noise – The total of all noise in a system or situation, independent of state highway traffic noise under study.

Barrier – A solid wall or earth berm located between the roadway and receiver location which provides noise reduction.

Design Year – The future year used to estimate the probable traffic volume for which a highway is designed, usually 10 to 20 years from the beginning of construction.

EDNA - Environmental designation for noise abatement, being an area or zone (environment) within which maximum permissible noise levels are established.

Existing Noise Level – Natural and man made noises considered to be usually present within a particular area's acoustic environment.

Impacted Community – Noise sensitive receptor sites (such as schools or neighborhoods) where people would be exposed to substantially increased noise levels or noise levels that approach abatement criteria due to a project.

Noise Abatement Criteria (NAC) – Noise levels for various activities or land uses which, when approached or exceeded, are considered to be traffic noise impacts.

Traffic Noise Impacts – Impacts which occur when the predicted traffic noise levels approach or exceed the Noise Abatement Criteria or when the predicted traffic noise levels substantially exceed the existing noise levels.

Type I Project – A proposed highway construction at a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of traffic through lanes.

Type II or Retrofit Project – A proposed project for noise abatement on an existing highway or highway configuration.

446.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as noise impacts are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) Federal Noise Control Act and Implementing Regulations

The Noise Control Act of 1972 (42 USC 4901 *et seq.)* authorized the establishment of federal noise emission standards. Companion legislation (23 USC 109 (i)) directs the Secretary of Transportation to develop and implement traffic noise standards for highway projects.

Noise impact criteria and abatement implemented by FHWA are in 23 CFR 772 (Procedures for Abatement of Highway Traffic Noise and Construction Noise). This regulation requires preparing a noise study to determine what noise impacts, if any, will result from the proposed highway improvement and what measures will be taken to lessen these impacts. If noise impacts are expected, noise-reduction measures that are determined by the state highway agency and FHWA to be practicable, reasonable, and acceptable to the public must be incorporated into the highway improvement.

Laws can be accessed at the following web site:

http://www4.law.cornell.edu/uscode/

Enter Title 42 Section 4901, then click on Go To Title and Section.

Enter Title 23 Section 109, then click on Go To Title and Section.

Or by direct links:

http://www4.law.cornell.edu/uscode/42/4901.html

http://www4.law.cornell.edu/uscode/23/109.html

Regulations can be accessed at the following web site:

http://www.access.gpo.gov/nara/cfr/

Click on Code of Federal Regulations, then Title 23, then Browse parts 1-999, then 772.

Or by direct link:

http://www.access.gpo.gov/nara/cfr/waisidx_01/23cfr772_01.html

(3) State Noise Legislation and Implementing Regulations

The Noise Control Act of 1974 (RCW 70-107) authorizes an expansion of statewide efforts for abatement and control of noise to protect the health, safety, and welfare of the people; the value of property; and the quality of the environment.

The Washington Department of Ecology (Ecology) is responsible for implementation under the following regulations:

- WAC 173-58 – Establishes standard procedures for measuring sound levels of sources regulated by Ecology, including, but not limited to, environmental noise, motor racing vehicles, construction, float planes, railroads, and aircraft engine testing.
- WAC 173-60 – Establishes maximum noise levels permissible in identified environments, and EDNA standards measured at the receiver's property line. Highway traffic is exempt from this regulation; however, it does apply to highway construction before 7 a.m. and after 10 p.m.
- WAC 173-62 – Sets noise emission standards for new motor vehicles for the operation of motor vehicles on public highways. These standards provide several methods of evaluating motor vehicle noise levels.

(4) Local Noise Ordinances

Noise generated by construction or maintenance of state highways or other transportation facilities during nighttime hours are subject to local ordinances and may require a permit (see **Section 446.06** and **Section 510**).

446.03 Policy Guidance

The Washington Transportation Commission's Policy Catalog contains a specific policy on noise abatement. Policy 6.3.7 states that: "Noise is a form of pollution which increases when transportation volume and speeds increase, and which may result from land, water, and air-based systems. Noise detracts from environmental quality and is ultimately linked to transportation policy." The general policy is to minimize noise impacts from transportation systems and facilities.

The policy and action strategies are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

446.04 MOUs, MOAs, and IAs

No MOUs, MOAs or IAs have been identified for highway noise. See **Section 446.07** for an Interagency Agreement related to transit projects.

446.05 Technical Guidance

Guidance for conducting traffic noise studies and preparing documentation is provided in the documents described in this section.

(1) WSDOT

(a) Traffic Noise Discipline Report

The Traffic Noise Discipline Report Checklist (**Exhibit 446-2**) serves as a general guide for preparing a noise discipline report. The report should include: project description, noise characteristics, methodology, existing land use, existing and future noise levels, impact analysis, mitigation analysis, construction noise, bibliography, and supporting documentation.

(b) Data Requirements

Before requesting a traffic noise discipline report, the WSDOT project manager needs to compile relevant data that will be needed by the analyst. Such data includes MicroStation files, traffic data, and land use and zoning maps. For a list of data requirements, see:

http://www.wsdot.wa.gov/eesc/enironmental/

Click on Air/Acoustics/Energy, then Noise Study Data Requirements (under Acoustics).

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

(c) Consultant Scopes of Work

Exhibit 446-3 is a sample scope of work that can be used as a guide in contracting with consultants for traffic noise studies. (See **Exhibit 446-5** for a similar scope of work for transit and park and ride noise studies.)

(d) WSDOT Traffic Noise Analysis and Abatement Policy and Procedures

This document provides guidance and criteria for conducting traffic noise impact and mitigation analyses consistent with federal highway traffic noise standards in 23 CFR 772, Procedures for Abatement of Highway Traffic Noise and Construction Noise. It includes information on qualifications for noise analysts, definitions, when noise abatement is required, methodology, public involvement, coordination with local officials, and highway construction noise. For the complete document, see:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy, then Noise Policies (under Acoustics).

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/policies.htm

(e) USDOT Noise Evaluation Procedures for Existing State Highways.

USDOT Directive D22-22 **(Exhibit 446-4)** gives guidelines for conducting noise inventories for retrofits of existing state highways (Type II projects) and establishing priorities for noise abatement projects.

(f) WSDOT Roadside Manual

The WSDOT *Roadside Manual* (M 25-30), Chapter 460 (Noise Abatement), provides additional information on safety, visual quality, and maintenance that may be useful for designers of noise barriers.

(g) Development Review Good Practices Manual

Chapter 3-3 of this manual, Environmental Issues, gives general guidelines that local jurisdictions and private developers should follow when considering development and noise impacts on state roadways.

(2) FHWA

(a) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents. For noise, the draft EIS should include a summary of the noise analysis, including the following:

- Brief description of noise-sensitive areas, including developed and undeveloped areas for land uses such as residences, business, schools, and parks.
- Extent of the impact (in decibels) at each sensitive site.
- Noise abatement measures considered for each impacted area, and costs for those likely to be incorporated into the proposed project.
- Noise impacts for which no prudent solution is reasonably available and the reasons why.

For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(b) FHWA Highway Traffic Noise Analysis and Abatement, Policy and Guidance

This document (June 1995) is available at the Highway Traffic Noise Products (abstracts) web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs; then Environment; then Highway Traffic Noise; then Reports, Brochures, and other Products.

Or by direct link:

http://www.fhwa.dot.gov/environment/AB_NOISE.htm

(c) *FHWA Guidance on Construction Noise*

FHWA guidance on highway construction noise can be found in FHWA Technical Advisory T6160.2, *Analysis of Highway Construction Noise*. March 13, 1984, available online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6160.2.

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t616002.htm

An earlier reference is FHWA's Special Report, Highway Construction Noise: Measurement, Prediction and Mitigation (May 2, 1977).

(3) Other Technical Resources

FHWA's home page contains links to numerous references on highway construction and traffic noise analysis and abatement:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook.

Or by direct link for Noise:

http://www.fhwa.dot.gov/environment/noise/index.htm

Or by direct link for Environmental Guidebook:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch8.htm

446.06 Permits and Approvals

The only noise permits required are for variances from state and local noise laws for construction and maintenance activities during nighttime hours (WAC 173-60). See also **Section 510** and **Section 520**.

In most cases, daytime noise from construction activities is exempt from local laws. In all other cases, permits from local agencies may be needed. Each local agency will need to be contacted to determine the local regulation and if a permit is required. Some acoustical analysis may be needed before the local agency will grant the permit. This is done on a case-by-case basis.

Information required to apply for noise variances for night construction work is given at the ESO web site below. For details, contact WSDOT's Air Quality and Acoustics section.

http://wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy, then Noise Variance Data Requirements (under Acoustics).

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

446.07 Non-Road Project Requirements

(1) Rail, Transit and Park and Ride Facilities

For many projects involving rail or transit and park and ride facilities, the Federal Transit Administration (FTA) is responsible for implementation of noise and other environmental protections under 23 CFR 771, Environmental Impact and Related Procedures. Noise studies are also required for these facilities.

An Interagency Agreement for coordinated noise analysis and abatement policy and procedures is being developed by FTA, FHWA, WSDOT, and Sound Transit (see **Exhibit 446-5**). It gives guidance to those involved in noise discipline studies for environmental documentation on these types of projects.

FTA technical guidance for mass transportation noise analysis is available in *Transit Noise and Vibration Impact Assessment*, April 1995 (DOT-T-95-16). Another resource is the FTA General Noise Assessment Spreadsheet designed as an aid in using the FTA General Noise Assessment Procedures, available at:

http://www.fta.dot.gov/library/planning/enviro/

Click on Noise, then ftanoise.html.

Or by direct link:

http://www.fta.dot.gov/fta/library/planning/enviro/noise/ftanoise.html

(2) Ferry, Rail, and Air Facilities

Railroads – Measurement of sound levels is regulated under 42 USC 4916 and WAC 173-58. Rail projects require a vibration analysis. Contact the WSDOT ESO Air and Noise section for assistance.

Ferries – Ferry projects may require a permit to drive piling during or after set work hours. Additionally preparation of a Biological Evaluation (BE) includes addressing noise impacts to threatened and endangered species. Vessels, as defined in RCW 88.12.010 (21), are regulated for noise under RCW 88.12.

WSDOT airports have noise abatement guidelines.

446.08 Exhibits

Exhibit 446-1 – Traffic Noise Abatement Decision Process

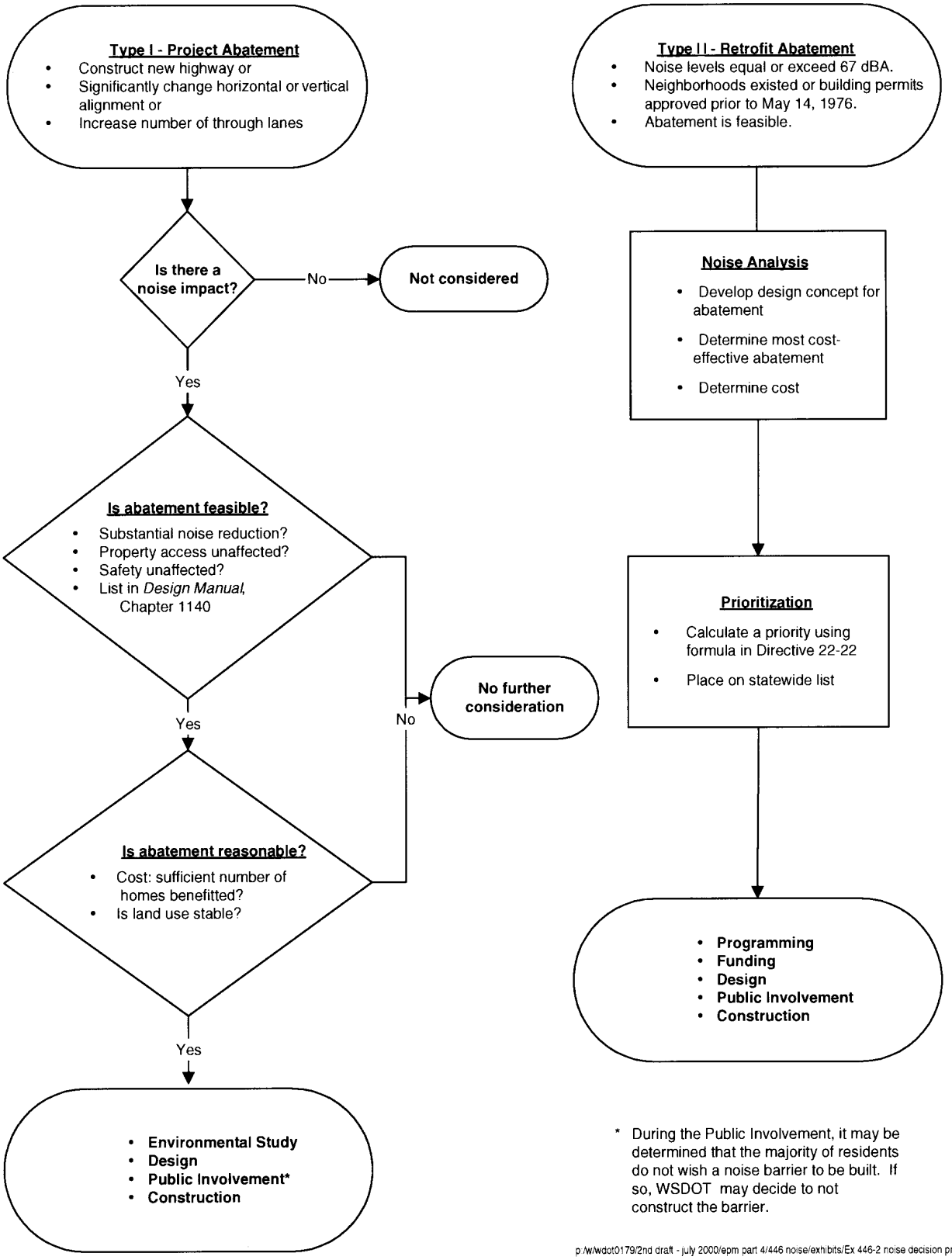
Exhibit 446-2 – Traffic Noise Discipline Report Checklist

Exhibit 446-3 – Sample Scope of Work for Highway Noise Analyses

Exhibit 446-4 – Noise Evaluation Procedures for Existing State Highways. (USDOT Directive D22-22)

Exhibit 446-5 – Sound Transit/WSDOT Re-Alignment Issue Paper No. 24

Traffic Noise Abatement Decision Process



* During the Public Involvement, it may be determined that the majority of residents do not wish a noise barrier to be built. If so, WSDOT may decide to not construct the barrier.

p:/w/wdot0179/2nd draft - july 2000/epm part 4/446 noise/exhibits/Ex 446-2 noise decision prcs.vs

Washington State Department of Transportation

Discipline Report Checklist
Traffic Noise

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

Noise impact studies are conducted in compliance with federal regulations 23 CFR 772. The Noise Discipline Report Checklist is intended to serve as a guide to the contents of a WSDOT noise study. The checklist should be modified as appropriate.

I. Summary

Summarize the analysis done and conclusions reached, with enough detail so the report can be included in the Noise Section of the EIS.

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Objectives of the project.
❒	❒	❒	❒	B.	Current noise environment, including impacts.
❒	❒	❒	❒	C.	Impacts of all alternatives, including the no-build alternative.
❒	❒	❒	❒	D.	Recommended mitigation.
❒	❒	❒	❒	E.	Comparison of alternatives based on the number of unmitigable impacts and cost of mitigation.

II. Project Description

Include relevant aspects of each alternative:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Type of roadway (elevated, depressed, at-grade).
❒	❒	❒	❒	B.	Number of lanes.
❒	❒	❒	❒	C.	Changes to existing access.
❒	❒	❒	❒	D.	Vicinity maps.
❒	❒	❒	❒	E.	Project maps.

III. Characteristics of Noise

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Definition and characteristics of noise.
❒	❒	❒	❒	B.	Nature of the logarithmic scale.
❒	❒	❒	❒	C.	Explanation of noise descriptors used in the report.
❒	❒	❒	❒	D.	Typical sound source noise levels.

IV. Methodology Used

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Abatement criteria.
❒	❒	❒	❒	B.	Noise Model.
❒	❒	❒	❒	C.	Traffic data for each alternative (existing and design year).
❒	❒	❒	❒	D.	Speeds.
❒	❒	❒	❒	E.	Vehicle type percentages.
❒	❒	❒	❒	F.	Peak hours volumes.

V. Affected Environment

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Existing land use including zoning and major terrain features.

VI. Impact Analysis

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Existing and future noise levels.
❒	❒	❒	❒	B.	Table comparing the noise levels at each receiver for existing conditions and the design year for each alternative, the number of residences or other noise-sensitive sites represented by each receiver.

VII. Mitigation Analysis

For each impacted receiver, include a discussion of the reasonableness and feasibility of each of the six methods of mitigation listed in 23 CFR 772 as well as a map showing the location of each receiver and proposed mitigation.

VIII. Construction Noise

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Typical construction equipment noise levels.
❒	❒	❒	❒	B.	Nature and duration of construction noise.
❒	❒	❒	❒	C.	Typical means of reducing construction noise.
❒	❒	❒	❒	D.	Local ordinances relating to construction noise.
❒	❒	❒	❒	E.	Land uses or activities which may be affected by construction noise.

IX. Bibliography

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	_____

X. Data

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Noise Model Data files.
❒	❒	❒	❒	B.	Record of field measurements and traffic counts.

Sample Scope of Work for Highway Noise Analyses

The CONSULTANT shall prepare a technical memorandum documenting the methodology and assumptions used to guide the noise analysis.

The CONSULTANT shall conduct a reconnaissance of the project study area to identify all of the land uses and locate noise sensitive properties within 500 feet of the project as described in 23 CFR Part 772. The CONSULTANT shall note physical and terrain features which affect noise propagation and features which may be altered during construction.

The CONSULTANT shall then conduct a noise study for the project area based on the guidelines presented in the current *Federal Aid Policy Guide, Sub-chapter H, Part 772* Procedures for Abatement of Highway Traffic Noise and Construction Noise, and the WSDOT Traffic Noise Abatement Policy and Procedures. Noise measurements will be conducted at sites as needed to calibrate the traffic noise model and to ensure complete description of existing noise levels that are representative of the land uses along the proposed alignments.

All measurements will be conducted for 15 minute sampling periods during daytime off-peak hours (10 AM to 4 PM) when traffic is moving freely. At each measurement site, traffic counts will be conducted concurrently with the noise measurements. All noise sources will be noted and those that may interfere with future mitigation determination will be identified. Traffic volumes that are counted during the noise measurement survey will be modeled and the resulting sound levels will be compared with the measured sound levels to reach close agreement. The use of shielding and alpha factors may be needed to adjust modeled receptor noise levels and will be used in consultation with the WSDOT Acoustic Program Manager or designee. Once the model has been calibrated, existing peak hour traffic will be used with speed limit speeds to calculate existing peak hour noise levels. In locations where there are no existing roadways, the loudest noise hour from a 24 hour noise measurements will be used to represent the existing noise level.

The CONSULTANT shall model the future year traffic noise level with and without the proposed project using the FHWA STAMINA 2.0, or Traffic Noise Model (TNM). Peak hour noise in the design year for each alternative will be modeled at selected noise sensitive receptors based on forecast traffic volumes. Modeling must be adequate to accurately predict the noise levels at each of the receptors, assess the number of properties within 500 feet of the project that are impacted or will be impacted and determine the increase in traffic noise and amount of reduction to each outdoor area as a result of mitigation.

In accordance with FHWA and WSDOT requirements, noise abatement measures will be considered at locations along the alignments where traffic noise impacts are predicted. Mitigation measures considered must include walls or berms, as well as the five other FHWA methods specifically mentioned in *23 CFR 772*. The CONSULTANT shall provide location, length, height, profile, estimated cost and number of benefiting noise sensitive properties for each proposed barrier. The analysis will contain a complete discussion of impacted areas that do not meet WSDOT's criteria for abatement and specifically note reasons for not including mitigation.

Construction activities that may cause annoyance at nearby noise sensitive land uses will be qualitatively assessed by the CONSULTANT in accordance with WSDOT's procedures. The CONSULTANT will discuss local laws applying to construction noise.

Deliverables:

1. Noise Model Data files,
2. Record of field measurements and traffic counts,
3. Noise Analysis Technical Memorandum containing:
    - 3.1. Tables of contents, figures and charts
    - 3.2. A summary including the impacts of each alternative and mitigation recommended
    - 3.3. A project description including relevant aspects of each alternative and a vicinity map
    - 3.4. A characteristic of noise discussion of noise
        - 3.4.1. The definition and characteristics of noise
        - 3.4.2. Nature of the logarithmic scale
        - 3.4.3. Noise descriptors used in the report
        - 3.4.4. Typical sound source noise levels
    - 3.5. Discussion of methodology used including abatement criteria, noise model and traffic data with speeds, vehicle type percentages and peak hour volumes for existing and design year for each alternative.
    - 3.6. Discussion of existing land use including areas of zoning and major terrain features.
    - 3.7. Discussion of existing and future noise levels.
    - 3.8. An impact analysis that includes a table comparing the noise levels at each receiver for existing conditions and the design year for each alternative as well as the number of sensitive residences or other sites represented by each receiver.
    - 3.9. A mitigation analysis that includes a discussion for each impacted receiver of the reasonableness and feasibility of each of the six methods of mitigation listed in 23CFR772 as well as a map showing the location of each receiver and proposed mitigation.
    - 3.10. A construction noise section that includes:
        - 3.10.1. Typical construction equipment noise levels.
        - 3.10.2. Nature and duration of construction noise.
        - 3.10.3. Typical means of reducing construction noise.
        - 3.10.4. Local ordinances relating to construction noise.
        - 3.10.5. Land uses or activities which may be affected by construction noise.
    - 3.11. Bibliography

Noise Evaluation Procedures for Existing State Highways

US DOT Directive D 22-22
Effective Date:
November 2, 1987

_____
Assistant Secretary for Highways

I. INTRODUCTION

A. PURPOSE:

This Directive sets forth guidelines to conduct a noise inventory for existing state highways and establishment of noise priority sites.

B. SUPERSESSION:

D 22-22, "Noise Evaluation Procedures for Existing State Highways", January 17, 1975.

C. REFERENCES:

1. FHWA Federal-Aid Highway Program Manual, Vol. 7, Chapter 7, Section 3 "Procedures for Abatement of Highway Traffic Noise and Construction Noise," August 9, 1982.

2. IDC, August 26, 1983, Position Paper "Criteria for Programming of Noise Attenuation Work" from Tom McLain to District Administrators.

II. RULES

A. Part 8 of FAHPM 7-7-3 promulgates rules for noise abatement on Type II projects (existing highways) with federal aid participation the same as the federal-aid system on which the project is located.

B. The priority listing is developed based on an inventory of noise sensitive developments which existed, or for which a building permit had been approved, prior to May 14, 1976.

C. Department program, budget, and fiscal procedures apply to any noise abatement project which may be constructed from the noise inventory and priority listing.

D. The steps in Section III, PROCEDURES are used to determine the noise sensitive developments that have the highest priority.

E. The Department's priority listing is current as of August 19, 1986. (See Appendix A.) When new sites must be investigated, because of citizen complaints or public official's concerns, the procedures in this Directive will be used to prioritize those new sites.

III. PROCEDURES

A. Because the priorities are part of the public record, an accurate administrative record is kept identifying the steps taken to establish the final priority number of each site.

. Special care must be taken to identify those elements not included in the priority listing, and why they were not, for administrative review and use in support of the Department's actions.

B. NOISE INVENTORY, PRIORITIZATION PROCEDURES, AND SITE IDENTIFICATION

1. Conduct initial traffic noise evaluation to eliminate highway sections where traffic is insufficient to create a Leq = 67 dBA at the assumed right of way or actual right of way. This can be done in the office.

   a. Use "Annual Traffic Report" data or available special traffic studies.

   b. Predict noise levels based on FHWA - RD-77-108 'FHWA Highway Traffic Noise Prediction Model."

   c. Use posted traffic speed.

   d. Minimize on-site investigations at this stage.

2. Coordinate highway sections potentially having excessive noise with adjacent residential property or special sites.

   a. Eliminate all highway sections without adjacent residential or special sites or without physically practical solutions.

   b. Eliminate areas where roadside development, including access driveways, preclude noise abatement measures.

3. Continue inventory procedure with expanded emphasis upon developed areas with potentially excessive noise.

   a. Using the FHWA RD-77-108 model, plot contour of Leq = 67 dBA on statewide arterial route maps or other suitable maps where appropriate developments exist.

   b. Segregate impacted residential areas into workable units for subsequent analysis.

4. Conduct on-site inspection as preparation for second phase of prediction.

   a. Eliminate sites where terrain will minimize a noise impact to less than a Leq = 67 dBA or prohibits feasible abatement measures such as a housing development on a steep slope above the highway.

b. Secure criteria of design concepts for abatement (barrier wall, earth berm, etc.).

c. Measure noise to confirm original predictions.

5. Prepare fully-documented analysis of impacted work units.

a. Apply second analysis of work unit areas (to secure documented Leq dBA level for "Before Impact Factor"). See Section IV.

b. Include abatement design concepts in analysis for "After Impact Factor."

c. Develop cost estimates for abatement treatment.

d. Plot noise contours based upon the most cost-effective attenuation method and inventory residences within work units.

e. Complete the Benefit Cost Computations of Section IV and arrange the work units in resultant numerical priority sequence.

6. Submit the priority listing to the Office of Project Development for approval.

IV. COMPUTATION PROCEDURES OF NOISE PRIORITY NUMBERS

A. NOISE IMPACT.

The noise impact for a given group exposed to the same noise level Leq is

$$\text{Group Impact} = N \times U.F. \times 2^{\left(\frac{Leq - Lref}{10}\right)}, \text{ where } \left(\frac{Leq - Lref}{10}\right) \text{ is a power of } 2.$$

where N is the number of people in a given group exposed to a noise level of Leq, U.F. is the usage factor for the site, and Lref is the appropriate "NOISE ABATEMENT CRITERIA" for the land use of the site as provided in TABLE 1 FAHPM 7-7-3.

Group impact is computed for each group and added together for each site to give the site impact. This is done for the site both before and after abatement assumptions. This difference is called BENEFIT.

B. PRIORITY NUMBER

1. Obtain the benefit for each site.

2. Estimate the cost of noise barriers for each site. Benefit divided by cost in $1,000s is the priority number.

C. USER NUMBERS

1. RESIDENTIAL. Based on statistics of Washington State obtained by the Office of Fiscal Management in 1980, the average number of occupants in a single family home is three per house and two per apartment or mobile home.

2. SPECIAL SITES. The user number for schools, parks, churches, hospitals, etc., is the estimate of the number of users.

D. USAGE FACTORS

Established usage factors are shown below.

SITE	Hours/ Day	Days/ Week	Months/ Year	Usage Factor
HOMES	24	7	12	1
APARTMENTS AND MOBILE HOMES	24	7	12	1
HOSPITALS	24	7	12	1
CHURCHES	6	3	12	.11
SCHOOLS	10	5	9	.22
PARKS	10	7	5	.17

Factors for other special sites shall be submitted for approval.

E. EXAMPLE COMPUTATIONS FOR NOISE BARRIER PRIORITY NUMBERS:

1. Residential neighborhood.

Assume that before abatement treatment there are four homes exposed to a Leq noise level of 65 dBA, ten homes at 67 dBA, and three homes at 69 dBA. Since the usage factor is one, the average number of people per home is three, and the noise abatement criteria for residential land use is 67 dBA, the computation is as follows:

$$12 \text{ x } 2\ (\frac{65 - 67}{10}) + 30 \text{ x } 2\ (\frac{67 - 67}{10}) + 9 \text{ x } 2\ (\frac{69 - 67}{10}) = 12 \text{ x } .870 + 30 \text{ x } 1 + 9 \text{ x } 1.149 = 50.78$$

This is the "Before" impact. Assume that after construction of a noise barrier there are eight homes at 63 dBA, six homes at 60 dBA, and three homes at 67 dBA. The after impact is as follows:

$$24 \text{ x } 2\ (\frac{63 - 67}{10}) + 18 \text{ x } 2\ (\frac{60 - 67}{10}) + 9 \text{ x } 2\ (\frac{67 - 67}{10}) = 24 \text{ x } .758 + 18 \text{ x } .615 + 9 \text{ x } 1 = 38.26$$

This is the "After" impact. With an estimated noise barrier cost of $102,000, the priority number of this site is:

$$\frac{50.78 - 38.26}{102} = \frac{12.51}{102} = .123$$

2. Church

Assume 100 members and the church is exposed to 68 dBA before noise walls have been constructed. Since the usage factor is .11 for a church and the noise abatement criteria is 67 dBA, the computation is as follows:

$$100 \text{ x } .11 \text{ x } 2\ \frac{68 - 67}{10}) = 11 \text{ x } 1.072 = 11.8$$

This is the "Before" impact. Assume that the noise barrier reduced the exposure to 57 dBA. The "After" impact is as follows:

$$100 \text{ x } .11 \text{ x } 2\left(\frac{57 - 67}{10}\right) = 11 \text{ x } .5$$

With an estimated noise barrier cost of $20,000, the priority number is:

$$\left(\frac{11.8 - 5.50}{20}\right) = .315$$

ISSUE PAPER NO. 24

TOPIC:	**Noise Methodology and Criteria**
ACTION SPONSOR TEAM:	Environmental Action Team
PRIMARY AUTHOR(S):	Environmental Action Team
APPLICABLE PROJECTS:	All Sound Transit projects.
ISSUE:	Noise Analysis Guidance
DATE APPROVED:	February 1, 2001

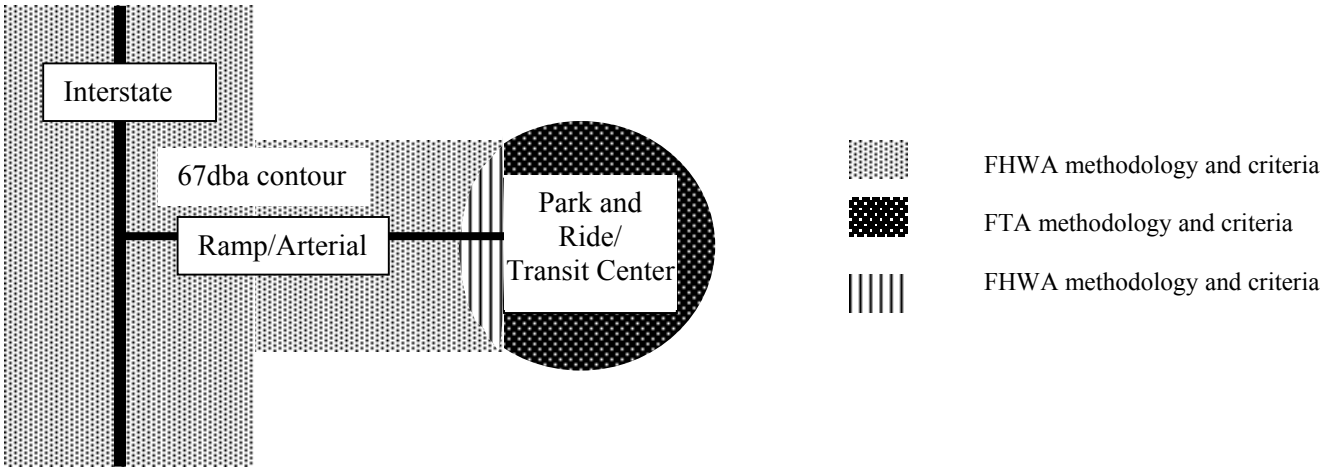
BACKGROUND:

FHWA and FTA have different methodologies and criteria for noise analysis.

DECISIONS:

	Co-lead		**FTA-Only**		**FHWA-Only**	
	Method	Criteria	Method	Criteria	Method	Criteria
Point Source e.g. Park & Ride Transit Center	FTA	FTA	FTA	FTA	FTA	FTA
Line Source	FHWA	FHWA	FHWA	FHWA	FHWA	FHWA

FHWA methodology and criteria (line source) will be used for the roadways to the intersection with the physical boundary of the point source (e.g. curb line of a park and ride lot). For the point source, use FTA methodology and criteria contained in FTA's Transit Noise and Vibration Assessment. In areas where the line source analysis area and point source analysis area overlap, the FHWA line source methodology and criteria will be used. Contact Sound Transit's Environmental Compliance Division staff for copies of FHWA and FTA guidance.



ENVIRONMENTAL ACTION TEAM DECISION ON ISSUE PAPER NO. 24
Noise Analysis

AGREED TO ON FEBRUARY_1_, 2001 BY:

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447.01 Introduction
447.02 Applicable Statutes and Regulations
447.03 Policy Guidance
447.04 MOUs, MOAs, IAs
447.05 Technical Guidance
447.06 Permits and Approvals
447.07 Non-Road Requirements
447.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

447.01 Introduction

This section contains policies and procedures for dealing with hazardous or problem materials encountered or potentially encountered in property WSDOT owns, manages, plans to sell, or plans to purchase. See **Section 510** and **Section 520** for procedures related to using, storing, and transporting hazardous materials or cleaning up hazardous materials spilled during construction or maintenance Stringent federal and state environmental laws and regulations expose WSDOT to full responsibility for cleanup and proper disposal of hazardous materials, whether the original source is from WSDOT activities, from a tenant, or inherited when property is acquired. WSDOT has assumed a leading role in dealing with hazardous materials associated with transportation project development. The extraordinary costs incurred with liability for hazardous materials make it imperative that WSDOT aggressively seek to reduce exposure to liability.

Identifying hazardous materials early in the project development process has many advantages:

- Provides increased safety by minimizing potential dangers to WSDOT other personnel and the environment arising from exposure to and release of hazardous chemicals.
- Reduces the likelihood of project redesign, delay, or termination and attendant costs.
- Reduces the possibility and costs of litigation against WSDOT during both design and construction.
- Avoids the adverse publicity associated with owners of contaminated property.

WSDOT practice is to conduct thorough, legally defensible investigations for identifying potentially contaminated property; develop and maintain good document files; and conduct all appropriate inquiry as early in the project development process as possible. It is essential that the extent and risk of liability be identified before property acquisition. **Table 447-1** summarizes actions to minimize liability throughout the process.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) *Summary of Requirements*

Exhibit 447-1 illustrates the process of hazardous materials discovery, investigation, and reporting during each stage of the project – from planning to project definition, development, construction, maintenance, and surplus property disposal. This section describes requirements during project development and refers to other parts of this manual for detail on other phases.

Two parallel and overlapping processes are described: (1) environmental documentation (discipline studies in support of an EIS or EA), and (2) hazardous materials investigations, which may be done independently or in support of environmental documentation. Hazardous materials investigations should be done at a corridor level, beginning with Geographic Information System (GIS) screening at the planning stage, and/or at a site-specific level. Site-specific investigations should be conducted to progressively greater levels of detail in an Initial Site Assessment (ISA), Preliminary Site Investigation (PSI), and Detailed Site Investigation (DSI).

Hazardous materials investigations should be done prior to property acquisition, property management of potentially contaminated sites, and to characterize contaminated media prior to construction (see **Section 510.09**). WSDOT general practice is to avoid property with hazardous materials potential. When acquiring such property is not avoidable, site assessments, investigations, and remediation shall be conducted in a manner that creates the least potential for WSDOT liability.

Table 447-1:
Important Phases in the Highway Project Development Process
Where Liability May be Minimized

Phase	Recommended Procedures	Options if Problems Identified
Project Planning (See Part 2)	Screening for major hazardous materials issues such as Superfund sites.	Design around contaminated property. Secure cleanup by current owner prior to purchase Negotiate performance bonds, indemnifications, etc., to ensure property owner financial responsibility.
Project Definition (See Part 3)	Environmental Review Summary identifies possible presence of hazardous materials.	Same as above.
Initial Design / Location / Environmental Studies (Sec. 447.05)	Conduct Initial Site Assessment. Conduct Preliminary Site Assessment.	Delay project until site is cleaned up by the responsible parties. Proceed to design, incorporating avoidance or necessary WSDOT cleanup actions. Identify other liable parties for their input on cleanups
Project Design (Sec. 447.05)	Evaluate feasibility of alternative concepts.	Revise location decision/terminate project. Proceed to design, incorporating avoidance or necessary WSDOT cleanup actions. Delay project until site is cleaned up by the responsible parties. Proceed to ROW appraisal and acquisition.
ROW Appraisal and Acquisition (Sec. 447.05)	Conduct detailed hazardous materials site investigation. Include special provisions in purchase agreements.	Revise location decision/terminate project. Negotiate performance bonds, indemnifications, etc., to ensure property owner financial responsibility. Delay project until site is cleaned up by the responsible parties. Cleanup by highway agency after acquisition.
Construction (see Sec. 510)	Establish hazardous materials procedures for construction contractors. Implement notification procedures. Require the SPCC Plan.	Revise location decision/terminate project. Delay project until site is cleaned up by the responsible parties. Cleanup by highway agency.
Property Management (see Sec 530)	Conduct hazardous materials audits of all excess property. Negotiate protective leases.	Delay maintenance or other activity until site is cleaned up by responsible parties. Cleanup by highway agency.

(2) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

ASTM	American Society for Testing and Materials
CAA	Clean Air Act, 42 USC Section 7901
CERCLA	Comprehensive Environmental Response, Compensation; and Liability Act. 42, USC Section 9601.
CHWCP	Construction Hazardous Waste Contingency Plan
CW	Contaminated Waste
CWA	Clean Water Act, 33 USC Section 1251
DSI	Detailed Site Investigation
DWR	Dangerous Waste Regulations
GIS	Geographic Information Systems
HMTA	The Hazardous Material Transport Act, 49 USC Section 1803
HSWA	Hazardous and Solid Waste Amendments, 42 USC Sections 268, 280, 3001
ISA	Initial Site Assessment
L&I	Washington Department of Labor and Industries
LUST	Leaking Underground Storage Tank
MTCA	Model Toxics Control Act
NPL	National Priority List
OSHA	The Occupational Safety and Health Act, 29 USC Sections 651 –678
PCB	Polychlorinated biphenyls
PCS	Petroleum Contaminated Soil
PRP	Potentially Responsible Party (or Person)
POTW	Publicly Owned Treatment Works
PSI	Preliminary Site Investigation
RCRA	Resource Conservation and Recovery Act, 42 USC Section 6901, 40 CFR 260-281
RES	Real Estate Services
SARA	Superfund Amendments and Reauthorization Act, 42 USC Section 9601-9651
SDWA	Safe Drinking Water Act, 42 USC Section 30
SPCC	Spill Prevention, Control, and Countermeasures
TSCA	Toxics Substances Control Act, 15 USC Section 2601-2629
TSD	Transfer, treatment, storage or disposal – types of hazardous waste facilities
UST	Underground Storage Tank

WAD	EPA/Washington State identification number for wastes regulated under the Dangerous Waste Regulations
WP	Waste Profile

(3) Glossary

Dangerous Waste – Solid waste designated as dangerous, or extremely hazardous or mixed waste in Washington's Dangerous Waste Regulations (WAC 173-303). Under RCRA, solid waste may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed (listed in RCRA, 40 CFR 261). Dangerous wastes, not necessarily listed under 40 CFR 261, are characteristically reactive, corrosive, toxic, or ignitable. Radioactive substances are excluded from RCRA regulation.

Hazardous Materials – In general, any material which poses harmful risks to human health and/or the environment. Includes any hazardous or toxic substance, pollutant, or chemical regulated under the CAA, CWA, TSCA, and/or RCRA, excluding petroleum (CERCLA Sec. 101(14)); a pollutant or contaminant as any substance likely to cause death, disease, abnormalities, etc. (CERCLA Sec. 101(33)). Listed in 40 CFR 302.

Hazardous Waste – Solid wastes designated by 40 CFR Part 261, and regulated as hazardous and/ or mixed waste by the USEPA according to Washington's Dangerous Waste Regulations (WAC 173-303). Hazardous wastes defined under RCRA are included as a subset of hazardous materials defined under CERCLA.

Solid Waste – Under RCRA Sec. 1004(27), any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Excludes solid or dissolved material in domestic sewage, irrigation return flows, industrial discharges, nuclear, or nuclear byproduct material.

447.02 Applicable Statutes and Regulations

Federal and state legislation and regulations related to hazardous materials can be found via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Hazardous Materials, then Documents, then Guidance Documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

Or:

Click on Site Index, then H, then Highways and Local Programs, then Operations More>>, then Environmental Legislation, then look under Solid/Hazardous Waste for USC and RCW.

Or by direct link:

http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironLeg.htm

(1) *National Environmental Policy Act/ State Environmental Policy Act*

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to hazardous materials are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions.

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ) State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) *Federal*

(a) *CERCLA*

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 103, also known as "Superfund," is a remedial statute that created the legal framework for identifying parties liable for hazardous waste contamination and requiring them to take responsibility for cleanup operations. Under this statute a person or agency is required to provide notification of releases or potential releases of hazardous materials. CERCLA also created the USEPA ranking system and the National Priorities List (NPL). CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA), which introduced more stringent and detailed guidelines for remediation, as well as more complex liability issues. It also defined and provided for the now common defenses against liability for potentially responsible parties. Superfund is the name of the account held by USEPA to provide funding for hazardous waste site cleanups where the potentially responsible party or person (PRP) cannot be identified or does not have the funds available to conduct the cleanup.

(b) *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA) is a preventive statute, which provides requirements for the treatment, storage, and disposal of hazardous waste. The provisions in RCRA are often referred to as the "cradle to grave" liability concept. Under RCRA, EPA provides the definitions and methods of identifying and classifying hazardous wastes. This legislation also defines who generates hazardous waste that requires USEPA identification numbers and manifests to transport hazardous waste. In 1984, RCRA was amended by the Hazardous and Solid Waste Amendments (HSWA), which greatly expanded its initial scope. In the amendments, Congress prohibited land disposal of certain wastes and created treatment standards for such wastes. RCRA Subtitle I40 (CFR 280, 281, 282) establishes requirements for ownership, operation, maintenance, and closure of underground storage tanks, and Subpart M (40 CFR 61) defines national asbestos emissions standards.

(c) *Occupational Safety and Health Act*

The Occupational Safety and Health Act (OSHA) establishes requirements for site safety procedures, worker training, and worker safety and health standards for employees engaged in work related to hazardous materials. Regulations adopted under this act include the Hazardous Waste Operations and Emergency Response, 29 CFR 1910. This regulation requires specific levels of annual training for everyone working with hazardous wastes and for certain levels of supervised on-site experience.

(d) Clean Water Act

The Clean Water Act (CWA), 33 USC Section 1251 et seq. (formally known as the Water Pollution Control Act), provides for comprehensive federal regulation of all sources of water pollution. It prohibits the discharge of pollutants from other than permitted sources, and authorizes cleanup, injunctive, and cost-recovery powers where an imminent hazard is caused by pollution. Other provisions prohibit the discharge of oil and other hazardous substances; impose criminal penalty for failure to notify the appropriate authorities of such discharges; and provide for citizen suits.

(e) Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), 42 USC Section 300(f) et seq., provides broad administrative and legal authority to protect public drinking water systems. Primary enforcement authority is given to the states. It applies when any contaminant, defined broadly as "any physical, chemical, biological, or radiological substance or matter" is present in, or about to enter, a public drinking water system. See USC Title 42, Chapter 6A, Subchapter XII for provisions on safety of public water systems.

(f) Clean Air Act

The Clean Air Act (CAA), 42 USC Section 7901 et seq., provides federal authority to regulate all stationary and non-stationary (e.g., motor vehicle) sources of air pollution. Under Section l12 of the Act, USEPA is empowered to promulgate uniform national standards for hazardous air pollutants. Hazardous air pollutants are defined as those likely to cause an increase in mortality, serious irreversible illness, or incapacitating reversible illness. While nonhazardous air pollutants are regulated with some discretion, hazardous air pollutant standards are strictly enforced.

(g) Toxic Substances Control Act

The Toxic Substances Control Act (TSCA), 15 USC Sections 2601-2629, regulates the manufacture, processing, and commercial distribution of chemical substances and mixtures capable of causing an adverse reaction to health or the environment. Certain hazardous substances, such as polychlorinated biphenols (PCBs), are regulated under TSCA.

(h) Endangered Species Act

The Endangered Species Act (ESA) of 1973, 16 USC 1531-1543 aims to conserve species and ecosystems and allow recovery of threatened and endangered species. Section 7 of the ESA requires each federal agency to ensure its actions which authorize, permit, or fund a project do not jeopardize the continued existence of any threatened or endangered species or their habitat. The ESA specifically prohibits discharge of hazardous materials to the environment in a way that affects threatened or endangered species or their habitat. Damage to habitat is considered a "taking" whether the habitat is currently in use, or may be in use in the future. For details, see **Section 431**, **Section 436**, and **Section 437**.

(3) Washington State

Washington State laws and regulations often contain more stringent requirements than their federal counterparts. For activities in Washington, these state regulations take precedence over all other laws and rules.

(a) Dangerous Waste Regulations

Dangerous Waste Regulations, WAC 173-303, implement RCRA and the Hazardous Waste Management Act, RCW 70-105. These regulations, considerably more comprehensive than RCRA, provide for waste identification procedures unique to Washington State. The regulations define generator, transportation, storage, and disposal requirements, including forms and rules related to manifesting and transporting hazardous waste. (see **Section 447.06**, Permits and Approvals).

(b) Model Toxics Control Act Cleanup Regulation

The Model Toxics Control Act Cleanup Regulation, WAC 173-340, implements the Model Toxics Control Act, RCW 70.105D. Several administrative rules in this regulation concern WSDOT. These include strict requirements for site discovery and reporting, site assessments, and state hazardous site lists. Any hazardous substance released to the environment must be reported to the Department of Ecology (Ecology) within 90 days of discovery. Most important, the regulation defines standard methods used to assess whether a site is contaminated or clean.

WSDOT and Ecology general roles and responsibilities are clarified by a written implementing agreement (see **Section 447.04**).

(c) Standards for Solid Waste Handling

Minimum Functional Standards for Solid Waste Handling are contained in WAC 173-304, which implements the Solid Waste Management Act, RCW 70.95. Since this legislation assigns solid waste management responsibility to local governments, WSDOT encounters a wide variety of rules and procedures for disposal of solid and problem wastes.

(d) Underground Storage Tanks

The RCRA Underground Storage Tank Program is implemented through WAC 173-360. Most important to WSDOT is the very short (24-hour) reporting requirement for leaks and the release investigation requirements imposed on operators and owners of regulated tanks. Tanks not required to be registered have a 90-day reporting requirement. A related regulation is the Uniform Fire Code 7902.1.7.2.3 (WAC 51-34-7902.1.7.2.3). This regulation requires that USTs not in service for less than one year must be temporarily closed in place and that tanks not in use for more than one year must be either permanently closed in place or removed. The removal of USTs requires permits and a licensed UST remover. Under no circumstances should an unlicensed individual remove an UST.

(e) Sediment Management Standards

Sediment Management Standards, WAC 173-204, implements marine sediment quality and cleanup standards similar to those contained in the MTCA. This regulation imposes a number of unique requirements that impact WSDOT activities, particularly those of Washington State Ferries and other transportation projects in or near coastal zones and sediment impact zones. Special sampling and laboratory analysis protocols complicate site assessments when the Sediment Management Standards apply.

(f) Water Quality Standards

Pollution of state waters is controlled by two administrative regulations that implement RCW 90.48, Water Pollution Control Act. WAC 173-201 A, sets water quality standards for fresh and marine surface water and establishes criteria for toxic substances, pH, dissolved oxygen, and aesthetic values. WAC 173-200 contains similar regulations for groundwater, with special emphasis on radionuclides and carcinogens. (See **Section 431** and **Section 433**.)

(g) Land Treatment – Cadmium

WAC 173-303-655 contains land treatment standards for owners or operators who treat or dispose of dangerous waste. Specifically, WAC 173-303 section 655(5)(iv)(b) identifies certain requirements for high levels of cadmium. Most important to WSDOT is the requirement to notify future property owners by a stipulation in the land record or property deed that because the property is contaminated with high levels of cadmium, food chain crops must not be grown on the property.

(h) Occupational Health Standards

WAC 296-62, contains occupational safety and health standards managed by the Department of Labor and Industries (L&I). Part P and Part R, Hazardous Waste Operations and Emergency Response (HAZWOPER), contain the state regulations that implement OSHA Standards (29 CFR 1910.120). These rules cover operations at known hazardous sites and initial investigations of sites identified by the government, which are conducted before the presence or absence of hazardous substances has been ascertained. They apply to the majority of site assessments conducted by WSDOT. This regulation contains rules on site assessments and control, training, protective equipment, and emergency response.

(4) Federal and State – Lead-Based Paint

A number of federal and state statutes and regulations apply specifically to WSDOT projects involving work with lead-based paint, most often those that include renovation or demolition of buildings or bridges (see **Section 447.05 (7)(c)**).

(a) Environmental Health Issues

The federal RCRA, CAA, and CWA prohibit the release of lead into the environment. The MTCA also provides for cleanup standards in the event of a release. Washington's DWR (WAC 173-303) define tracking and disposal requirements and establish liability and ownership for hazardous wastes. See **Section 447.06** for procedures on obtaining a WAD number using the Form 2.

(b) Worker Safety

In accordance with various sections of WAC 296-62 and 296-155, the Washington Department of Labor and Industries (L&I) enforces occupational safety requirements to protect workers from exposure to lead during work-related activities. In general, these standards cover worker right to know (hazard communication), training, personal protective equipment, medical surveillance, and work methodologies.

(c) *Real Estate Services Property Management*

Transportation projects also must comply with the Professional Workforce requirements under TSCA Title IV. The most pertinent is Section 406, which requires that owners of properties provide renters and purchasers with a USEPA pamphlet when that property either contains or has the potential to contain lead-based paint. This requirement is also linked to Title X of the Housing and Community Development Act of 1992, Section 1018. This section requires disclosure of known or potential location of lead-based paint in residential properties. It does not require testing or removal of lead-based paints.

(5) *Liability and Highway Project Development*

Under current state and federal hazardous waste cleanup statutes, liability is strict, joint, several, and retroactive. This means that all former, current, and future property owners are liable for contaminated property. If WSDOT acquires contaminated property, it can be held liable for any cleanup regardless of the "degree of guilt." The fact that WSDOT can be connected to a contaminated waste site can establish potential liability. If two or more parties are involved, either could be held responsible for the entire cost of cleanup. WSDOT can also be held liable if it was a prior owner; thus, selling land does not protect the department from liability.

WSDOT liability is not limited to remediation costs. Significant common law awards for damages associated with liability are frequent, and where willful misconduct or negligence is involved there is no limit to liability. Consequently, WSDOT must continuously defend itself against liability, and minimize responsibility for hazardous wastes in all stages of highway project development.

WSDOT can also incur liability because of the acts or omissions of state employees. Generally, if a state employee's actions are "in good faith" and "within the scope of that person's official duties," the Attorney General's Office would represent that employee in any action against the employee, and the state would satisfy any judgment against the employee. However, criminal convictions, as well as civil fines, can and have been obtained against individuals whose actions were willful or grossly negligent. Sovereign immunity afforded the government does not attach to individual government employees to immunize them against prosecution for their criminal acts. An educated employee is the best defense against the agency's criminal liability.

Current laws give WSDOT some limited protection against liability, as described below:

- ***Cleanup liability.*** WSDOT policy encourages timely removal of abandoned USTs and contamination encountered on its property without Ecology assistance or approval. These "independent cleanups" are allowed under MTCA (Section 447.02(3)(b)) without an administrative agreement or order in place. A WSDOT managed "independent cleanup" generally accelerates remedial actions and is far less costly than the lengthy process of establishing formal agreements with Ecology, such as Agreed Orders and Consent Decrees. In addition, timely removal reduces the risk of contaminant migration, third party lawsuits, and the potential for WSDOT to encounter unanticipated construction problems. After cleanup has been completed, WSDOT must report the independent cleanup to Ecology within 90 days.

  WSDOT may seek certification from Ecology that the cleanup was adequate in the form of a "No Further Action" letter. Ecology requires a fee to review the cleanup and upon approval will issue the No Further Action letter, which provides assurance that Ecology will not require additional cleanup work in the future based on known site conditions.

After performing an independent cleanup, WSDOT may seek cost recovery from parties who may be potentially liable; however successful cost recovery is much less certain without an order or consent decree.

- ***Third party defense***. This defense applies if WSDOT can show that the contamination was solely the result of an act by someone other than an employee or agent of WSDOT or a person involved in a contractual relationship with WSDOT, and that WSDOT took due precautions against foreseeable acts by others and the foreseeable consequences of those acts. The due care concept implies that WSDOT conducted reasonable inquiry and acted with reasonable diligence to prevent the release or spread of contamination.
- ***Innocent landowner defense***. This defense under MTCA may apply if WSDOT acquires property after disposal of hazardous substances on the property and WSDOT did not know nor had no reason to know about the hazardous materials. To consider this defense against liability, WSDOT must clearly demonstrate that all reasonable inquiry had been undertaken to discover, investigate, and characterize the hazardous substance and, once discovered, that due care was exercised to prevent the release or spread of contamination. Under CERCLA, the acquisition of property under the state's eminent domain power, by purchase or condemnation, creates an innocent landowner defense regardless of the state's knowledge of the contamination. However, the state must still show that any hazardous substances were handled with due care.

  WSDOT takes the following measures to manage potential liability risk:

- If necessary, WSDOT performs due diligence by conducting environmental site assessments, as appropriate, prior to property acquisition.
- When USTs and/or contamination are identified prior to property acquisition, WSDOT uses performance bonds, indemnifications and other tools to minimize agency costs and liability related to site remediation.

  In spite of using the above two sets of tools, WSDOT sometimes discovers unanticipated contamination on property it owns. Often, past owners/operators cannot be identified for cost recovery. However, where a past owner/operator is a larger, still-solvent oil company, WSDOT has been successful in soliciting participation in funding and implementing the remediation. WSDOT has been especially successful in recovering costs when early participation is solicited in remedial design.

  Defenses against liability involve demonstrating that all reasonable inquiry was accomplished. Reasonable inquiry is important throughout project development, and helps in establishing litigation defense. When WSDOT acquires property, it automatically assumes liability and responsibility for cleanup. It is imperative, therefore, that the presence of hazardous materials be identified as early in project planning as possible, and certainly before property acquisition. The importance of early identification cannot be overemphasized. This defense can be accomplished through early site investigation.

447.03 Policy Guidance

The Transportation Commission's Policy Catalog contains a specific policy on use of hazardous substances: Policy 6.3.8 states: "Reduce the potential adverse effects that transportation, storage, application, and disposal of hazardous substances can have on surface and groundwater, fish and wildlife populations and habitat, and air quality. Reduce, and eliminate where practical, the reliance of the state transportation system on environmentally hazardous substances utilized in the construction and maintenance of transportation facilities; ensure the adoption of best management practices in handling hazardous substances for transportation purposes."

The policy and action strategies are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Transportation Commission's Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

447.04 MOUs, MOAs, IAs

(1) Implementing Agreement on Hazardous Waste Management

This agreement between Ecology and WSDOT concerns hazardous waste management and reduction, site remediation, and regulatory compliance. The agencies agree to cooperate in carrying out their statutory responsibilities to meet state transportation requirements and protect public health and safety and the natural environment. The agreement sets forth procedures for each agency to follow in reaching its goals and objectives. The agreement is online via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Hazardous Materials, then Documents and then Guidance Documents (under Memorandum of Understanding).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/docs/doeagree.pdf

Implementing Agreement between the Department of Ecology and the Department of Transportation Concerning Hazardous Waste Management (April 1993).

(2) Water Quality Implementing Agreement

This MOU, between WSDOT and Ecology, provides guidance on meeting water quality requirements on bridge construction and maintenance. The agreement is being updated to include water quality guidance on other types of construction, namely concrete and asphalt grinding. The agreement, described more fully in **Section 431.04(1),** is online via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Regulatory Compliance, then Water Quality Implementing Agreement (under Documents).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

Implementing Agreement between the Washington State Department of Ecology and the Washington State Department of Transportation Regarding Compliance with the State of Washington Surface Water Quality Standards (February 1998).

447.05 Technical Guidance

Two parallel and overlapping processes are described in this section: environmental documentation (discipline studies in support of an EIS or EA) and hazardous materials investigations. See **Exhibit 447-1** for an illustration of the relationships between these

processes. Discipline studies are done during development of a new transportation project. Hazardous materials investigations may be done for property acquisition, property management of potentially contaminated sites, or to characterize contaminated media prior to construction (see **Section 510.09**). Hazardous materials investigations may be done independently or in support of environmental documentation.

Hazardous materials investigations may be done at a corridor level, beginning with GIS screening at the planning stage, and/or at a site-specific level. Site specific investigations may be conducted to progressively greater levels of detail in an Initial Site Assessment (ISA), Preliminary Site Investigation (PSI), and Detailed Site Investigation (DSI).

Procedures for WSDOT discipline studies are described first, followed by procedures for an ISA, PSI, and DSI. These are each separate reports, but the hazardous materials investigations may be done concurrently with a discipline study and the same information may be used in both reports.

(1) General Guidance

Information on WSDOT's Hazardous Materials Program, including contacts, site investigation procedures, contacts and consultants, training opportunities, documents and links, is online at WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Hazardous Material.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz.htm

(a) Terminology

FHWA, WSDOT, USEPA, and the real estate industry use different terminology to describe the sequential steps in Hazardous Materials Assessments that relate directly to timing and decision making in the transportation project development process. **Table 447-2** summarizes this terminology.

Table 447-2:
Terminology for Screening/Evaluating
Sites for Hazardous Materials

FHWA/WSDOT	USEPA/Ecology	Real Estate Industry/ Banks
Initial Site Assessment (ISA)	Remedial Site Evaluation Preliminary Assessment/Initial Investigation	Phase I
Preliminary Site Investigation (PSI)	Site Inspection/Initial Investigation complete	Phase II
Detailed Site Investigation/Hazardous Waste Management Plan (DSI/HWMP)	Remedial Investigation/Feasibility Study (RI/FS)/Same	Phase III

The guidelines in this section describe the procedures and requirements for the following hazardous materials management practices:

- Assessing the potential for discovering hazardous materials and the methods for identifying such hazardous materials in the planning and project development process and on properties owned and managed by WSDOT.
- Preparing complete and legally defensible site investigation documentation.
- Handling and disposing of sampling wastes generated during preliminary and detailed site investigations.
- Evaluating and managing the hazardous materials potential in special problem areas such as underground storage tanks (USTs), asbestos abatement, and lead-based paint.

(b) WSDOT Environmental GIS Workbench

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available databases include CERCLA (Superfund) sites, RCRA sites, and Toxics Cleanup Program sites.

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Information Management/GIS and then WSDOT GeoData Catalog (under Related Information).

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(c) FHWA Guidance

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents, including specifically hazardous waste sites in the vicinity of a proposed project. During early planning, the location of any permitted or nonregulated hazardous waste sites should be identified and locations shown on a map in relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts and public health concerns of the affected alternative(s), and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the draft EIS. If the preferred alternative impacts a known or potential hazardous waste site, the final EIS should address and resolve the issues raised by the public and government agencies. For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

In addition, FHWA's online Environmental Guidebook contains documents on hazardous waste, including Supplemental Hazardous Waste Guidance (January 1997), Hazardous Wastes in Highway Rights-of-Way (March 1994), and Interim Guidance: Hazardous Waste Sites Affecting Highway Project Development (August 1988). Available via the FHWA home page:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Hazardous Waste and Brownfields.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch7.htm

(2) Corridor Study Plan Preparation

Guidance is being developed, with an accompanying Instructional Letter, to assist in preparing hazardous materials reports during corridor study plans. For current information, see the ESO website:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, then Hazardous Materials, then Documents, then Guidance Documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

(3) Discipline Report

The Hazardous Materials Discipline Report is one of several such reports prepared to support EISs, EAs, or SEPA checklists. A hazardous materials discipline study should be completed for any project that requires the acquisition of large portions of new right of way. The study must be thorough enough to provide the data necessary to recognize and assess the hazardous materials impacts of a proposed project. Hazardous materials investigations (ISAs, PSIs, and DSIs) may be used to document the discipline report.

The current version of the Hazardous Materials Discipline Report checklist is maintained online at WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, then Documents, then Guidance documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

The decision process for preparing a discipline report is illustrated in **Exhibit 447-2**.

A discipline study is broad in scope, and identifies which properties require more detailed investigation. It focuses on the history of properties along the right of way, particularly those with industrial, commercial, or waste disposal activities. Because unknown contamination associated with historical activities can become a major liability issue and/or cause major cost overruns and delays, historical reviews must be thorough. Research sources vary depending on availability but often include aerial photography, business directories, Sanborn Insurance maps, published local histories, published theses,

historical societies and museums, and interviews. Current information is usually obtained through regulatory environmental database lists. However, just listing the sites contained on these lists is not sufficient for the report. The report should include the extent of the known problem, status of enforcement actions, and a summary of impacts to the transportation project. This information is necessary to assess route alignment options, cleanup and mitigation costs, and prepare property acquisition plans.

Land uses that involve any of the operations, processes, or activities like those listed in **Table 447-3** are likely to generate hazardous materials and to have chemical or fuel storage facilities on site.

Report writers should understand the requirements and objectives for hazardous materials discipline studies in order to prepare comprehensive contract bids and to avoid lengthy delays in rewrite efforts. The requirements below are organized by report section headings. In addition, writers and reviewers of Hazardous Materials Discipline Reports should reference the checklist.

(a) Introduction

The introduction should clearly establish the parameters that will be followed in the report; i.e., what is being studied and what study methods will be employed. There should also be a brief discussion tying the report to the project objectives and alternatives. Ensure that the study boundaries are consistent with the project, any defined alignments, discipline study checklist, and ASTM standards as appropriate.

Study areas may be defined by any number of methods, from similar land uses to project segments, to alignments. Where possible, these study areas should match or easily transpose into any project areas developed for the EIS. A brief windshield survey of the project will often make defining study areas easier.

(b) Studies and Coordination

Identify all the resources that were researched for the study and describe how they were used to identify and evaluate sites to be listed. Sections 3.2 and 3.3 of the discipline study checklist give examples of commonly used resources, but this is not to be considered a complete list. The similarity of these resources to those used in the ASTM guidelines for conducting an Initial Site Assessment (ISA) (Phase I) is noteworthy. ASTM provides a set standard for conducting "reasonable inquiry" into specific site investigations.

Although the research expected for a discipline study is similar in nature to that of an ISA, the investigation is much more flexible and not constrained to rigid rules. The investigation's level of detail can vary considerably depending on the complexity and size of the project, severity of potential contaminants, and the need for specific detail to assess impacts. This level of detail and a flexible approach to conducting research is consistent with AASHTO guidelines.

Table 447-3
Example Land Uses Likely to Generate Hazardous Materials

Analytical laboratory operations.	Manufacture, refinishing, or stripping of furniture or wood products.
Battery manufacturing, rebuilding, or recycling.	Metal finishing, refinishing, and etching (auto body, printed circuit board manufacturing, jewelry fabrication).
Building and excavation of structures and roads.	Metal galvanizing.
Building and repair of boats.	Nursery and greenhouse operations.
Chemical and petroleum product storage facilities (both above and under-ground tanks and flam-mable storage rooms).	Operation or repair of printing and reproduction equipment.
Chemical manufacture, formulation, or processing.	Paint formulation and mixing.
Chemical treatment of lawns, gardens, yards, or provision of other landscape and tree services.	Photographic processing and printing.
Cosmetic manufacturing or processing.	Pressure treating or preserving wood products.
Drum, barrel, and tank reconditioning.	Product distribution, consolidation, and shipping operations.
Dry cleaning and laundry services.	Production and repair of shoes, including hide tanning for leather.
Electroplating and other metal manufacturing and fabricating operations.	Provision of home, industrial, or commercial pest control.
Fueling, repair, and maintenance of motor vehicles (automobiles, aircraft, trucks, construction equipment, RVs).	Recycling facilities.
Home, garden, pool, or agricultural supply manufacturing.	Schools, auditoriums, hotels, and other facilities with large heating requirements.
Landfills.	Scrap metal and junk yard operations.
Leasing or renting of vehicles, maintaining fleet operations, renting equipment.	Solvent recycling.
Manufacture, formulation, or processing of pesticides or agricultural products or chemicals.	Textile manufacturing (including fabric dying and finishing).
	Warehouse operations.
	Waste or spent product incineration.

The studies and coordination section includes a list of sites (and only those sites) that the project will impact and that possess potential for involvement with contaminants. Section 3.4 of the Discipline Report checklist requires the preparer to validate the lists of suspected contaminated sites, so sites that will not be impacted are eliminated from further consideration. Some writers may prefer to include the list of all the sites identified in the initial research as well as a final list prepared after validation. This large list is usually attached as an appendix.

The Federal Highway Administration (FHWA) supplemented its guidance for hazardous materials on January 16, 1997. In this supplemental guidance, FHWA described sites that could be dealt with in a relatively predictable manner and sites that could be considered substantially contaminated. For preparation of Hazardous Materials Discipline Reports, the following definitions are to be used:

- ***Reasonably Predictable Sites.*** Sites where the nature of potential contamination is known based on existing investigation data, or where it can be reasonably predicted based on observations of the site, and/or experience at similar sites, and/or best engineering judgment. Reasonably predictable sites are typically small to medium in size, the potential contaminants are not extremely toxic or difficult to treat, and probable remediation approaches are straightforward.

- Examples of sites generally classified as "reasonably predictable" are gas stations, auto repair shops, most underground storage tanks (USTs), leaking underground storage (LUSTs), above ground storage tanks (ASTs), small manufacturing operations, and buildings with asbestos and/or materials that contain lead-based paint.
- ***Substantially Contaminated Sites*** – Sites which will create a major liability for WSDOT either in construction liability or by virtue of acquiring all or a portion of the site. If the site has undergone a detailed investigation and a feasibility study, the impacts and remediation costs may have already been predicted. Nonetheless, the site will be identified as substantially contaminated because of its substantial impact or liability.
- Other sites are considered substantially contaminated sites because they are not reasonably predictable. In general, these will be sites that possess a potential for substantial soil, water, and/or sediment contamination, and/or the information necessary to predict remedial costs is lacking, and the contaminants are persistent and/or expensive to manage. The site may be contaminated over a large area with a single contaminant or over a smaller area with multiple contaminants. Substantially contaminated sites are typically large and/or have large volumes of contaminated materials, and/or have a long history of industrial or commercial use.
- Examples of sites that could be classified as "substantially contaminated" include wood products facilities, wood treating operations, metal plating facilities, large bulk petroleum facilities, refineries, hazardous waste treatment facilities, or other sites that use or used large amounts of contaminating materials.

(c) Affected Environment

This section should include three separate discussions: land use, physical environment, and a study area summary. Many of the impacts and mitigation considerations in Sections V and VI of the checklist are predicated upon knowledge and assessment of the land use and physical environment. These two discussions should give a comprehensive accounting of the present land use, its evolution over time, critical areas if any, consideration of likely contaminants including their complexity and distribution, and issues of cleaning up contaminants in the existing environment. The types and distribution of at risk populations should also be addressed.

The requirements for discussing the physical environment are straightforward and are presented in Section 4.2 of the Hazardous Materials Discipline Report checklist. The primary consideration for discussing the physical environment is the effect on contaminants, their distribution, and migration potential.

The discussion of study areas should contain details only of the sites in the final list developed for Studies and Coordination. These are the sites that will be impacted by the project. Detailing other sites is superfluous to the needs of the report. The manner in which this discussion is organized is up to the writer; it should be logical and recognizably related to the study areas and/or project segments discussed in the Introduction. This section of the discipline study should clearly identify the

presence and extent of known and suspected contaminants, results of prior cleanup activities, and enforcement actions.

(d) Impacts

Preparing a comprehensive discussion of the impacts of contaminated sites on the proposed project requires an assessment beyond mere repetition of the obvious existence of contaminants. The writer should not repeat the details from the Affected Environment section. At this point what is needed is a thoughtful identification and explanation of the impacts. Further, writing this section requires some knowledge and consideration of the project construction lanes, design, and techniques. Although detailed design plans will most likely not be available, considerable information about the need for bridge work, pier construction, cut and fill, realignments, and property acquisition needs will be available.

When discussing construction impacts, keep in mind that this is a transportation construction project and not a simple property transfer. Consideration should be given to such issues as changes in migration pathways, impacts on groundwater, worker safety, public health, consent decrees and enforcement orders, and regulatory impacts, especially local requirements. Quite often the impacts of generating contaminated construction soil and water wastes are neglected, as are worker and public health and safety. See **Section 480** for information on secondary and cumulative impacts. Operational impacts would occur as a result of the daily operation of the project once it is completed. Operational impacts should be discussed with secondary and cumulative impacts.

This section of the report contains recommendations for further investigations such as ISA, PSI, and DSI. Recommending investigations of a substantial number of sites may indicate that the report was not properly researched. Very few, if any, full ISAs should be recommended, since that type of research was conducted to create the list of sites (Studies and Coordination section) impacted by the project. It may be reasonable, in limited circumstances, to recommend some ISA work; for instance, to confirm the location and size of USTs.

Invasive testing through a PSI should be recommended only where it is necessary to confirm the existence and kind of contamination present in substantially contaminated sites without adequate data.

DSI recommendations may be appropriate for sites if that level of detail would be necessary to negotiate cleanup liability, develop construction bid items, and prepare health and safety plans for construction workers.

(e) Mitigation

This is another section of the report where the preparer is expected to demonstrate professional knowledge and initiative, and go beyond obvious generalities. The intent of this section is to describe the potential mitigation for impacts identified in the previous section. Each identified impact must be addressed, whether or not a mitigation option is available. There should not be a discussion for an impact that was not previously identified in the impacts section.

Measures presented in this section are site and project specific; therefore, no set standards can be created. In general, the section should address at least the following issues:

- All contamination known or suspected to exist and be impacted by the project, through construction or property acquisition, must be addressed.
- Mitigation measures should consider innovative remediation measures and all applicable regulatory constraints. Early coordination with regulatory agencies, property owners, and local jurisdiction may also open up opportunities to mitigate environmental impacts.

The next area to be addressed is federal, state, and local regulations. Numerous permits and variances could cause considerable cost overruns and delays if neglected, and these should be identified. Measures to mitigate worker and public health and safety are often neglected. Such issues can easily be a major environmental concern.

The suggestions presented here should not be considered all inclusive. The Hazardous Materials Discipline Report checklist includes several other specific topics that may be discussed if they are pertinent to the project.

Estimates of the cleanup costs must be prepared for all alternatives. FHWA expects that every effort will be made to estimate cost liabilities. Lack of professionally developed cleanup cost estimates is a major cause for rejection of EIS documents. Because of the probability factors involved in preparing hazardous materials cleanup estimates, the costs should be prepared as the "most likely" case. These costs should reflect the most prudent and likely remediation method and any reasonable mitigation recommendations presented in this section.

(4) Initial Site Assessment (ISA)

The purpose of an ISA is to conduct all reasonable inquiry into specific parcels of land that may be contaminated and to assess impacts to WSDOT liability, design, and construction. All ISAs conducted by WSDOT are to follow the investigative procedures established by the American Society for Testing and Materials in *ASTM Standard E-1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The discussion of impacts and mitigation, however, is in addition to the ASTM. The ISA may be prepared independently or in support of a discipline study being done for environmental documentation.

The Initial Site Assessment Checklist guides the researcher through the assessment process and helps identify the records and documentation that should be included. Using this checklist alone is not sufficient; each item in the checklist must be documented in a report. Project offices should also keep completed files with documents related to the assessment not incorporated in the final report. The actual amount of documentation will vary depending on the complexity of the project and the past and current land uses. **Exhibit 447-3** provides guidelines for contents of documentation files. The ISA Checklist and recommended table of contents and format is maintained on WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, then Documents, then Guidance documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

(a) *Initial Site Assessment Process*

Essentially, the ISA involves reviewing historic and current land uses with the intent of identifying whether there is a potential for contamination. This level of inquiry may be sufficient to assess the impacts to the project. It is not intended, however, to identify the extent of an identified problem. Other objectives of an ISA include:

- Protecting WSDOT from liability that may be incurred by unknowingly acquiring previously contaminated property.
- Assessing the need for sampling to confirm whether or not hazardous material is present.
- Establishing defenses available to WSDOT if hazardous material is discovered later.
- Beginning the site appraisal process and establishing a baseline condition for excess property.
- Assisting in the selection of specific project alternatives.

Since Regional Offices are most familiar with their respective areas and the details of a particular highway project, each region is encouraged to develop the staff and expertise to conduct ISAs. Assessments must be completed by an environmental professional in order to satisfy one of the legal elements of reasonable inquiry. An environmental degree is not necessarily a prerequisite to be considered an environmental professional. Work experience and continuing education can provide the requisite background. Regions wishing to qualify personnel should work closely with the WSDOT ESO to design a training program.

Because an ISA usually involves off-site records research, it can often be performed without having to enter a site and risk exposure to potentially hazardous situations.

The ISA is a detailed assessment of specific properties. Any property that may involve hazardous materials in any manner throughout its history should be subjected to a complete ISA. Land uses that involve any of the operations, processes, or activities listed in **Table 447-3** are likely to generate hazardous materials and to have chemical or fuel storage facilities on site.

A complete ISA consists of three major elements:

- Records review
- Site reconnaissance
- Interviews with government officials and property owners/occupants
- Several conditions constrain the scope of an ISA. The assessment does not include testing or sampling of any materials. Furthermore, it is site specific, in that it relates to a specific parcel. Also, appropriate inquiry is not exhaustive; there is a point where the cost and/or time expended to gather information outweighs its value. No site assessment can wholly eliminate uncertainty regarding the potential for hazardous environmental conditions.

(b) *Records Review*

The purpose of a records review is to obtain information that will help identify hazardous environmental conditions. Because of the possible impact of migrating hazardous substances from surrounding properties, the records review should include a minimum search distance of one mile from the parcel under review. Documents reviewed should be reasonably available public or private records, obtainable at a reasonable cost and time, and should not require extraordinary analysis of complex or irrelevant data.

Standard document sources may include some or all of those listed below. Federal information can be obtained from USEPA Region 10, and Washington State data can be obtained from Ecology. Note that Ecology has most federal records, so it is best to begin there. Local sources are unique to each region and may be extensive. Regional WSDOT offices may have their own list of sources. Some site lists can be accessed from WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, then Documents, then Guidance Documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

- Federal NPL site list
- Federal CERCLIS list
- Federal RCRA lists
- Ecology General Files
- Ecology Confirmed and Suspected Contaminated Sites Report
- Ecology Hazardous Sites list
- Ecology LUST list
- Ecology UST list
- Local sources
  - Environmental health departments
  - Fire departments
  - Planning departments
  - Regional pollution/water quality agencies
  - Libraries and museums

Review physical setting documents, which provide information about the geology, hydrogeology, hydrology, and topography of a site. This information is important when conditions are such that hazardous substances are likely to migrate onto or from a parcel. A required physical setting source is a current US Geological Survey (USGS) 7.5-Minute Topographic Map. Recommended sources include soil maps from the Natural Resources Conservation Service, and USGS or state Geologic Survey groundwater and geology maps. Washington Department of Natural Resources (DNR) has an extensive natural resources library and Washington Department of Fish and Wildlife (WDFW) has aerial photos of many areas.

Historical use information is an important data source for assessing the potential for hazardous materials. These sources are numerous and those selected for review must, in the professional opinion of the reviewer, relate directly to identifying the use, storage, or generation of hazardous materials. Researching historic land uses prior to 1940 is not usually necessary, unless there is compelling evidence that major contamination occurred before then. Two outstanding sources for historic land use assessment are historic USGS Topographic Maps and aerial photography. Historic topographic maps are widely available at various government offices. Older WSDOT right-of-way plans often reveal potentially contaminated historic sites.

The WSDOT Geographic Services Branch provides extensive historical photography of Washington State, particularly areas containing rights of way. Local sources of data are surprisingly informative. Use fire insurance maps such as Sanborn, and directories such as Polk Directories, Kroll and Metsker Atlases, and various business directories, to identify past land uses of concern. Do not overlook local government records such as property tax files, zoning records, land title records, and fire department records. (However, these local sources cannot be the sole historical source consulted.)

(c) Site Reconnaissance

The purpose of a site reconnaissance is to observe a parcel, and any structures on the property, for recognized hazardous environmental conditions. Temporary easement (right-of-entry) may be required (**Section 447.05(9)**). Every effort should be made to examine the site physically. However, if access cannot be reasonably obtained or if a physical or health hazard may be present, observe the site from adjacent public properties. This procedure applies only to exterior observations. Assessing interior conditions (asbestos and lead paint) is addressed below **(Section 447.05(7))**. A complete photographic record, written description, and maps of the property, to the extent practical, are essential for the documentation files. General site setting observations should include the following:

- ***Current use*** – Identify, in as much detail as possible, any current use likely to involve the use, treatment, storage, or disposal of hazardous substances or petroleum products. Verify that markings on manholes and well head lids are correct. They may lead to dry wells or vaults.
- ***Past use*** – Note and describe structures, certain layouts, or equipment, which may indicate past uses of concern.
- ***Current uses of adjoining property*** – Describe adjoining property uses to the extent that they present a possible migration impact.
- ***Past uses of adjoining property*** – Describe recognized past hazardous environmental conditions, which may indicate migration potential of contaminants. Also, past uses of other property may help identify past uses of the property in question, as certain types of businesses are frequently co-located.
- ***Above ground and underground storage tanks*** – Note any evidence of storage tanks, vents, or access ways. Patches in pavement can indicate former locations of tanks or fuel islands.

- ***Containers*** – Identify any containers that contain or might contain hazardous substances or petroleum products. Include the approximate quantities involved, types of containers, and storage conditions noted. Do NOT open or disturb any containers that are in poor condition or where labeling is absent or unclear as to the contents.
- ***Dry wells, water wells, and septic systems*** – Note anything related to wastewater or other liquid discharges (including storm water), or any drainage into a ditch, drain, or stream on or adjacent to the property. Describe all wells observed, especially injection wells, and indications of septic tanks or cesspools. Also indicate the location of dry wells. Lids to any of these may have incorrect markings, so the investigator should inquire whenever the contents are suspect.
- ***Asbestos and lead*** – Note any buildings constructed before 1980; they are presumed to contain asbestos and/or lead based paint.
- ***PCBs*** – Describe electrical or hydraulic equipment known to contain or likely to contain PCBs. Fluorescent light ballasts need not be noted if the structure was built after 1977.
- ***Stains*** – Describe in detail the visual characteristics and extent of stained soils or pavements. Note whether an odor is present.
- ***Odors and liquids*** – Identify strong, pungent, or noxious odors and their sources. Describe standing water, pools, or sumps containing known or unknown liquid.
- ***Vegetation*** – Absence of vegetation, or areas of stressed vegetation other than those due to insufficient water, often indicate improper disposal of chemicals or overuse of pesticides. Document any observations.

The Site Reconnaissance Checklist and guidance information is maintained online at WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, then Documents, then Guidance documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

(d) Interviews

The objective of conducting interviews is to obtain information about possible hazardous environmental conditions that corroborates information obtained in a records review or site reconnaissance, or that identifies new information. Interviews often lead to the initial discovery of hazardous conditions and should not be underestimated.

Who should be interviewed is a matter of professional judgment. However, make a reasonable attempt to interview major occupants, property owners, neighbors, and key managers for commercial properties. Others who may be able to provide needed information include former employees, museum curators, librarians, local

historians, and longtime residents. Although some people dislike being interviewed, most people are willing to provide answers to direct and concise questions. In addition to asking for information on recognized environmental conditions connected with the property, ask whether any of the following documents exist, and whether copies can be obtained within a reasonable time and at reasonable cost.

- Environmental site assessments reports
- Environmental audit reports
- Environmental permits
- Registrations for UST
- Material safety data sheets
- Safety and spill prevention and control plans
- Reports regarding hydrogeologic conditions on the property or surrounding area
- Notices regarding past or current violations from any government agency
- Hazardous material generator notices or reports

Make a reasonable attempt to interview at least one staff member of any of the following local government agencies with jurisdiction over the area in which the property is located:

- Fire department
- Health agency
- Agency responsible for hazardous materials disposal or other environmental matters

(e) Documentation Files

Carefully organize, catalogue, and document all information gathered during an ISA. Documentation is important, because part or all of it may serve as the basis not only for WSDOT decision- making, but also for future legal action. Even where litigation does not seem likely, the high degree of liability and costs associated with hazardous materials involvement increases the probability that litigation may arise in the future.

Since hazardous materials site information would be essential in any future litigation, it should be retained indefinitely. The amount of data and analysis needed for a particular site or project alignment depends upon the likelihood of its acquisition or adoption as the preferred alternative. Regions should carefully assess the risk incurred in deciding to restrict the level of analysis required for any site or project.

Even a small project can generate a large amount of documentation. Project documentation files should contain all the information supporting the conclusions contained in the ISA Report. See **Exhibit 447-3** for documentation that WSDOT considers essential for a complete project hazardous materials file. No format is

prescribed for a documentation file. Individual regions should follow their current record keeping practices for preparing and tracking documentation files.

An ISA Report is prepared according to ASTM recommendations for format and content, modified for WSDOT reports as shown in **Exhibit 447-4**. Deviations, omissions, and additions in the recommended contents are permissible, if determined appropriate by the environmental professional and supported by the documentation file.

(f) Recommendations

The final step in the process is to summarize the assessment of all material environmental risks which may be associated with the property and recommend what should be done; for example further investigation or site cleanup. The narrative should document compliance with ASTM Standard E 1527 to qualify for the innocent purchaser defense to CERCLA liability, i.e. the requirement to conduct "all appropriate inquiry into the previous ownership and uses of a property consistent with good commercial or customary practice." Property environmental risk assessment should include not only CERCLA issues of soil and groundwater contamination, but other risks to the environment, or to worker or public health and safety such as asbestos or lead-based paint in building structures, or wetlands which can impact development on a property.

(5) Preliminary Site Investigation (PSI)

A PSI is a limited field investigation and is conducted only when the ISA determines there is a potential hazardous materials risk associated with the site. The primary purpose of a PSI is to confirm whether or not the risk exists. It is imperative that the PSI be conducted as early in the project as possible, certainly before making a right of way acquisition decision. A PSI may also be needed during the construction phase (see **Section 510**). The PSI may be prepared independently or in support of a discipline study being done for environmental documentation.

Conducting a PSI requires some form of intrusive testing. The Regional Office is responsible for obtaining all necessary rights of entry and locating all underground utilities. Duration of a right-of-entry should be a minimum of six months; preferably one year. If a property owner refuses to grant a right-of-entry, the region can obtain a court-ordered temporary condemned easement for the purpose of conducting a PSI. Condemned easements should be used only when acquisition of the property is essential to the project and when knowledge of the existence and extent of contamination is necessary to protect WSDOT against future liability. For details, see **Section 447.05(9).**

Although limited in scope, a PSI should not be viewed as a "quick and dirty" project requirement. The planning, equipment, and data requirements are the same as for a more detailed site assessment. PSIs are generally both costly and time consuming; costs can exceed $15,000, and completion often requires two to six months. Personnel conducting a PSI require specialized training and certification in hazardous material operations, and must comply with unique health and safety requirements. Consequently, within WSDOT, PSIs are generally conducted by trained ESO staff or approved environmental contractors.

All PSIs conducted by WSDOT are based on the investigative procedures established by the American Society for Testing and Materials in ASTM Standard E-1903-97, Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process. Guidance for conducting a Preliminary Site Investigation Checklist directs the environmental professional through the investigative process and helps identify the

records and documentation that should be included in the report. The actual amount of documentation depends on the complexity of the project as well as the past and current land uses of the subject property. **Exhibit 447-3** provides guidelines for contents of documentation files. Guidance for conducting a Preliminary Site Investigation is maintained online at WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, then Documents, then Guidance documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

(a) Methodologies

Most PSI methods involve some form of investigative sampling or analysis, especially where hazardous materials are known or suspected to have penetrated below the surface. Investigative technologies are selected based on knowledge of how hazardous materials respond to specific geologic conditions, and on analytical requirements.

Subsurface geophysical testing methods are used to evaluate geologic conditions that create or impact hazardous material migration. These methods include electromagnetics, magnetometer studies, and ground-penetrating radar. They are also capable of determining contamination plumes and locating buried wastes, pipe conduits, and underground storage tanks.

Samples taken for laboratory analysis are the primary means for identifying the presence and extent of contamination hazardous to human health or the environment. A number of techniques are used to take soil and water samples, depending on local conditions and known subsurface geology. Soil samples may be taken from the surface or shallow pits. Deeper samples are obtained using a back hoe or augers, either hand operated or mobile drilling rigs. The latter are the most frequently used and potentially the most expensive. They are also used to obtain deep samples in marine environments. Sediment samples are important when streams or lakes are potentially contaminated. These samples are generally easy to obtain using scoops, specialized coring devices, and specially constructed grab samplers.

Air sampling is frequently part of a PSI. The technique is usually a real time method that not only screens for any existing contamination, but also establishes criteria for worker safety. Worker safety is an important consideration in assessing contamination discovered during construction activities. Direct reading instruments, such as photoionization detectors and soil gas probes, are used to take air samples.

Selection of analytical methods and proper sample handling techniques are critical to a successful PSI. Laboratory analysis must be performed by Ecology-certified laboratories. A variety of laboratory analyses are available. Most methods are selected based on the specific objective of the PSI, although many are dictated by specific provisions of regulatory documents. Improper or incomplete sample or analysis planning may invalidate sampling results or make the results legally indefensible. Proper handling of samples is also crucial to obtaining usable and defensible data, and includes selection of correct sample containers, proper storage

and transportation, consideration of holding times, and following strict chain-of-custody procedures.

(b Reports

An ISA sufficiently detailed to identify the possibility of contamination will normally be required before a PSI is undertaken. An abbreviated ISA can be conducted if the site history is known or obvious and the suspected contaminants are well understood. The report prepared for a PSI depends on the nature of the project and the findings of the ISA. For instance, in the case of a service station, information contained in an ISA should be referenced and not repeated in a PSI report.

Regions reviewing PSI reports prepared by WSDOT ESO personnel or an environmental contractor should expect to find the following information:

- Discussion of the physical environment and its relationship to the potential types of contamination, its influence on where contamination may be found, and how it impacts the extent of contamination migration.
- Selection of sampling techniques, the rationale for the type of sampling, and a sampling plan.
- Discussion of the laboratory analysis performed.
- Conclusions and recommendations, which should include identification of any contamination found, its extent, impact on human health and the environment, and a remediation strategy.

Since a PSI involves limited field sampling, the conclusions and remediation strategy recommendations are not an "end all." The contamination may require extensive sampling, and perhaps long-term monitoring. The remedial strategy formulated at this time can serve as no more than a first guess. However, Regional Offices should expect sufficient detail to make a property acquisition or design modification decision from the information contained in a PSI report.

(6) Detailed Site Investigation (DSI)

A DSI generally includes conducting a thorough investigation of a site and preparing a remediation plan. The DSI may be prepared independently or in support of a discipline study being done for environmental documentation, and may also be needed during the construction phase (see **Section 510**). A DSI can be extensive, time consuming, and expensive. Consequently, in WSDOT a DSI is conducted only when the following conditions are met:

- The existence of hazardous materials on the project site has been confirmed and the PSI indicates the need for more detailed sampling and analysis, and
- A decision has been made to proceed with the property acquisition, and
- A site analysis and cleanup is not being performed by a responsible party other than WSDOT.

  Or:

- Hazardous material conditions are discovered in the project right of way during construction, and
- There are no alternative construction options.

A DSI includes detailed sampling of the site, analysis of remedial alternatives with estimates of the cleanup costs, and recommendations of which remediation type to use. Generally, WSDOT does not have the resources to conduct a DSI, although there may be circumstances in which the department finds it beneficial to commit the resources to conduct an in-house DSI project. Consult the ESO for assistance in meeting DSI requirements. The ESO has several on-call environmental contractors specifically to conduct DSI and remediation projects.

Field work and laboratory analysis are the major components of a DSI and consequently account for most of the study time and costs. A DSI site characterization provides a sufficiently detailed understanding of the site to allow the subsequent formulation and evaluation of remedial alternatives. DSIs may take months to several years to complete and costs may exceed half a million dollars.

(7) Requirements for Specific Hazardous Materials

(a) Leaking Underground Storage Tanks (LUSTs)

Petroleum is the most common form of hazardous materials contamination encountered by WSDOT. Although petroleum is not currently defined as a hazardous substance under CERCLA, it is under MTCA, and its occurrence is so widespread that numerous state and federal regulations and guidelines have been promulgated to deal with its prevention and cleanup.

The most frequently occurring cause of petroleum contamination is leaking underground storage tanks (LUSTs). LUSTs are commonly found at gas and service stations, along main roadways, arterials, and at intersections. Private under-ground storage tanks (USTs) such as home heating oil tanks in rural and residential areas and farm fuel tanks are also common and are not registered with Ecology. Consequently, identification prior to property acquisition is a priority for WSDOT.

The liability WSDOT can incur from acquiring even a small piece of property contaminated with petroleum makes thorough site assessments necessary. Regions are expected to conduct at least an ISA for all UST sites or property where petroleum products were handled and where complete or partial acquisition is planned.

A full ISA is usually not necessary for service station sites, because there is already cause to suspect contamination. A PSI should be conducted if potential contamination cannot be reasonably ruled out. There are no fixed rules on when a PSI must be conducted. Keep in mind that the absence of visual signs does not mean a tank has not leaked. It is not unreasonable to expect some level of PSI for all petroleum sites considered for acquisition.

Unless the petroleum contamination is unusually widespread, or groundwater is contaminated, the cost of remediating a known LUST site or other petroleum site is often a reasonable acquisition risk. In such cases, consult the Attorney General's Office for special provisions to include in purchase agreements.

Until recently, excavation and land disposal of petroleum soils was the norm. Fewer landfills and higher dumping costs, as well as RCRA policies and liability issues, now make land disposal the least desirable method. USEPA encourages treatment remediation as the preferred course of action. Treatment at the site is

preferred, because of the added cost and liability in transporting contaminated soil away from the site.

Depending on the type of release and the geologic conditions, petroleum contamination may be managed cost effectively by on-site bioremediation, soil venting, or thermal destruction. For small volumes, off-site treatment may be appropriate. Several companies in the state now accept petroleum-contaminated waste, which is thermally remediated or incorporated into asphalt or concrete. The cost for this type of disposal is generally less than landfill disposal fees. Ecology's *Guidance for Remediation of Petroleum–Contaminated Soils* (November 1955) provides additional information. The document is online at Ecology's web site:

http:/www.ecy.wa.gov/

Click on Publications, then Search for Publications, and type in name of document.

Or by direct link:

http://www.ecy.wa.gov/biblio/9130.html

(b) Asbestos

Asbestos is a naturally occurring fibrous mineral that was used extensively in residential and commercial buildings. It is rarely used in new construction today. Asbestos was widely used as a commercial product because it is non-combustible, resistant to corrosion, and has a high tensile strength and low electrical conductivity. In residential and commercial buildings constructed before 1981, asbestos is often contained in thermal system insulation, various decorative spray-on texturing and fire-proofing, floor coverings, siding, adhesives, roofing materials, and thousands of other building materials and/or applications.

There are several forms of asbestos, such as actinolite, amphibole, amosite, tremolite, chrysotile, crocidolite, or anthrophyllite. Building materials containing at least one percent asbestos as determined by polarized light microscopy are considered to be a regulated hazardous material. The *Method for Determination of Asbestos in Bulk Samples* is contained in Appendix A of Subpart F in 40 CFR Part 763.

Asbestos is a known carcinogen and contributor to lung disease. Federal, state, and local regulations govern all aspects of asbestos. Management, removal, and disposal of asbestos requires special training, handling, and permitting. Asbestos regulations are enforced by local air pollution control authorities, Ecology, and most specifically by Labor and Industries (WAC 296-62, Part I-1). Federal guidance about asbestos is found in 40 CFR 61 Subpart M, National Emissions Standards for Asbestos.

In WSDOT projects, asbestos is most commonly found in pre-1985 buildings, and various underground piping and conduits. Demolition of structures or excavation of buried utilities can expose workers and the public to asbestos.

Project Design Considerations – The following considerations shall apply during the design phase of any project that will include demolition or renovation:

- Any project work involving asbestos must be completed by trained and certified individuals.

- All buildings constructed before 1985 should be presumed to contain asbestos unless testing and inspection reveals otherwise.
- If the presence of asbestos is suspected during the ISA or at any point during project design, a survey by a certified asbestos inspector shall be conducted.
- The abatement plan or management plan shall be completed by a certified AHERA Project Designer.

Dependent upon availability, WSDOT's ESO Hazardous Materials Program has an AHERA accredited inspector and can conduct asbestos surveys. Detailed information and instruction for dealing with asbestos is located in the WSDOT *Asbestos Abatement Manual* (M-27-80).

(c) *Lead Paint*

Lead-based paint poses risks to environmental health and worker safety when disturbed for maintenance, renovation, and demolition of structures including bridges and buildings. Environmental documentation prior to any project should ascertain the existence of lead-based paint and determine if that paint will be disturbed.

Testing for lead-based paint must be conducted by trained and certified personnel or contractors. Testing should be completed as early in the design phase as possible and certainly before advertising a project when the contract includes building demolition or renovation. Lead removal can be included in the primary contract or in a separate contract. WSDOT's ESO Hazardous Materials Program can provide project managers and Real Estate Services with contract specifications and other contracting assistance. See **Section 447.02** for statutes and regulations applicable to lead paint.

A manual covering identification, disposal procedures, forms, regulations, health hazards, and exposure monitoring is available from the Associated General Contractors of Washington (AGC). For the *Lead Manual* and other AGC publications, see AGC's home page:

http://www.agcwa.com/

Click on Education Programs, then AGC Education Foundation, then Class Schedule and then Publications.

Or by direct link:

http://www.agcwa.com/Public/education_foundation/coned/class_schedule_materials.asp

Facilities – Especially in pre 1980 buildings, buildings scheduled for demolition should be tested for lead-based paints before beginning work.

Bridges – Almost all WSDOT and county steel structure bridges contain large concentrations of lead paint and other regulated heavy metals, such as zinc. To comply with applicable air, water, and safety and health regulations, these hazardous materials pose significant management challenges as related to construction and maintenance. Because of the rapidly changing policy concerning painting, any questions concerning bridge painting should be directed to the ESO Hazardous Materials Program Manager.

Exposure of hazardous materials to the environment and personnel will occur during bridge paint removal and surface preparation, through contact with spent abrasives, old

paint, corrosion products, dust, grease, bird feces, and wastewater. Likely exposure pollutants include lead, chromium, cadmium, arsenic, barium, mercury, selenium, and silver. Even though contractors perform the majority of bridge construction and maintenance, WSDOT is required to be diligent for managing these hazardous materials from "cradle to grave."

Disposal of Lead-Based Paint and Lead-Contaminated Wastes – WSDOT, as a generator of project hazardous materials, is responsible for overseeing and managing the disposal of project wastes. Lead-based paint poses disposal challenges due to the toxicity of the metal. Disposal options vary depending on the toxicity and lead leachability of the waste (lead TCLP). For example, lead concentrations in the waste materials greater than 5 mg/kg are required to be disposed of at a certified landfill. Lead concentrations less than 5 mg/kg can be disposed of at a non-certified landfill. The difference in the disposal cost is significant when comparing landfills.

Leachability of the lead is reduced when contractors or maintenance personnel use binders such as Blastox in the removal of lead-based paints.

(8) Disposal Procedures for Waste from Investigative Sampling

This section summarizes the procedures to be followed for management of investigative sampling wastes generated during a PSI or DSI. Disposal of sampling wastes is regulated by numerous federal, state, or local laws and procedures, depending on what the waste is determined to contain. It is the responsibility of the region in which the sampling was conducted to store and dispose of the sampling waste. The ESO will provide the laboratory characterization reports and recommendations for legally disposing of sampling waste.

Sampling wastes may include drilling mud, bore cuttings, purge water from wells, soil, other materials from the collection of samples, and solutions used to decontaminate equipment. Under certain conditions, such sampling wastes may be disposed of on site. The hazardous material specialist or site manager conducting the sampling is responsible for complying with laws that govern on-site waste disposal.

Because of potential public concern and the liability associated with leaving sampling waste in the public right of way or at sites accessed with temporary easements, Regional Offices must remove sampling containers from such locations within 24 hours. Sampling waste containers are stored at facilities owned or operated by WSDOT. The ESO recommends that each region establish a limited number of facilities where sampling waste may be stored. This eases the burden of disposal if the sampling waste is determined to be hazardous material as defined by RCRA.

Labeling is of prime importance when dealing with known or suspected contaminated wastes and materials. All containers must have a legible label with the correct information on that label. See the USDOT labeling regulations (49 CFR 173.2).

(a) Non-hazardous Waste Disposal

Most wastes generated by WSDOT are not hazardous and can be properly disposed of in landfills, pit sites, or back onto the property from which they were obtained. Also, sampling waste is not a hazardous waste until positive evidence, based on test results, confirms its characteristics. Consequently, there is no requirement to obtain USEPA/State Site Identification Numbers or prepare shipping manifests to transport sampling waste.

Sampling waste determined not to be hazardous can be disposed of in several ways. Waste without any contaminants can be returned to the site of origin or placed in a WSDOT pit site. Problem wastes, notably petroleum-contaminated soil

and asbestos, may legally be disposed of in a permitted landfill or with one of the many permitted business that accept such waste. Regional Offices are responsible for determining the acceptability of problem wastes for treatment or disposal in their region. The ESO will provide updated information on permitted businesses, their location, fees, and restrictions. Aqueous waste may be poured onto the ground, if contaminant free, or disposed of through a Publicly Owned Treatment Works (POTW). Regions are responsible for complying with the restrictions of their POTW.

(b) Hazardous Waste Disposal

Sampling waste determined to be hazardous must be disposed of by a WSDOT-certified hazardous waste transport contractor. Regional Offices must obtain a USEPA/State Site Identification Number before offering hazardous waste for transport. A few exceptions are permitted for small quantity generators as described in WAC 173-303-070(8). See **Section 447.06** for information on obtaining identification numbers. A separate number is necessary for each site from which hazardous waste is shipped. Since Ecology requires annual reports, limiting the number of sites for storing potential hazardous sampling waste will reduce documentation. To ship hazardous wastes, Regional Offices must comply with all administrative and substantive requirements for RCRA wastes in Washington State, including shipping manifests, packaging and transport requirements, and record keeping.

(9) Right-of-Entry Procedures

One of the major issues for conducting environmental site investigations is access to private property for the purpose of sampling. The issue consists of determining whether access is required, then following appropriate guidelines for gaining access. RCW 47.01.170 allows only visual inspections of the property. Washington has no statute allowing collection of samples without the owner's permission. Permission of the property owner is necessary when access is required to conduct invasive testing for a PSI. A unique condition exists when a private property owner refuses a valid WSDOT request for entry. In either case, the assistance of the office of the Attorney General is required.

(a) Reasons for Access

The first step is to determine whether access to potential contaminated property is required to conduct a PSI. Documentation that supports WSDOT's need to access a particular property is essential and will normally be needed if seeking a court order. The recommended form of documentation is an ISA. Following are several objectives that would require WSDOT to enter upon private property.

- ***Routine engineering and surveying*** – Routine access for purposes such as project design, estimating cost, or setting stakes is permitted under RCW 47.01.170. To demonstrate respect for private property rights and to protect employees from unknown dangers, oral permission from the property owner will be obtained whenever possible. Invasive engineering or testing requires a signed right of entry, which can be obtained through the Region Real Estate Services (RES) section.
- ***Avoiding MTCA strict liability exposure*** – WSDOT becomes liable for cleanup costs as a subsequent owner even though it did not cause the contamination. WSDOT policy is to sample property that is suspected of

being contaminated prior to purchase or as part of the Real Estate Services negotiation.

- ***Detecting hazardous substances*** – In order to establish an innocent landowner defense, WSDOT must exercise due care and reasonable precaution (CERCLA, 42 USC 9601 and 9607). Eminent domain condemnation does not protect WSDOT against a third party claim unless adequate investigation, due care, and reasonable precautions have been established. To qualify for this defense, WSDOT must demonstrate that it:
  - Acquired the property after contamination
  - Exercised due care with respect to hazardous substances involved
  - Took reasonable precautions against the consequences of pollution
- ***Detecting petroleum product contamination and underground storage tanks for RCRA compliance*** – Sites must be investigated to detect petroleum contamination due to liability imposed by MTCA, and the need to remove tanks. This is one of the principal problems encountered by WSDOT and one that has caused the most cleanup liability and costs.
- ***Complying with federal, state and local laws*** – Examination of sites is required to comply with numerous environmental, natural resource, agricultural, and historic laws. These include NEPA, 4(f), and laws relating to clean air, historic preservation, relocation, wetlands, threatened species, and cultural/ archaeological artifacts. Access to the property for inspection must be obtained prior to property acquisition in order to accomplish the letter or intent of these laws.
- ***Determining project location and scheduling*** – WSDOT must decide whether the costs and delays of contamination cleanup warrant selecting an alternative route. Otherwise WSDOT could be mired in review and investigation procedures that delay construction for years or even prevent proceeding with the project.
- ***Determining construction site conditions*** – WSDOT must know the type of contamination and other conditions likely to be encountered during construction and to which its contractors may be exposed. WSDOT and its contractors found to have caused or contributed to the release or threatened release of a hazardous substance can be held liable for that contamination.
- ***Appraising property*** – Access is required for appraisal purposes. Contamination affects the valuation of property and methods selected for cleanup. WSDOT may act as a contracting or negotiating agent for current owners in some situations. In other cases, the cost of cleanup should be deducted from acquisition cost or money held in escrow for cleanup.

(b) Pre-Access Requirements

The following steps should be taken before requesting a right-of-entry to conduct a PSI:

- ***Conduct an environmental audit*** – Reviewing public records may reveal that other work was conducted and that regulatory agencies are involved. There is no need for WSDOT to repeat a site investigation. This should have been accomplished in the ISA.

- ***Determine that the purpose of the proposed site inspection is clearly identified*** – Legitimate purposes include acquiring property for a transportation project, remediating contamination on the property, project planning, or preparing an Environmental Impact Statement.

(c) Obtaining Right-of-Entry

Procedures for obtaining a right-of-entry are as follows:

- Rights-of-entry are obtained through the Region RES section, using the procedures in the Right of Way Manual (M26-01) Chapter 6, Easements and Permits. RES will obtain title evidence and negotiate and process payments for damages. Although condemnation is permissible under the statute, WSDOT and the Transportation Commission have taken the position that WSDOT will not condemn property to acquire rights of entry for environmental testing.
- The Region RES section will need the details of the area to be investigated, what materials are expected to be found, and how long it is going to take. If long term use of the property is needed, RES will determine and negotiate a fair market rental rate to be paid. It is often helpful for the engineer to attend the meeting with the property owner(s) to clarify issues that arise. This is an opportunity for WSDOT to make reciprocal agreements to share the results of any testing on the site.
- Should the owner(s) refuse to allow entry, and it is essential to continue investigation, the Region RES personnel will enlist the assistance of the office of the Attorney General (AG) to obtain a court order. An assistant AG will need an affidavit of negotiation, setting out WSDOT's attempts to obtain permission from the owner and the owner's refusal. Typically, this consists of the RES agent's diary and any engineering notes to the file.

(10) Real Estate and PropertyManagement

Real property activities involve hazardous material management issues in two major areas: property acquisition and property management. WSDOT's Real Estate Services plays a major role and is responsible for helping to coordinate a wide variety of hazardous material procedures.

(a) Property Acquisition

The main objective for hazardous materials management in property acquisition is to avoid or minimize liability. Once title to a contaminated site is held by the state, it may be too late to resolve legal problems related to acquisition. Certain protective measures in the acquisition process are required very early in the program. Real Estate Services role includes the following:

- Preparing and negotiating right-of-entry documentation so site testing can proceed in a timely manner.
- Analyzing test results from a fiscal standpoint, and coordinating applicable value estimates to make sure appropriate compensation is offered for property rights acquired.

- Including indemnification language in acquisition documents to make sure WSDOT will not be held liable for any claims related to site cleanup that are not directly attributable to the state's provisions of title.
- Applying appropriate indemnification deposit procedures that withhold compensation to a property owner, so WSDOT does not bear the financial burden for site cleanup when latent contamination is discovered.
- Coordinating asbestos testing for all habitable dwellings or business buildings that are acquired.

(b) Property Management

Although property management presents unique considerations, the ultimate objective is the same as other WSDOT activities, which is to minimize or eliminate liability for hazardous materials. Sites under property management usually were acquired as early possession of a right of way. The property may remain vacant or be leased until highway construction begins. Often, property is made available for sale due to changes in highway projects or by becoming "excess" after a project is completed (see **Section 530**).

When WSDOT leases property for any reason, it remains liable for contamination caused by the lessee. However, a number of steps should be taken to minimize liability under lease arrangements.

Like any landlord, WSDOT screens all potential tenants to ensure they will be environmentally responsible during occupancy of the property. At a minimum, tenants should be required to describe their type of business and any proposed hazardous waste and hazardous materials handling practices. Property managers should routinely check each prospective tenant's environmental reputation and compliance record.

Although as the property owner WSDOT will not be released from MTCA and CERCLA liability, including indemnification provisions in the lease will protect WSDOT from inheriting responsibility for environmental damages caused by the tenant. This will ensure that WSDOT does not bear the burden of cleanup.

WSDOT regularly monitors a tenant's activities to ensure commitment to maintaining a clean site. A baseline environmental assessment is recommended as soon as a tenant occupies a property. Periodic spot inspections, provided for in the lease, should be conducted. Prior approval must be obtained from WSDOT before any USTs or sumps are installed or removed. Notification before tenants conduct any subsurface investigations should be required, and copies of all environmental reports and inspections should be provided to WSDOT. Before terminating a lease, the property is thoroughly evaluated to ensure hazardous materials, drums, and tanks have been properly removed and disposed.

(11) Contract Specifications for Contractor Spill Prevention Plans

Standard Specification #1-07.15(1) requires contractors to complete a Spill Prevention, Control, and Countermeasures (SPCC) Plan before beginning any WSDOT project. The WSDOT ESO Hazardous Materials Program has developed a number of documents and guidance materials to assist contractors in developing an SPCC Plan. These include an example site map illustrating the level of detail and the type of information required in an SPCC Plan submitted to WSDOT and an example SPCC Plan that meets the minimum

requirements of the Standard Specification. Guidance documents are also available for WSDOT staff who review SPCC Plans. These documents are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Environmental Services Office, Hazardous Materials, Documents, then Guidance Documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

447.06 Permits and Approvals

(1) Hazardous Waste Tracking Number (Ecology Form 2)

WSDOT is responsible for obtaining all required permits and one-time-only or regular disposal USEPA Identification Numbers. A separate identification number (RCRA Site Identification Number) is required for each project. The RCRA Site Identification Number (also known as a WAD number) must accompany wastes regulated under the Dangerous Waste Regulations (WAC 173-303) during generation, transportation, storage, and disposal.

The WSDOT contractor must be given this Ecology RCRA Site Identification Number before any hazardous waste may be manifested and transported. The Project Office applies for and maintains the RCRA number for each project.

For more information and an application (Form 2) for a RCRA Site Identification Number, visit the Ecology home page:

http://www.ecy.wa.gov/

Click on Programs, then Hazardous Waste & Toxics Reduction, then Hazardous Waste Management Requirements, then Hazardous Waste Regulatory Information & Assistance, then Hazardous Waste ID# and Annual Reporting, then Form 2.

Or by direct link:

http://www.ecy.wa.gov/biblio/9128.html

Once the project is completed and the hazardous waste is properly receipted at the approved disposal site, the RCRA number must be canceled by submitting another Ecology Form 2. Unless cancelled, Ecology will require annual reports on all active Site RCRA numbers.

Regional Offices are responsible for ensuring that hazardous wastes are properly disposed of, and should maintain permanent copies of all records for waste characterization tests, permits, manifests, and RCRA number applications.

To find out whether a RCRA number is required for a specific waste, contact the WSDOT ESO Hazardous Materials Program.

(2) Bridge Removal Permits

Several permits are required for bridge removal, most commonly a Hydraulic Project Approval, Shorelines permit, Endangered Species Act (ESA) concurrence, and Temporary Water Quality Modification. See **Section 431.06** and **Section 436.06** for details. Permit requirements must be determined on a project-specific basis.

(3) Soil Boring, Well Drilling & Well Decommissioning Licenses/Notifications

A Water Well Construction and Operator's License is required for all drilling activities, including developing water wells, monitoring wells, and biotech soil borings. Ecology also requires notification prior to constructing or decommissioning water wells. For further information contact the WSDOT ESO Hazardous Materials Program or see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, Water Resources, then Wells.

Or by direct link:

http://www.ecy.wa.gov/programs/wr/wells/wellhome.html

447.07 Non-Road Project Requirements

Ferry terminals may be located in areas containing contaminated sediments. If dredging is required and the sediments are not determined to be suitable for open-water disposal, sediments are disposed of at an upland disposal site.

Additionally, extracted creosote timber piles may require special disposal, though Ecology does not consider them a hazardous waste. Pre-demolition or construction coordination with local landfills is recommended.

No special requirements have been identified for aviation or rail projects.

447.08 Exhibits

Exhibit 447-1 – Hazardous Waste Discovery Process

Exhibit 447-2 – Decision Process for Preparing a Hazardous Materials Discipline Study

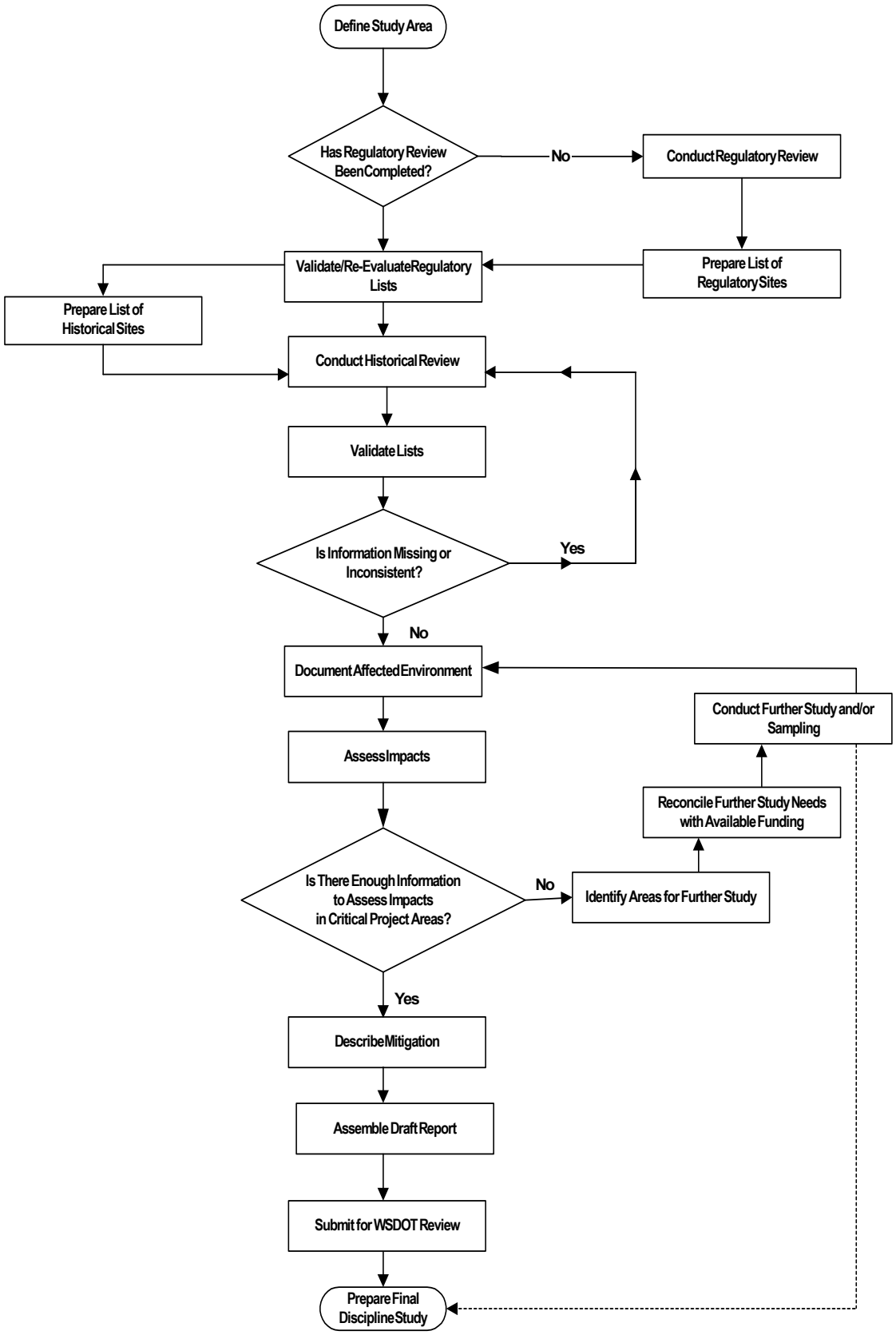
Exhibit 447-3 – Documentation File Content Guidelines

Exhibit 447-4 – Initial Site Assessment Recommended Table of Contents and Report Format

Hazardous Waste Discovery Process For Transportation Projects

PROGRAM PLANNING AND ENGINEERING PROCESS	HAZARDOUS MATERIALS DISCOVERY PROCESS
Program Planning	Hazardous Materials GIS Data Screening (Environmental Workbench)
Project Definition and Planning	Corridor Screening Level Study
Develop and Analyze Preferred Alternative	Develop Discipline Study (including mitigation cost estimates)
Select and Refine Preferred Alternative	Perform Sampling if Necessary and Finalize Discipline Study
Refine Project Design and Begin Property Acquisition	Prepare Draft EIS (Refine Mitigation Cost Estimates)
Finalize Design Report	Finalize EIS
Refine and Finalize Plans, Specifications, and Estimates	Support Development of Hazardous Materials Management Specifications as Needed
	Conduct Any Necessary Pre-construction Clean-up
Construction	Clean-up During Construction and Hazardous Waste Disposal

Decision Process for Preparing A Hazardous Materials Discipline Study



Documentation File Content Guidelines

Minimum Essential Documents for Hazardous Waste Assessments/Investigations

	ISA		PSI/DSI	
DOCUMENTATION	Required	Recommended	Required	Recommended
Physical				
USGS Topographic Map	✓			✓
Aerial photographs		✓		✓
Site photographs	✓		✓	
Soil Conservation map-extracts		✓		✓
Site map	✓		✓	
Other geology/hydrogeologic maps or reports		✓		✓
Records				
Temporary easements		✓	✓	
Interview records and memorandums		✓		✓
Environmental Reports/Permits - copies or excerpts		✓		✓
Land use/planning/zoning/Health Department permits and reports	✓			✓
Title searches	✓		✓	
State/Federal Environmental registers - memorandum of use	✓			✓
Local records - identity and memorandum of use		✓		
Historical records - identity and memorandum of use		✓		
Investigative				
Sampling plans/site maps			✓	
Field records/notes			✓	
Laboratory analysis and custody records			✓	
References				✓
Contractor reports and correspondence				✓
Correspondence				
WSDOT	✓		✓	
Regulatory agencies	✓		✓	
Court orders/decrees/consent agreements		✓		✓

450.01 Overview
450.02 Overview of Environmental Requirements
450.03 Exhibits

450.01 Overview

Land use and transportation are often closely intertwined. Land use may determine the demand for transportation facilities, and transportation projects may help determine land use. This relationship is acknowledged in WSDOT's approach to project development.

Applicable land use laws, regulations, policies, plans, and permit requirements and studies must be completed before permits can be applied for and the project can go into construction. Policies, plans, rules, regulations and permits may come from the federal, state, and/or local city or county level.

Section 451 through **Section 458** cover a range of land use topics, listed below.

451 Land Use, Land Use Plans, and Growth Management

452 Coastal Areas and Shorelines

453 Wild and Scenic Rivers

454 Agriculture and Farmland

455 Public Lands – 4(f) and 6 (f)

456 Cultural Resources

457 Social and Economic Conditions

458 Environmental Justice

459 Visual Impacts, Aesthetics, Light, and Glare

While the emphasis is on highway projects, the same or similar requirements apply to ferry, transit, rail, and aviation projects.

450.02 Overview of Environmental Requirements

(1) National Environmental Policy Act (NEPA)

Under NEPA implementation regulations (40 CFR 1508.14), the human environment is defined as "comprehensively including the natural and physical environment and the relationship of people with that environment.…" Land use is a major expression of the relationship of people with their physical environment. "When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." Under 40 CFR 1508.8, aesthetic, historic, cultural, economic, social, and health impacts are among those to be considered. Statutory and regulatory authority is found in:

- NEPA, 42 USC 4321-4347
- CEQ regulations, 40 CFR 1500-1508

FHWA's environmental impact and related procedures are found in:

- 23 CFR 771
- FHWA 7-7-1 (June 1989)
- FHWA Technical Advisory 6640.8A

(2) State Environmental Policy Act (SEPA)

SEPA requires analysis of a project's impact on the natural and built environment prior to permitting or construction. The built environment includes topics covered in **Section 451** through **Section 459**: analysis of land and shoreline use, relationship to existing land use plans and estimated population, housing; aesthetics, light and glare, recreation, historic and cultural preservation, and agricultural crops (WAC 197-11-444).

Under SEPA the relationships between transportation projects and land and shoreline use are analyzed, including consistency with state and local plans such as the Shoreline Management Act and the local Shoreline Master Plan. WSDOT regional staff are responsible for doing the analysis and determining appropriate thresholds, standards, and significant adverse impacts. Because WSDOT is not the land use authority in most cases, regional staff must coordinate the work with the local land use authorities, or in some cases, both local and state authorities.

SEPA implementing regulations are at WAC 197-11.

450.03 Exhibits

None.

451 Land Use, Land Use Plans, and Growth Management

451.01 Introduction
451.02 Applicable Statutes and Regulations
451.03 Policy Guidance
451.04 MOUs, MOAs, and IAs
451.05 Technical Guidance
451.06 Permits
451.07 Non-Road Project Requirements
451.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

451.01 Introduction

The potential impacts of transportation projects on land uses and land use plans typically are extensively reviewed during project development at local, regional, and state levels. Such review has gained visibility as a result of Washington's Growth Management Act (GMA) and federal mandates such as those applied through the Transportation Equity Act for the 21st Century (TEA-21) and federal grants. These programs have led to increased analysis of projected population, land use, and need for public infrastructure. Local jurisdictions, particularly cities and counties planning under the GMA have adopted land use policies and capital facilities plans which must be taken into account during development of transportation projects. Most of these are in the process of being updated as the comprehensive plans are being updated. The update of comprehensive plans is now on a staggered schedule.

(1) Summary of Requirements

The primary requirements for analysis of impacts on land use and land use plans are established in implementing regulations for NEPA, SEPA, and the GMA; the GMA's mandated Essential Public Facilities (EPF) review; and local codes.

NEPA and SEPA processes can be done concurrently; however, GMA mandates linked to an EPF process may require an extended timeline. Early coordination with local jurisdictions is essential for several reasons: to identify local conditions that could affect design; to obtain early buy-in and explore possible joint development projects, and to ensure sufficient time for extensive local review. Documentation of comments is essential in the unlikely circumstance that WSDOT would want to file an objection to local changes with the GMA Hearing Boards. The Hearing Boards expect early and continuous involvement that has been well documented.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) *Acronyms and Abbreviations*

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

CFP Capital Facilities Plan

EPF Essential Public Facilities

GMA Growth Management Act

HSS Highways of Statewide Significance

LOS Level-of-Service

MPO Metropolitan Planning Organization

OCD Washington State Office of Community Development

PSRC Puget Sound Regional Council

RTPO Regional Transportation Planning Organization

(3) *Glossary*

Concurrency – The requirement to have needed infrastructure (e.g. roads, sewers, water systems) in place or planned and funded within the next six years in the jurisdiction where the project is located. The "concurrency" process was established through the GMA.

Highways of Statewide Significance – RCW 47.06.140 designates these and sets standards. HSS and other facilities and services of statewide significance are essential public facilities.

Level of Service – A tool for identifying when a public service or infrastructure has reached capacity and requires an improvement or another similar facility. The most common use is the LOS A-F standard for capacity, volume, and delays at a traffic intersection, F being the worst congestion and delay time period.

Urban Growth Area — The identified boundary that allows for higher density and focused infrastructure development to control growth from "sprawling" into the identified rural and sensitive areas of local jurisdictions.

451.02 Applicable Statutes and Regulations

(1) *National Environmental Policy Act/ State Environmental Policy Act*

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to land use are given due weight in project decision-making. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) *Growth Management Act (GMA)*

The Washington State legislature adopted growth management legislation in 1990 and 1991 and in most years since then. The 1990 Growth Management Act (GMA), RCW 36.70A.070, sets goals to guide planning in the larger, fastest growing counties and cities within those counties, and provides for a regional transportation planning program to be administered by WSDOT. The GMA requires fully planning counties and cities to:

- Adopt countywide planning policies.
- Work together to allocate the projected population within each county.

Adopt local comprehensive plans, including a transportation element among others.

- Define urban growth areas, and reevaluate every ten years.
- Ensure that development regulations are consistent with comprehensive plans.
- Comprehensive plans are required to include a process for siting essential public facilities.
- Designate natural resource lands (forest, agriculture, and mineral resources).
- Designate critical areas (wetlands, aquifer recharge areas, habitat, and flood prone and geologically hazardous areas).
- Include the best available science when developing policies and development regulations to protect the functions and values of critical areas.
- Give special consideration to conservation or protection measures to preserve or enhance anadromous fisheries.
- Review and revise, if needed, the comprehensive plan and development regulations every seven years to ensure they comply with GMA.

The applicability of these local plans and policies to WSDOT transportation projects is described below in **Section 451.03**. Permits required pursuant to implementing regulations are listed in **Section 451.06**.

The act is available on line at:

http://www.ocd.wa.gov/info/lgd/growth/

(a) GMA Goals

The GMA identifies the following goals to guide counties and cities in developing comprehensive plans and development regulations:

- Preserve historic properties.
- Assure adequate public facilities and services at the time developments are completed (concurrency requirements).
- Provide for citizen participation and coordination between communities to resolve conflicts.
- Protect the environment and enhance the quality of life in Washington State.
- Retain open space, develop recreational opportunities, and increase access to natural resource lands and water.
- Preserve and enhance natural resource-based industries, including timber, agriculture, and fisheries.
- Provide timely and predictable processing of applications for state and local permits.
- Protect private property rights from arbitrary and discriminatory actions, to include just compensation for taking of private property for public use.
- Provide economic development consistent with adopted comprehensive plans; encourage growth in areas of need.

- Provide sufficient affordable housing of a variety of types and densities; preserve existing housing.
- Provide efficient transportation systems based on regional priorities and coordinated county and city plans.
- Reduce conversion of undeveloped land into sprawling development.
- Encourage development in urban areas where adequate public facilities and services exist or can be provided efficiently.

Later legislation added the 14th goal of shoreline management.

All fully planning counties under GMA are required to meet the following requirements.

- All counties are required to designate and protect critical areas and designate and protect natural resource lands. Every seven years local governments are to review their work in these areas to ensure it complies with GMA, including using best available science.
- All cities and counties with comprehensive plans are required to make their development regulations consistent with their comprehensive plans.
- Short plats and subdivisions may be approved only if adequate services are available.
- Any building permit application need to supply evidence of adequate water supply.

(b) Regional Transportation Planning

The GMA authorizes local governments to create Regional Transportation Planning Organizations (RTPOs) to develop regional transportation plans and to coordinate transportation planning between local governments and the state. In eight urbanized areas of Washington, these RTPOs are known as Metropolitan Planning Organizations (MPOs) for federal purposes. (See **Sections 220.02** and **220.03** for details.)

The act also provides for state grants to RTPOs, administered by WSDOT, and specifies these requirements:

- ***Joint Planning*** – Regional planning processes must be integrated with WSDOT's planning program.
- ***Coordination between Regions*** – WSDOT's planning program must ensure statewide coordination among the regional transportation plans produced by RTPOs.
- ***Development of Standards for Regional Transportation Planning*** – In coordination with the RTPOs, WSDOT establishes the rules on the process and planning activities undertaken by the regional transportation planning program. All regionally significant transportation projects, whether state or locally funded, must be consistent with the adopted regional transportation plan.

  WSDOT's Environmental GIS Workbench, a GIS interface, includes a data set of RTPOs in Washington and Urban Growth Areas in the Puget Sound region. Internal WSDOT users can access these and other data sets at:

  w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(c) Projects Affecting Multiple Jurisdictions

Many major transportation projects affect multiple jurisdictions as to economic development, fiscal influence, environmental consequences, land use implications, and mobility of people and goods. The GMA encourages local governments affected by a major transportation project to consider the range of local, state, and federal requirements, and coordinate planning and regulatory decisions with other affected jurisdictions (RCW 36.70A.420). WSDOT should work closely with affected jurisdictions on studies, permits, or other approvals required for major projects.

For counties and cities that are not required to fully plan under GMA, the above requirement does not apply (See **Section 451.03** for requirements applicable to all counties.). WSDOT project managers need to work with all counties and/or cities to review any applicable land use and/or transportation plans.

(3) 1991 Growth Strategies Act

The 1991 Growth Strategies Act (RCW 36.70A (as amended) is an update of the GMA. The Growth Strategies Act has a more direct impact on WSDOT operations, since it requires state agencies to comply with local comprehensive plans and development regulations. The act defines state transportation facilities as Essential Public Facilities (EPFs). These facilities can be subject to local conditions established by development regulations. The act requires local governments to develop a process for siting such facilities. Key provisions of the act are summarized below.

(a) State Agency Compliance

The act requires state agencies to comply with local government comprehensive plans and development regulations prepared under the act. In designated Growth Management Areas, WSDOT is only subject to development regulations, including critical area ordinance permits. Within the right-of-way, WSDOT is not subject to building and clearing/grading permits. Outside of the right-of-way, WSDOT is subject to these permits, for example for a building project at a maintenance facility.

(b) Siting of Essential Public Facilities

The act requires local governments to have a process for siting EPFs, including regional and state transportation facilities. The state Office of Financial Management must maintain a list of state EPFs that are required or likely to be built within the next six years. Local governments may not preclude the siting of these facilities. However, WSDOT must coordinate planning activities with local governments and comply with local development regulations.

(c) Growth Planning Hearings Board

The legislation created three regional Growth Planning Hearings Boards to hear and resolve growth management disputes. WSDOT has access to these boards to challenge a local comprehensive plan or development regulation, and local governments may use the boards to challenge WSDOT actions. However, if WSDOT has not commented on the process during the local jurisdiction's comment period, the agency cannot bring any challenges to the Hearing Boards. Therefore, any comments should be timely and well documented.

(d) State Agency Grants and Loans

State agencies must give preference for grants or loans to local governments that have adopted countywide planning policies authorized under the act. These policies must cover transportation facilities and strategies.

(4) Local Ordinances and Regulations

Many local government land use ordinances and regulations may affect transportation projects. These include: zoning ordinances and development regulations, critical areas ordinances, and shoreline management master programs. WSDOT project managers will need to ascertain which such regulations may apply to their project. In cities and counties planning under the GMA, two regulations that may affecting transportation projects are summarized below.

(a) Concurrency

The GMA requires local governments to adopt ordinances that prohibit development unless necessary transportation improvements, identified in the Capital Facilities Element, are made "concurrent with" the development. "oncurrent with" is defined as "at the time of or committed to be made within six years." Local governments can devise a system for metering land use development to match their transportation capacity and transportation budget.

Transportation infrastructure identified in the Capital Facility Element is required to serve the community at an acceptable level. Concurrency requirements are identified through the level of service tool. Level-of-Service (LOS) standards for streets and roads are adopted in the local Comprehensive Plan and implemented through development review and SEPA. Highways of statewide significance are excluded from the local concurrency requirements.

(b) Development Impact Fees

The GMA authorizes local governments to collect development impact fees to pay for public facilities, including roadways, and many jurisdictions have adopted ordinances imposing traffic or transportation impact fees. The GMA requires specific "upfront" planning by the local government to document needs, and establishes a standard process for collecting fees. However, the act does not establish a specific process for collecting fees for state transportation facility improvements. Such a process would have to be arranged with each local government.

451.03 Policy Guidance

(1) Regional Transportation Plans

All 14 RTPOs in Washington have adopted regional transportation plans that are updated regularly. All WSDOT transportation projects should be consistent with these regional plans.

(2) County and City GMA-Related Plans and Policies

(a) Countywide Planning Policies

To ensure cooperation between neighboring jurisdictions, each county planning under GMA is required to adopt countywide planning policies, formulated with and agreed upon by each of the cities in the county. These policies are the framework of the county's overall growth management strategy. Multi-county planning policies are to be adopted by two or more counties, each with a population of 450,000 or more, with contiguous urban areas; other counties may voluntarily adopt multi-county policies. This requirement applies to King, Pierce, and Snohomish counties.

Countywide planning policies are required to give direction for siting public capital facilities of a countywide or statewide nature, including transportation facilities of statewide significance as defined in RCW 47.06.140. WSDOT regional offices should participate in developing the transportation component of countywide planning policies, since state agencies must adhere to them once they are adopted.

(b) Urban Growth Areas

Counties that plan fully under the act, in consultation with cities, must designate urban growth areas within which urban growth is to be contained. Growth boundaries established under that process impact how WSDOT plans for improvements. For example, higher levels of access control may be used in rural areas to discourage urban-type growth, and the federal aid urban boundary may need to be realigned to target the urban transportation programs within the urban growth boundary.

(c) Natural Resource Lands and Critical Areas

Counties and cities are required by GMA to designate natural resource lands and critical areas to be protected through their plans, policies and development regulations. Resource lands are defined as forest, agriculture, and mineral resource lands. Critical areas to be designated are:

- Wetlands
- Aquifer recharge areas
- Fish and wildlife habitat conservation areas
- Frequently flooded areas
- Geologically hazardous areas

Critical areas impacts are closely tied to wetland regulations, flood zone regulations, and other natural habitat area protection regulations. (See **Sections 420.02**, **432.02**, **433.02**, **436.02**, and **437.02**).

(d) Local Comprehensive Plans

Each county and city planning fully under the GMA has a comprehensive plan consistent with countywide planning policies. Comprehensive Plans designate urban and rural areas; natural resource lands; and critical areas. Local plans often contain an arterial plan, and under GMA must include a Capital Facilities Plan (CFP), which is a six- and twenty-year list of transportation and other facilities projects needed to implement the plan.

Local comprehensive plans are required to include the following elements: land use, housing, capital facilities, public utilities, rural areas (counties only), and transportation. Elements mostly likely to affect transportation planning are:

- **Land use element.** This element designates the proposed general distribution of land use. It must include review of drainage and stormwater runoff and provide guidance to mitigate water pollution. The land use element provides the basis for infrastructure plans, including capital facilities, public utilities, and transportation. Environmental information related to designated critical areas may be included in this section.

- **Transportation element.** The transportation element must be consistent with the land use element. It must inventory the transportation system, establish Level-of-Service (LOS) standards, identify deficiencies, analyze transportation funding, and develop proposals to upgrade deficiencies. The inventory must include state-owned transportation facilities within the city or county boundaries (RCW 36.70A.070 (6)(iii)(a)).

  The GMA requires that local jurisdictions identify transportation facilities of statewide significance in their local plans. The GMA authorizes a regional transportation planning process to improve coordination between local governments and the state.

- **Capital facilities element.** The capital facilities element is for public facilities, including transportation facilities, with a minimum cost of $25,000.00 and expected useful life of at least 10 years. A capital facility element is created through an analysis of the need for additional facility capacity to serve current and future development. The financial part of the Capital Facility Element is a Capital Facility Plan (CFP) showing how facilities will be financed over a six-year time frame. The transportation section of CFPs address transportation concurrency and levels of service (RCW 36.70A210 (3)(a-h), with greater detail on policy and implementation strategy than the Regional Transportation Plan.

Both the land use and the transportation chapters in local comprehensive plans provide direct guidance for new transportation projects. WSDOT project managers should evaluate their project for consistency with countywide planning policies and local comprehensive plans.

If the project is inconsistent, WSDOT should consult with the county and/or regional government staff to discuss policy differences and possible resolution of those differences. Under the GMA, state agencies must comply with local comprehensive plans and development regulations (RCW 36.70A.103); likewise local agencies should coordinate with WSDOT.

(3) *Planning and Zoning (Jurisdictions Not Planning Fully under the GMA)*

Cities and counties in the smaller, slower-growing areas of the state are not required to fully plan under the GMA. These jurisdictions are authorized to regulate land use under RCW 36.70. However, all counties in the state are required to designate and protect critical areas and natural resource lands.

WSDOT staff should familiarize themselves with any comprehensive land use plans, zoning and development regulations, and arterial plans these jurisdictions have adopted.

(4) *Other Local Planning Policies*

Neighborhood plans, subarea plans, special overlay zones, and downtown plans are among the other local documents that may contain additional policy direction or guidelines for transportation projects. They may require additional studies and/or mitigation, restrict access, require redesigning a road's function and design, require transfer of development rights, or regulate air rights to protect views.

451.04 MOUs, MOAs, and IAs

None.

451.05 Technical Guidance

(1) *WSDOT Discipline Report*

The checklist in **Exhibit 451-1** is a guide to completing WSDOT's Land Use Discipline Report, which is used to prepare the land use section of Environmental Assessments (EAs), SEPA checklists, or Environmental Impact Statements (EISs). The discipline report should include a review of applicable local and regional land use plans, policies, and ordinances; a description of existing land use and zoning and development trends; potential impacts on land use resulting from the project, and construction impacts. Mitigation measures are normally not applicable.

(2) *FHWA Technical Advisory*

FHWA's Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (October 1987) gives guidelines for preparing environmental documents, including specifically sections on land use and joint development measures.

Land use sections of EISs, EAs, and Section 4(f) documents should identify current development trends, and consistency of each alternative with relevant regional and local plans for land use, transportation, public facilities, housing, community services, and other areas. Secondary social, economic, and environmental impacts of development induced by the project should be presented, making a distinction between planned and unplanned growth impacts.

The draft EIS should also identify and discuss joint development projects that could be undertaken by WSDOT in cooperation with a local jurisdiction or private party to preserve or enhance an affected community's social, economic, environmental, and visual values. This discussion may be presented separately or combined with the land use and/or social impacts presentations. The benefits to be derived, those who will benefit (communities, social groups), and the entities responsible for maintaining the measures should be identified (see also **Section 456.05**). For details, see:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A, then Land Use or Joint Development.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/ techadvs/t664008a.htm

(3) FHWA Environmental Guidebook

FHWA's online Environmental Guidebook contains documents on community impact assessment that may be relevant to land use studies. Available at:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

(4) Washington State Department of Community Development (OCD)

OCD staff should be consulted for technical assistance on GMA-related issues. For information about other resources, see the OCD home page:

http://www.ocd.wa.gov/

451.06 Permits

(1) State Permits

In a few cases, state permits related to land use may be required:

- Removal or destruction of a monument – may need permit from the Washington Department of Natural Resources (DNR).
- Easements and harbor line adjustments from DNR for bridges, ferry terminals or docking facilities, including the right to make necessary fills on, over, or across beds of navigable waters that are under DNR jurisdiction.
- Activities affecting archaeological resources on federal or tribal land – requires Archeological Resources Protection Act Permit (see **Section 456.06**).
- Activities affecting forest lands – may require DNR Forest Practices Application (see **Section 455.06**).

(2) Local Permits

Within state right-of-way, or publicly traveled ways, WSDOT is subject to local permits. State laws that require WSDOT to obtain local permits are the Shoreline Management Act and Growth Management Act. In designated Growth Management Areas, WSDOT is only subject to development regulations, including critical area ordinance permits. Within the right-of-way, WSDOT is not subject to building and clearing/grading permits. Outside of the right-of-way, WSDOT is subject to these permits, for example for a building project at a maintenance project.

Applicability of local permits to WSDOT projects must be determined on a case-by-case basis. Project managers should check with local jurisdictions to determine which requirements may apply.

451.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, or permits that apply to road systems.

(1) Ferry Facilities

Ferry terminals are often located near areas that provide natural harbors. These harbors can be attractive as sites for private marinas that could interfere with ferry operations. Washington State Ferries prefers to take proactive steps, such as working with local jurisdictions, to minimize the opportunities for private marina development that may pose navigational hazards.

(2) *Aviation Facilities*

Environmental documents on public-use airports must address land uses which may attract birds and other wildlife, which may create hazards on or near airports. These issues are addressed in the following Federal Aviation Administration (FAA) Advisory Circular: *Hazardous Wildlife Attractants on or Near Airports*, FAA Advisory Circular No. 150/5200-33, (May 1, 1997).

- Section 1 of the advisory circular describes types of hazardous wildlife attractants on or near airports, land use practices that attract wildlife, and siting criteria for airport projects.
- Section 2 provides information on land uses that are incompatible with safe airport operations. These include putrescible waste disposal operations, wastewater treatment facilities, and dredge spoil containment areas.
- Section 3 lists land uses that may be compatible with safe airport operations. These include: enclosed waste facilities, recycling centers, composting operations, ash disposal, construction and demolition debris landfills, water detention or retention ponds, landscaping, golf courses, and agricultural crops.
- Section 4 provides guidance on notifying the FAA about hazardous wildlife attractants, including FAA review of proposed land use changes.

The circular is online at FAA's web site:

http://www.faa.gov/

Click on Federal Aviation Administration, then FAA Organizations, then Airports (ARP); then Airport Safety, Certification, and Wildlife; then Wildlife Hazard Management at Airports Manual; click on Manual, then Appendix C.

Or by direct link:

http://www.faa.gov/arp/birdstrike/appendC.pdf

Or:

http://www.faa.gov/arp/pdf/5200-33.pdf

451.08 Exhibits

Exhibit 451-1 – Land Use Discipline Report Checklist.

Washington State Department of Transportation

Discipline Report Checklist
Land Use

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Studies and Coordination

(Refer to 40 CFR Section 1502.16(c), 40 CFR 1506.2(d), and DOT 5610.1C Attachment 1.)

Reviews of city and county land use plans, arterial street plans, land use codes, comprehensive plans, regional transportation plans, and neighborhood plans.

II. Affected Environment

Include (if necessary) federal, state, regional, and local plans for zoning, land use, recreational, shoreline, and transportation plans, including the following descriptions or graphics:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	Map showing existing land use for the project area and the surrounding area influenced by the project.
❒	❒	❒	❒	B.	Map showing existing zoning.
❒	❒	❒		C.	Applicable land use plans and development trends.
❒	❒	❒	❒		1. Federal plans or policies - including land use policies related to air or water quality impacts.
❒	❒	❒	❒		2. State plans, if any.
❒	❒	❒	❒		3. Regional planning agency development and transportation plans.
❒	❒	❒	❒		4. Transportation system plans of applicable agencies.
❒	❒	❒	❒		5. County and city plans:
❒	❒	❒			a. Land use plans (include map where available).
❒	❒	❒	❒		b. Recreation area and open space plans.
❒	❒	❒	❒		c. Shoreline master program.
❒	❒	❒	❒		d. Zoning plans.
❒	❒	❒	❒		e. Critical areas.

III. Impacts

Consider land use changes caused by or reasonably foreseeable from increased accessibility or other project effects.

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Distribution of development among governing agencies and impact on their public services.
❒	❒	❒	❒	B.	Distribution of development between cities and suburbs.
❒	❒	❒	❒	C.	Amount and type of land required.
❒	❒	❒	❒	D.	Existing zoning and current use of real property to be acquired for right of way.
❒	❒	❒	❒	E.	Potential for joint or multiple use of right of way for utilities or other purposes, above, below, or beside the traveled lanes of the highway.
❒	❒	❒	❒	F.	Land use changes caused by changes in noise, air, water, and visual quality.
❒	❒	❒	❒	G.	Possible conflicts between proposed action and Indian land or other land use plans, policies, and controls (40 CFR Section 1502.16(c)). If there is conflict, describe the extent to which the proposed action will be reconciled with these plans (40 CFR Section 1506.2(d)), and/or reasons for proceeding without full reconciliation (DOT 5610.1C Attachment 1).
❒	❒	❒	❒	H.	Consistency with adopted transportation and development plans for the area and region.

IV. Mitigation (Normally not applicable.)

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Mitigation measures and commitments to offset adverse impacts (e.g., access changes or controls).
❒	❒	❒	❒	B.	Mitigation measures considered or available but not included, with reasons why.

V. Construction Activity Impacts

All impacts associated with construction of the project are to be addressed in a "Construction Activity Impacts" section of the EIS. Provide the following information, as appropriate, for inclusion in that section:

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Under **Impacts**, consider temporary impacts associated with construction.
❒	❒	❒	❒	B.	Under **Mitigation (normally not applicable)**:
❒	❒	❒	❒		1. Mitigation measures and commitments during construction.
❒	❒	❒	❒		2. Mitigation measures considered or available but not included, with reasons why.

VI. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.

The summary should include:

SAT	INC	MIS	N/A		
❒	❒	❒		A.	The objectives of the project.
❒	❒	❒		B.	Current land use patterns.
❒	❒	❒		C.	Impacts of all alternatives including the no-build alternative.
❒	❒	❒		D.	Recommended mitigation.
❒	❒	❒		E.	Comparison of alternatives based on impacts and cost effectiveness of mitigation.

General Comments: _____

_____

_____

_____

452.01 Introduction
452.02 Applicable Statutes and Regulations
452.03 Policy Guidance
452.04 MOUs, MOAs, and IAs
452.05 Technical Guidance
452.06 Permits
452.07 Non-Road Project Requirements
452.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

452.01 Introduction

This section includes information and requirements for transportation projects in and near coastal zones and shorelines, where a project could add pollutants to waters, increase sedimentation in runoff, harm endangered species habitat, or affect slope stability, coastal currents, or littoral transport of sediment. See related information in **Section 431** (Water Quality), **Section 432** (Floodplains), **Section 436** (Wildlife, Fisheries, and Vegetation), and **Section 437** (Wetlands).

(1) Summary of Requirements

Shoreline areas are protected under the State Shoreline Management Act (SMA) and local Shoreline Master Programs (SMP). In areas under federal jurisdiction such as harbors and coastal zones, federal regulations apply. In most local jurisdictions, a Joint Aquatic Resources Application (JARPA) form and/or a SEPA checklist provide the basis for identifying shoreline and coastal zone issues and sources of information.

(2) Acronyms and Abbreviations

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

CBRA	Coastal Barrier Resources Act
CZM	Coastal Zone Management
NOAA	National Oceanic and Atmospheric Association
OHWM	Ordinary High Water Mark or Line
SMA	Shoreline Management Act
SMP	Shoreline Management Program

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(3) Glossary

Enforceable Policies – Under the CZMA, legally binding policies (such as constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions) by which a state exerts control over private and public land and water uses and natural resources in the coastal zone.

Shorelines – Land within 200 feet of the ordinary high water mark of waters of the state, including marine waters, rivers, streams, lakes, and reservoirs, and their associated wetlands, floodways, deltas, and floodplains. The Shoreline Management Act (RCW 90.58.030 (2d)) excludes streams with a mean annual flow of 20 cfs or less and lakes smaller than 20 acres (including adjacent wetlands).

Shorelines of Statewide Significance – Shorelines for which there is special interest in preserving the natural characteristics and encouraging and increasing public access.

Substantial Development – Any development of which the total cost, or fair market value, exceeds $2,500.00, or any development that materially interferes with normal public use of the water or shorelines of the state.

452.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision-making. For example, for work along shorelines and in coastal areas that requires permit approval, environmental documents must explain the impacts the project will have on these areas and resources within them. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

Relationships between transportation projects and land and shoreline use are analyzed through the NEPA/SEPA process. SEPA may address effects on both state and local plans and efforts, such as the State Shoreline Management Act (SMA) and the local Shoreline Master Plan (SMP). SEPA, however, does not set standards to be met for particular issues such as water quality or land use density. Nor does it determine which impacts are adverse and significant. WSDOT is responsible for doing the analysis and making decisions on thresholds, standards, and significant adverse impacts. Because WSDOT is not the land use authority in most cases, WSDOT must coordinate with the local land use authorities, or in some cases, both local and state authorities.

(2) Federal

(a) Clean Water Act

The Water Pollution Control Act (33 USC Section 1251 *et seq.)*, better known as the Clean Water Act (CWA), provides for comprehensive federal regulation of all sources of water pollution, including fill or discharges in shoreline waters or wetlands within shorelines of the state. Refer to **Section 431.02** for more information.

(b) Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act, 33 USC 410 *et seq.* requires authorization from the U.S. Army Corps of Engineers (COE) for construction of any structure in or over any navigable water of the United States, the excavation/ dredging or deposition of material in these water or any obstruction or alteration in a navigable water. A Section 10 permit is required for a structure or work outside the limits defined for navigable waters if it affects the course, location, condition, or capacity of the water body. For information on Section 10 permits, see **Section 431.06**. Section 9 of the Act requires Coast Guard approval for any bridge over navigable waters that would be located in shoreline areas.

(c) Coastal Barrier Resources Act

The Coastal Barrier Resources Act (CBRA) establishes certain coastal areas to be protected by prohibiting the expenditure of federal funds for new and expanded facilities within designated coastal barrier units. There are no coastal barrier units in Washington.

(d) Coastal Zone Management Act (CZMA)

Congress established the Coastal Zone Management Act (16 USC 1452 *et seq.*) in 1972 in order to:

- Preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations.
- Encourage and assist the states to develop Coastal Zone Management Programs (CZMPs) that provide for the protection of natural resources and the management of coastal development.
- Encourage the preparation of special area management plans which provide for increased specificity in protecting significant natural resources, reasonable coastal-dependent economic growth, and improved protection of life and property in hazardous areas.

Implementing regulations are at 15 CFR 923-930.

Washington's Coastal Zone Management Program has been approved by the National Oceanic and Atmospheric Administration and is administered by the state Department of Ecology (Ecology). The CZM Program applies to all activities within Washington's 15 coastal counties. Ecology oversees most activities except agriculture and activities related to single-family homes. USEPA approves activities on tribal or federal land.

Under the CZMA, "enforceable policies" means legally binding policies (such as constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions) by which a state exerts control over private and public land and water uses and natural resources in the coastal zone. In Washington, the primary enforceable policies of the CZMA are SEPA, SMA, state Clean Water Act, Clean Air Act, and implementing regulations. Procedures for certifying consistency with these policies are described in **Section 452.06.**

Under the program, cities and counties can develop local management plans that -must be approved by Ecology. Ecology gives program overview and support, and local advisory councils offer suggestions to city and county governments. The CZMA is on-line at:

http://www4.law.cornell.edu/uscode/

Click on Title 16, Chapter 33.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch33.html

(3) State and Local

(a) Shoreline Management Act (SMA)

Washington's Shoreline Management Act (RCW 90.58), was passed by the Legislature in 1971 and adopted by the public in a 1972 referendum. The SMA's goal is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." A rule adopted November 29, 2000 will ultimately change SMA requirements. See Ecology's web site for the implementing regulations (WAC 173-27) and other shoreline management references:

http://www.ecy.wa.gov/

For the WAC, click on Publications, then Environmental Rules, then Chapter 173-27 (under Shorelands and Environmental Assistance). For guidelines and other references, click on Programs (on Ecology's home page), then Shorelands and Environmental Assistance.

Or by direct link for WAC 173-27:

http://www.ecy.wa.gov/biblio/wac17327.html

Or by direct link for guidelines and references:

http://www.ecy.wa.gov/programs/sea/shorelan.html

The Act establishes a broad policy giving preference to uses that:

- Protect the quality of water and the natural environment.
- Depend on proximity to the shoreline ("water-dependent" and "water related" uses).
- Preserve and enhance public access or increase recreational opportunities for the public along shorelines.

The SMA uses a combination of policies, comp-rehensive planning, and zoning to create, in effect, a special zoning code overlay for shore-lines. Under the SMA, each city and county can adopt a shoreline master program that is based on state guidelines but tailored to the specific geographic, economic, and environmental needs of the community. Master programs provide policies and regulations addressing shoreline use and protection as well as a permit system for administering the program.

Since shoreline management is a state-legislated activity, WSDOT is subject to these local programs. Decisions regarding approval of shoreline programs may be appealed to the Shoreline Hearings Boards.

The SMA applies to:

- All marine waters.
- Streams with a mean annual flow greater than 20 cubic feet per second.
- Lakes 20 acres or larger.

- Upland areas, called "shorelands," 200 feet landward from the ordinary high water mark (OHWM) of these waters.
- The following areas when they are associated with one of the above:
  1. Biological wetlands and river deltas
  2. Some or all of the 100-year floodplain including all wetlands within the entire floodplain

The SMA also states that "the interests of all the people shall be paramount in the management of shorelines of statewide significance." Shore-lines of statewide significance are those for which there is special interest in preserving the natural characteristics and in encouraging and increasing public access.

Shorelines of Statewide Significance are defined in the SMA (RCW 90.58.030) as:

- Certain areas on the Pacific Coast, Hood Canal, and Puget Sound shorelines.
- Lakes or reservoirs with a surface acreage of 1,000 acres or more.
- Larger rivers (1,000 cubic feet per second or greater for rivers in Western Washington, 200 cubic feet per second and greater east of the Cascade crest).
- Wetlands associated with all the above.

(b) Local Shoreline Master Programs

A local jurisdiction may develop a Shoreline Master Program (SMP) to guide compliance with the SMA. In Washington, 205 cities and 38 counties have adopted shoreline master programs. See WAC 173-19 for a complete list of jurisdictions that have adopted SMPs. See the Ecology web site below for references on local SMPs.

Local SMPs are planning and regulatory documents subject to approval by Ecology. Local jurisdictions use the shorelines permitting process as the primary tool for shorelines protection.

SMPs designate shorelines according to the degree of impact by human activity. Most local jurisdictions use the standard designations recommended by Ecology, but may use additional ones. The four standard designations are: (1) urban, (2) rural, (3) natural, and (4) conservancy. Project coordinators must pay close attention to the use regulations to be followed under each designation.

Local governments may modify master programs to reflect changing local circumstances, new information, or improved shoreline management approaches. All changes to SMPs require public involvement. At a minimum, local governments must hold public hearings. Substantial revisions are usually written with help from citizen advisory committees.

452.03 Policy Guidance

(1) Shoreline Master Programs

City and County SMPs include policies to guide development in and adjacent to shorelands. The SMA and other laws require local governments to take into account the SMA and SMP when reviewing proposed development projects for zoning, site plan, subdivision, or other approvals. For this reason, jurisdictions may review plans for consistency with the local SMP and the SMA. Development projects may be conditioned or denied based on shoreline policy.

(2) Other Local Plans and Policies

City and county comprehensive plans and parks and recreation plans may contain policy and planning guidance on shorelines. In addition, local critical areas plans may apply in areas where the shoreline and wetlands are hydrologically connected. These documents should be considered in preparing shorelines sections of environmental documents.

452.04 MOUs, MOAs, and IAs

None.

452.05 Technical Guidance

(1) WSDOT Discipline Report

WSDOT has no formal discipline report for coastal areas and shorelines.

(2) WSDOT Environmental GIS Workbench

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available data sets include major shorelines, lakes, and rivers. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(3) Ecology Guidance

For information on the SMA, implementing guidelines and permit information, see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then look under Shoreline Management.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/shorelan.html

(4) *FHWA Technical Advisory*

Technical Advisory T6640.8A (October 30, 1987) gives guidance on preparing NEPA and Section 4(f) environmental documents, including sections on coastal barriers and coastal zone impacts. If coastal zones may be impacted by a proposed project and an EIS is required, the draft EIS should: (1) identify direct and indirect impacts to the coastal zone unit(s); (2) discuss the results of early coordination with the state CZM agency or appropriate local agency and the Fish and Wildlife Service (FWS); and (3) identify any alternative which would require an exception under the Act. For details, see FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(5) *FHWA Environmental Guidebook*

FHWA's online Environmental Guidebook con-tains documents on coastal barrier resources and coastal zone management. Available online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Coastal Zone Management.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

(6) *Other Guidance*

For coastal erosion issues, several references are available:

Washington Coastal Erosion Task Force Report (March 1, 1999), including policy recommendations. Available from Washington Office of Community Development, Growth Management.

The Southwest Washington Coastal Erosion Study has resulted in a number of publications, available from the Ecology website:

http://www.ecy.wa.gov/

Click on Programs, then Shorelands and Environmental Assistance, then SW Washington Coastal Erosion Study.

Or by direct link:

http://www.ecy.wa.gov/programs/sea/swce/index.html

452.06 Permits

(1) *Water-related Permits*

See **Section 431.06** for information on permits which may be required for work affecting coastal areas and shorelines. The Joint Aquatic Resource Permit Application (JARPA) is used to apply for the following permits: Shoreline Management Permits from local governments (see details below); U.S. Army Corps of Engineers (COE) Section 10 and Section 404 permits; Coast Guard Bridge Permits; WDFW Hydraulic Project Approvals (HPAs); Approvals for Exceedance of Water Quality Standards from Ecology (only for

certain in-water work and aquatic pesticides); Water Quality Certifications (Section 401) from Ecology; Aquatic Resources Use Authorization from DNR. (Note that Water Quality Certifications for projects on federal or tribal land are granted by the USEPA Region 10, Aquatic Resources Unit, rather than Ecology.) Water-related permits are described in **Section 431.06**; and summarized in **Exhibit 431-9.**

(2) Shoreline Substantial Development Permits

(a) Conditions Requiring a Shoreline Permit

Under the State SMA, a permit is required for projects that involve substantial development of waters or shorelines of the state. A permit is granted only when the proposed project is consistent with the provisions of the act, implementing regulations, and the local shoreline master program (WAC 173-27-150). Substantial development permits, conditional permits, and variance permits are issued by local jurisdictions, and must be filed with Ecology. Approval is required from Ecology on all conditional use or variance permits. Ecology has 30 days to review the permit and issue a decision. Issuance of Ecology's decision letter begins the 21-day appeal period. For substantial development permits, if Ecology does not agree with the local permit decision, Ecology must appeal the decision within 21 days of filing (WAC 173-27-130).

Substantial development means any development of which the total cost, or fair market value, exceeds $2,500.00, or any development that materially interferes with normal public use of the water or shorelines of the state.

"Shorelines of the state" include "Shorelines of Statewide Significance" (described earlier) and "Shorelines." As noted earlier, shorelines are defined as lands within 200 feet of the high water mark of waters of the state, including marine waters, rivers, streams, lakes, and reservoirs, and their associated wetlands, floodways, deltas and floodplains. The SMA exempts streams with a mean annual flow of 20 cfs or less and lakes smaller than 20 acres (including adjacent wetlands). See (RCW 90.58.030(2d)). It is up to the local government(s), not WSDOT as the applicant, to determine when exemptions from the permit requirements are appropriate.

Permits are required for substantial development that materially interferes with normal public use of the water or shorelines of the state. Exceptions include (a) normal maintenance or repair of existing structures or developments, including damage by fire, accident, or elements; (b) emergency construction necessary to protect property from damage by the elements; and (c) construction or modification of navigational aids, such as channel markers and anchor buoys.

When conducting preconstruction drilling (soil/foundation sampling) within shorelines, the WSDOT regional office must contact the local government to obtain a permit or an exemption.

(b) Conditional Use Permit

Conditional uses may be authorized by the local government if the proposed project is consistent with the SMA and local SMP, does not interfere with normal public use of public shorelines, is compatible with other uses in the area, and will cause no adverse effects to the shoreline environment or detriment to the public interest. Uses specifically prohibited in the local SMP may not be granted a conditional use permit (WAC 173-27-160).

(c) Variance Permit

The purpose of a variance permit is strictly limited to granting relief from specific bulk, dimensional, or performance standards set forth in the applicable SMP. It may be authorized when extraordinary circumstances are such that strict implementation of the SMP would impose unnecessary hardships on the applicant or thwart the policies of the SMA (WAC 173-27-170).

(d) Permit Duration

Substantial progress toward completion of a permitted activity must occur within two years after issuance of the permit by local government. Substantial progress shall include the preparation of PS&E; signing of notice-to-proceed; completion of grading and excavation; installation of major utilities; or, where no construction is involved, commencement of the activity. The local government may authorize a single extension for project implementation before the end of the time limit, with prior notice to parties of record and Ecology, for up to one year based on reasonable factors.

The project must be completed within five years or within the time period established by the local agency. The local government may authorize a single extension for project completion before the end of the time limit, with prior notice to parties of record and Ecology, for up to one year based on reasonable factors (WAC 173-14-60).

(e) Authority

RCW 90.58, WAC 173-14, and WAC 173-17.

(f) Permit Information

Shoreline permits are obtained through the Joint Aquatic Resources Permit Application (JARPA). Or information and permit assistance, see Ecology's web site:

http://www.ecy.wa.gov/

Click on Services, then Permit Assistance Center, then Permit Applications, then Joint Aquatic Resource Permit Application (JARPA).

Or by direct link:

http://www.ecy.wa.gov/programs/sea/pac/jarpa.html

(3) Coastal Zone Management Certification (CZM)

Agency Responsible – Ecology Headquarters, Shorelands and Environmental Assistance Program.

Regulated Activities and Requirements – When applying for federal permits, such as a Coast Guard or COE Section 401 and 404 permit, for a project in one of the 15 coastal counties, WSDOT must certify that the requirements of the state's Coastal Zone Management Program have been met (SMA, RCW 90.58). For a proposal to be consistent with the CZM Program, it must meet the requirements of SEPA, the Shoreline Management Act, federal and state clean water acts, and federal and state clean air acts. Ecology reviews proposed projects for consistency with the above laws.

The CZM form (called Certification of Consistency with Washington's Coastal Zone Management Program for Federally Licensed or Permitted Activities) is a checklist that provides the necessary information for to assure federal consistency. See **Exhibit 452-1** for a copy of the consistency form.

WSDOT requests CZM certification as part of its JARPA submittal, by providing a project description, a brief assessment of the impacts, and a statement that the project complies with the CZM program. Ecology generally includes its CZM Consistency Response with its 401 Certification. The JARPA application is described in **Section 431.06**.

Public notice must be given, allowing a minimum of 20 days review; CZM notice can be combined with notice required under one of the enforceable policies, such as a SEPA determination or a Shoreline Substantial Development permit. WSDOT must indicate how and when public notice was given for CZM consistency. If no WSDOT public notice is given, Ecology must issue a public notice for a minimum of 20 days comment period. Ecology must agree with the CZM statement before a federal permit can be used.

Ecology has denied CZM consistency for the entire COE Nationwide Permit (NWP) program. As a result, any NWP used in a coastal county requires notice to Ecology with a statement that the project is consistent with the enforceable policies of the CZMA, and an explanation of how public notice under the Act has been given.

Statutory Authority – Section 6217 of the U.S. Coastal Zone Management Act (CZMA), 16 USC 1451 *et seq*.; CZMA regulations, 15 CFR 923-930; and RCW 90.58.

452.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road projects.

452.08 Exhibits

Exhibit 452-1 – Certification of Consistency with Washington's Coastal Zone Management Program for Federally Licensed or Permitted Activities.

CZM Consistency Form

CERTIFICATION OF CONSISTENCY WITH WASHINGTON'S COASTAL ZONE MANAGEMENT PROGRAM FOR FEDERALLY LICENSED OR PERMITTED ACTIVITIES

Federal Application Number:_____

Applicant:_____

Project Description:_____

_____

(attach site plans, location (county/city), and proximity to waterbody (name))

This action under CZMA§307(c)(3) is for a project, which will take place within Washington's coastal zone, or which will affect a land use, water use, or natural resource of the coastal zone. *(The coastal zone includes Clallam, Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pacific, Pierce, San Juan, Skagit, Snohomish, Thurston, Wahkiakum and Whatcom counties.)*

The project complies with the following enforceable policies of the Coastal Zone Management Program:

1. **Shoreline Management Act**:
   - Is outside of SMA jurisdiction ( )
   - Applied for shoreline permit ( )#_____being reviewed by_____
   - Has a valid shoreline permit ( )#_____issued by_____on_____
   - Has received an SMA Exemption ( )#_____issued by_____on_____

2. **State Water Quality Requirements:**
   - Does not require water quality permits ( )
   - Applied for water quality certification ( )
   - Has received water quality certification ( )# _____issued on_____
   - Applied for stormwater permit ( )#_____issued on_____
   - Has received stormwater permit ( )#_____issued on_____

3. **State Air Quality Requirements:**
   - Does not require air quality permits ( )
   - Applied for Air Quality permit ( )#_____being reviewed by_____
   - Has an Air Quality permit ( )# _____issued by _____on_____

4. **State Environmental Policy Act:** SEPA Lead Agency is:_____
   - Project is exempt from SEPA ( )
   - SEPA checklist submitted ( ) date_____
   - SEPA decision issued/adopted ( )DNS ( )MDNS ( )EIS ( )Other_____date_____
   - NEPA decision adopted by ( )SEPA #_____date_____
   - Lead agency to satisfy SEPA

Public Notice for this proposed project was provided through:

( )notice mailed to interested parties using _____mailing list on _____(date)
( )publication in_____(newspaper) on_____(dates)
( )other (include dates)_____

Therefore, I certify that this project complies with the enforceable policies of Washington's approved coastal zone management program and will be conducted in a manner consistent with such program.

(Signature)_____ Date_____

453.01 Introduction
453.02 Applicable Statutes and Regulations
453.03 Policy Guidance
453.04 MOUs, MOAs, and IAs
453.05 Technical Guidance
453.06 Permits
453.07 Non-Road Project Requirements
453.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

453.01 Introduction

Most Washington rivers are protected or under consideration for protection by either a federal, state, or local government agency. This section includes information and requirements that apply when a transportation project will impact a river designated as a federal Wild and Scenic River or part of Washington's Scenic River System.

(1) Summary of Requirements

Both federal and state legislation protects the wild and scenic values of certain rivers. Transportation projects may adversely affect wild and scenic rivers if they are within a one-quarter-mile of a river shoreline and:

- Require an EIS, EA, or SEPA checklist.
- Require new right-of-way, earth moving, grading, or pile driving.
- Involve bridge replacement.

For such projects, both WSDOT and FHWA encourage early coordination with responsible management agencies. If the river area meets Section 4(f) criteria for protection of certain parks, recreational areas, wildlife or waterfowl. refuges, and historic properties, a Section 4(f) report may be required in addition to a NEPA document (see **Section 455.05**). For possible permitting requirements, see **Section 431.06**.

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this chapter are listed below. Others are found in the general list in the appendix.

FWA Federal Wilderness Act

NTSA National Trails System Act

NWSRA National Wild and Scenic Rivers Act

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(3) Glossary

(a) Federal Wild and Scenic River Definitions

Designated River **–** River area added to the National Rivers System by an act of Congress.

Nationwide Rivers Inventory **–** A national listing of rivers potentially suitable for inclusion in the National Rivers System.

Recreational River Areas **–** Rivers or sections of rivers that are readily accessible by road or railroad that may have undergone some impoundment or diversion in the past.

Scenic River Areas **–** Rivers or sections of rivers that are free of impoundment, with shore-lines or watersheds still largely undeveloped, but accessible in places by roads.

Study River – River area to be studied to determine if it qualifies for addition to the National Rivers System.

Wild River Areas – Areas or sections of rivers of the United States that are free of impoundment and generally inaccessible, except by trail, with watersheds or shorelines essentially un-touched and waters unpolluted. They represent vestiges of America prior to European settlement.

(b) State Scenic River Definitions

Modified Natural **–** River area where the associated natural environment of the river area is relatively undisturbed with little evidence of cultural development and natural resource management. Forest roads, hunters' cabins, and semi-primitive campgrounds may be evident. Natural features dominate the viewscape.

Primitive – River area that is in pristine condition with minimal evidence of human activity.

Rural **–** River area characterized by extensive agricultural and other resource-related activities. Cultural development is typically scattered homes and communities.

Urban – River area that is intensively modified by cultural activities, primarily residential and light commercial development. The river has high water quality and highly rated natural features such as historical and archaeological sites, fisheries resources, wildlife, or recreational values.

(c) Other

Wilderness – Areas defined in the Wilderness Act where "the earth and its community of life are untrammeled by man, where man is a visitor who does not remain…."

453.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to wild and scenic rivers are given due weight in project decision-making. The State Environmental Policy

Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on NEPA/SEPA see **Section 410** through **Section 412.**

(2) Federal

(a) Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (PL 90-542, 16 USC Chapter 28) designates certain rivers for special protection. Federally designated Wild and Scenic Rivers within Washington are:

- Skagit River and all tributaries upstream of the pipeline crossing at Sedro Woolley.
- Klickitat River from Wheeler Creek to the confluence with the Columbia River.
- White Salmon River from the confluence of Gilmer Creek (near the town of BZ Corner) to the confluence with Buck Creek.

Federally designated Study Rivers within Washington State are:

- Klickitat River upstream of the confluence of the Little Klickitat River to the Yakima Indian Reservation boundary.
- White Salmon River upstream of the confluence with Gilmer Creek.

Twenty-six Washington rivers are included on the Nationwide Rivers Inventory and are protected CEQ regulations. In addition, several rivers that are not on the National Rivers Inventory are being proposed for special consideration by the U.S. Forest Service.

For more information about this legislation, designated rivers, and federal management agencies, see the National Wild and Scenic Rivers homepage:

http://www.nps.gov/rivers/

(b) Wilderness Act

The Federal Wilderness Act (FWA) of 1964 (16 USC, 1131-1136) aimed to establish a national wilderness preservation system that would protect unspoiled lands from encroachment by "permanent improvements or human habitation." Generally, land falling under the Act is managed by the same agency that managed it prior to wilderness designation.

The Act defines wilderness as areas where "the earth and its community of life are untrammeled by man, where man is a visitor who does not remain…." Nearly 10 percent of lands in Washington are designated as wilderness.

For more information about the Act, wilderness maps, and other wilderness information, see the Wilderness Information Network Homepage:

http://www.wilderness.net/

Click on legislation.

Or by direct link:

http://www.wilderness.net/nwps/legis/default.cfm

(c) ***National Trails System Act***

The National Trails System Act (NTSA) (16 USC, 1241-1249) was established in 1968 to provide for recreation, public access, enjoyment, and appreciation of the "open-air, outdoor areas and historic resources of the nation." The Act is applicable in portions of Wild and Scenic Rivers where trails systems exist. It is available online at:

http://www4.law.cornell.edu/uscode/

Select Title 16, Conservation, and Chapter 27, National Trails System.

Or by direct link:

http://www4.law.cornell.edu/uscode/16/ch27.html

(d) ***Section 4(f) Public Lands Regulations***

Section 4(f) of the 1966 Department of Transportation Act, Title 23, CFR 771.135(d), man-dates protection of certain parks, recreational areas, wildlife or waterfowl refuges, and historic properties. Highway projects can only cross these special lands if there is no feasible and prudent alternative and the sponsoring agency demonstrates that all possible planning to minimize harm has been accomplished. For details on Section 4(f) see **Section 455.02**.

This title is applicable to portions of Wild and Scenic Rivers that are being used for purposes designated in Section 4(f). Public lands adjacent to a wild and scenic river also may be subject to Section 4(f) protection.

(3) ***Washington Scenic Rivers System***

State scenic rivers legislation (RCW 79.72) establishes that certain rivers, due to their "outstanding natural, scenic, historic, ecological, and recreational values," are preserved in "as natural a condition as practical and that overuse of such rivers…shall be discouraged." However, the program has not been funded by the Legislature since 1993.

The Skykomish River, and its tributaries upstream of the Sultan River, is the only designated State Scenic River. The Washington Scenic Rivers System also includes portions of the Skykomish, Beckler, Tye, and Little Spokane Rivers. Another 18 rivers were evaluated for state scenic river status.

453.03 Policy Guidance

None.

453.04 MOUs, MOAs, IAs

(1) ***Section 4(f) Involvement***

Two memoranda between the Office of Environmental Policy and FHWA (June 6, 1978 and May 26, 1981) clarify how Section 4 (f) applies to portions of wild and scenic river areas which are being used or designated for use as a park, recreation, wildlife or waterfowl refuge, or historic preservation. They state that Section 4(f) applicability to Wild and Scenic Rivers is not based solely on a system's

designation as a Wild and Scenic River, but rather on whether the system is a "significant publicly owned recreation area." The memoranda are available online in FHWA's Environmental Guidebook:

http://www.fhwa.dot.gov/environment/

Click on Environmental Guidebook, then Wild and Scenic Rivers.

(2) Presidential Directive

An August, 1979 Presidential Directive requires federal agencies to take care to avoid or mitigate adverse effects on rivers identified as wild, scenic, or recreational. For a detailed memorandum from the Council on Environmental Quality outlining procedures for interagency consultation to comply with this directive, see *Policy Guidance for Wild and Scenic Rivers* (October 3, 1980) in FHWA's Environmental Guidebook:

http://www.fhwa.dot.gov/environment/

Click on Environment, then Environmental Guidebook, then Wild and Scenic Rivers.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch15.htm

453.05 Technical Guidance

Region Environmental Managers need to monitor projects in their Regions and coordinate with the Environmental Services Office and FHWA whenever a project is in the vicinity of a Wild and Scenic River. Although specific permits may not be required, rigorous environmental documentation will be necessary.

(1) WSDOT Technical Guidance

WSDOT has no formal discipline report for Wild and Scenic Rivers. For projects that may affect a federal or state-designated Wild or Scenic River, this section includes general guidance for assessing potential requirements.

Most rivers in Washington are protected or under consideration for protection by either a federal, state, or local governmental agency. There is currently no organized clearinghouse for project review. **Exhibit 453-1** gives details on wilderness and scenic values by river reach for all Washington rivers listed in the Nationwide Rivers Inventory.

Projects have the potential for adversely affecting wild and scenic rivers if they are within a one-quarter-mile of a river shoreline and:

- Require an EIS, EA, or SEPA checklist.
- Require new right-of-way, earth moving, grading, or pile driving.
- Involve bridge replacement.

For such projects, the WSDOT regional staff should contact the appropriate agency. If the project is in or near a national forest, the district ranger should also be contacted.

Management plans have been developed for each Wild and Scenic River. These plans must be reviewed as part of the Section 4(f) study (see **Section 455.05**), and will help determine whether Section 4(f) is applicable. For each alternative that would take such land, coordination with the agency responsible for managing the river will provide

information on the management plan, specific affected land uses, and any necessary Section 4(f) coordination.

Responsible agencies are:

State Parks and Recreation Commission - Responsible for managing all state scenic rivers. Local agencies also administer State Scenic Rivers through their Shoreline Management Plans. Contact the appropriate regional State Parks office for projects near a Scenic River corridor or State Park.

National Park Service, Recreation Programs - Responsible for managing all rivers on the Nationwide Rivers Inventory.

Mt. Baker-Snoqualmie National Forest, Mt. Baker Ranger District - Manages the Skagit Wild and Scenic River.

Columbia River Gorge Commission - Manages the Klickitat and White Salmon Wild and Scenic Rivers. It also monitors activities within the Washington side of the Columbia Gorge National Scenic Area which includes SR 14.

Many of these agencies will only review projects at the permit stage, which could result in costly delays and modifications. Contact should be initiated early if there is a possibility of adverse effect in order to identify any agency concerns.

For relatively simple projects, an easy way to make the contact is to circulate a SEPA checklist to the responsible agency. Written contact should occur at the scoping stage for a project requiring an EA or EIS. A similar contact should be made with the appropriate local agency if a state scenic river is involved. If there is no response to written contact, it is assumed that the project is not within a Wild and Scenic River corridor or will not cause adverse effects.

If adverse impacts are likely, request assistance in writing from the administering agency and address agency comments and concerns. All reasonable measures to avoid or mitigate should be considered. Document the coordination and commitments made and include them in project design and construction documents.

(2) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing NEPA and 4(f) documents, including specifically sections on Wild and Scenic Rivers. If a proposed action could have adverse effects on a river in the National Wild and Scenic Rivers System or a river under study for designation, the draft EIS should identify early coordination with the agency responsible for managing the listed or studied river.

For each alternative, the EIS should identify the potential adverse effects on natural, cultural, and recreational values. Adverse effects include alteration of the free-flowing nature of the river, alteration of the setting, or deterioration of water quality. If it is determined that any of the alternatives could foreclose options to a designated or study river, or adversely affect the qualities for which a river was designated, the draft EIS needs to reflect consultations with the managing agency on avoiding or mitigation the impacts (23 CFR 771.123). The final EIS should identify measures that will be included in the preferred alternative to avoid or mitigate such impacts.

See **Section 455.05** for Section 4(f) requirements.

For more on the Technical Advisory, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

453.06 Permits

No specific permits are required for Wild and Scenic Rivers. However, close agency coordination is needed on studies, agency determination of impacts and possible mitigations, and selection of alternatives.

See **Section 431.06** for information on water quality permits which may be needed for work affecting Wild and Scenic Rivers. The Joint Aquatic Resource Permit Application (JARPA) is used to apply for COE permits (Section 10 and Section 404), Coast Guard Bridge Permits, WDFW Hydraulic Project Approvals (HPAs), Shoreline Management Permits from local governments, Approvals for Exceedance of Water Quality Standards (only for certain in-water work and aquatic pesticides) from Ecology, Water Quality Certifications (Section 401) from Ecology, and DNR's Aquatic Resources Use Authorization. Water-related permits are referenced in **Section 431.06** and some are listed in **Exhibit 431-9.**

453.07 Non-Road Project Requirements

The same policies, procedures, and permits that apply to road projects generally apply to non-road projects; for example emergency airstrips or rail lines located near a designated wild or scenic river.

453.08 Exhibits

Exhibit 453-1 – Values Identified for Washington Rivers Listed in Nationwide Rivers Inventory.

Values Identified for Washington Rivers Listed in Nationwide Rivers Inventory

River Name	Physiographic Section	Other State(s)	County(s)	Congressional Districts	Segment Reach Description	Length (miles)	Outstandingly Remarkable Values								Narrative Description of Values
							Scenic	Recreation	Geologic	Fish	Wildlife	Historic	Cultural	Other	
Bogachiel and North Fork	24a		Cllallam Jefferson	3	The entire mainstem and North Fork from source to confluence with Soleduck River. Mainstream North Fork	 44 7	x	x		x	x				A major river on the Olympic Peninsula. The upper portion is a pristine mountain on unroaded national park land with steep gradients, cascades, falls, and rapids. The low river is slower, wider and meanders through coastal forest with scattered agricultural and recreation development. Outstanding anadromous fishery. Recreational boating on lower river. Excellent water quality, although clay banks along lower river cause some discoloration. Important habitat for wildlife, including elk and bald eagles.
Chiwawa River	23a		Chelan	4	Entire length.	30		x							Relatively pristine mountain stream fed from Glacier Peak Wilderness Area; flows through mixed terrain of moderately steep valleys and wider meadows. Opportunities for kayaking, canoeing, rafting, and fishing.
Cispus River	23b		Lewis Skamania	2 4	Entire length	52	x	x		x					A fixed channel and braided river flowing through mainly undeveloped heavily forested areas. Large subalpine meadows near the headwaters with majestic views of the Goat Rock Wilderness. Important resident fishery resource. Considerable boating potential.

River Name	Physio Section	Other States	Counties	Congress .Districts	Segment Reach Description	Length	Scenic	Recreation	Geologic	Fish	Wildlife	Historic	Cultural	Other	Narrative Description of Values
Columbia River	20a		Benton Franklin Grant Yakima	4 5	From Priest Rapids Dam downstream to slack water at McNary Pool (Lake Wallula)	55				x	x		x		The Hanford Reach is the only remaining significant free-flowing section of the Columbia River in the United States, and it represents the most diverse fish and wildlife habitat on the mid-Columbia Rive. The area is used by bald eagles, peregrine falcons, Canada geese, and an assortment of other species, as well as a large variety of fish types. Largely undeveloped, it flows through the Hanford Nuclear Reservation. A large number of archeological sites have been identified.
Cowlitz River	23b		Lewis	2	From its source downstream to the confluence with the Cispus River.	42			x						Fixed channel and looped meandering river draining the southeast slopes of Mt. Rainier, and carrying significant amounts of glacial debris; being a fine example of an outwash stream. Excellent fishing resource.
Dosewallips River	24b		Jefferson	3	Entire length.	28	x		x						High scenic values, especially of the surrounding Olympic Mountains. Undeveloped, wilderness stream; clear water and unrestricted flow with numerous rapids, cascades, and small waterfalls. Dense forestation and good outdrop examples of Olympic Peninsula geology. Rises in Olympic National Park. Some kayaking in lowest reaches.
Duckabush River	24a 24b		Jefferson	3	Entire length.	24	x		x						Scenic views of surrounding Olympic mountains. Undeveloped, wilderness stream; clear, unrestricted flow with numerous rapids, cascades, and waterfalls. Subalpine meadows in the upper valley reach and very heavy forestation in the lower reaches. Rises in Olympic National Park.

Hoh River	24b		Jefferson		Entire length.	55	x	x	x	x					Considerable braided, glacier fed coastal river rising in Olympic National Park. Flows through a highly diverse landscape, including rare rain forest. Sustains considerable fishing and recreation; important winter steelhead resource; canoeing and rafting. Premier example of a high flow, glacial river, with superb scenic values.
Humptulips River & West Fork	24b		Grays Harbor		Entire mainstem and West Fork.	61	x	x		x					Good example of a coastal stream rising in higher mountainous regions and flowing through a diversity of landscape types. Upper undeveloped portion is a fixed channel, steep stream, while lower looped meander portion is low gradient. One of the most important winter steelhead resources – excellent recreational fishing resource. Canoeing and kayaking, potential rafting.
Kettle River	19		Ferry Stevens	5	Entire Washington portion.	54	x	x				x			Gently meandering stream flowing through historic mining region. Good scenic values and sufficient year-round flow and grade for premier canoeing and floating opportunities.
Klickitat River	23b		Klickitat	4	From the southern boundary of the Yakima Indian Reservation downstream to the confluence with the Columbia River.	48	x		x	x					Major canyon with high scenic values; fishing and some boating. Important summer Washington steelhead fishing stream.

River Name	Physio Section	Other States	Counties	Congress .Districts	Segment Reach Description	Length	Scenic	Recreation	Geologic	Fish	Wildlife	Historic	Cultural	Other	Narrative Description of Values
Methow River	19		Okanogan	4	The entire mainstem from source to mouth, and the major tributary, Chewack River. Methow River Chewack River	 80 41	x	x		x	x				A long river which drains the northern portion of the eastern slope Cascades. Headwaters are in a narrowly inclined valley on mostly unroaded national forest land, while most of the valley is privately owned agricultural land. The pastoral valley, combined with the nearby backdrop of Cascade peaks, makes the river visually appealing. Scenery from the river itself is relatively natural because of streamside vegetation and cliffs. Supports a wide range of recreational boating. A major anadromous/resident fishing stream with excellent pool/riffle ratio and clear water. A major wintering area for big game and raptors, including bald eagles.
Nisqually River	23b		Lewis Pierce	2	From Nisqually glacier downstream to Alder Reservoir.	28	x		x						Classic example of Alaska-type glacier fed stream. Cold, silty water in numerous braids, beginning in Mt. Rainier National Park. Course generally broad and shallow with numerous gravel bars and log debris. Essentially undeveloped.
Nooksack River and South Fork and Middle Fork and Wells Creek	23a		Whatcom Skagit	2	The upper mainstem from its source downstream to its confluence with the South Fork and the entire South and Middle Forks and Wells Creek.	35 37 20	x	x	x	x	x				High flow, glacier-fed river system rising in Mt. Baker-Mt. Shuksan area. Important salmon resource, and good Dolly Varden trout run. Sustains substantial boating use. Winter meeting area for eagles. Many cascades and waterfalls, including Nooksack Falls on the main North Fork.

Palouse River	20a		Whitman Adams Franklin	5	From Colfax downstream to the confluence with the Snake River.	72			x						Varies from upper meandered portion to lower canyon with vertical walls cut in Columbia basalt, providing excellent examples of volcanic formations, including Little Palouse and Palouse Falls (185-ft drop).
Rock Creek	20a		Whitman Adams Franklin	5	Entire length.	52			x						Flows through sparsely vegetated channeled scabland region; stream course includes a series of narrow, natural lakes located in small vertical-walled canyons cut in Columbia basalt. Good columnar jointing and other geologic formations. Upper portion essentially undeveloped.
Skykomish River and North and South Forks	23a		Snohomish King	2	South Fork, North Fork and mainstem from source to confluence with Snoqualmie River, including major tributaries (Beckler R., Tye R., Miller R. and Foss River) Mainstream South Fork & Tributaries North Fork	 54 26 28	x	x		x					A major Western Washington river accessible by highway, close to large urban population. Highly scenic mountain valley. Exceptional boulder and floodway zones. Clear water with rapids, cascades and falls in upper reaches. Braided streamway corridor with outstanding accretion beaches and gravel bars in lower reaches. Substantial runs of anadromous fish and high wildlife diversity. Supports wide variety of recreational boating. Portions are in the State Scenic and Recreational Rivers System.
Middle Fork Snoqualimie River	23a		King	2	From its source downstream to a point approximately four miles upstream from the confluence with the South Fork.	31	x	x		x					A fixed channel stream of high and moderate gradients rising from a tarn lake amid alpine meadows and rugged mountain slopes. Essentially undeveloped; excellent white water opportunities in lower reaches. Resident fish resource.
Soleduck River	24a		Clallam	3	Entire length.	65				x					Both fixed and looped meander channel pattern in the lower valley reaches, with low to moderate gradients and flow. Major Olympic drainage flowing through thickly forested areas. Produces some of the largest winter steelhead fish. Flows near well-known and developed hot springs area.

River Name	Physio Section	Other States	Counties	Congress .Districts	Segment Reach Description	Length	Scenic	Recreation	Geologic	Fish	Wildlife	Historic	Cultural	Other	Narrative Description of Values
Tucannon River	20a 20b		Columbia Garfield	5	Entire length.	57				x	x	x			Undeveloped upper portion; flows primarily in flat floored, steep-sided valley, past several small lakes. Good example of rejuvenated, underfit stream with present channel flowing within a narrow floodplain, well-defined by former mature meander pattern. Excellent fish and wildlife habitat. Some boating.
Wenatchee River	23a		Chelan	4	From Wenatchee Lake downstream to the confluence with Icicle Creek.	30	x	x	x						Major eastern Cascades river which sustains considerable white-water boating and fishing. Includes spectacular Tumwater Canyon. Heavily used commercial rafting river in the lower reaches and popular canoeing stream near Lake Wenatchee.
White River	23a		Chelan	4	Entire length.	34	x	x							Pristine wilderness stream with cascades and waterfalls. Rises in the Glacier Peak Wilderness. Some kayaking. Almost totally undeveloped.
Wind River	23b		Skamania	4	Entire length.	29			x	x					Swift stream flowing through interesting volcanic terrain, including some hot springs areas. Important summer steelhead resource.
Yakima River	23a 20a		Kittitas Yakima	4	From Crystal Springs to Lake Easton; River Mile 190 to confluence with Cle Elum River; from Teanaway, WA to Highway I-90 at Ellensburg and from Zillah to Prosser.	9 6 28 44		x	x	x	x				Scenic, geologically interesting rugged canyon displaying entrenched meanders and cutting through folded basalt. Fish and wildlife (notably bird) habitat; one of few potential wild trout producers. Considerable canoeing, some rafting and kayaking. Very popular swimming and tubing river. Dense and diverse riparian zone. Lower portion displays wide flood-plain characteristics.

454 Agricultural and Farmland

454.01 Introduction
454.02 Applicable Statutes and Regulations
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Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

454.01 Introduction

The loss of productive farmland to highways, urban sprawl, and other types of development is cause for concern. Highways may increase the pres-sure for conversion from farming to other uses. By making inaccessible areas more accessible, highways increase potential for develop-ment. In turn, development increases land val-ues and property taxes, tending to make farming economically infeasible. Adjacent development is seen as incompatible with farming, and far-ming activities may be considered a "nuisance" by newcomers. Additional traffic moving at high speeds creates a safety hazard for slow moving farm machinery.

Farmlands may be converted as a result of locating a new road in a farming area, rebuilding and/or enlarging an existing road, or adding an interchange from an interstate highway in a rural area. Conversion may indirectly result when land remaining in a tract partially taken for right of way can no longer be farmed because the project would restrict access, or is converted because of accessibility to a new highway.

(1) Summary of Requirements

Farmlands defined as "prime," "unique," or of state or local significance are protected by federal and state legislation. During the project defin-it-ion phase, potential impacts to protected farm-lands are identified in the Environmental Review Summary (see **Section 320.02**). Early consul-tation with the Natural Resources Conservation Service (NRCS), and state and local agencies is recom-mended. During project development, a farm--land conversion impact rating process is used, in coordination with these agencies, to deter-mine the degree of impact and whether alter-nat-ives or mitigation will be nec-essary. Env-iron-mental documents are prepared based on the results of this rating.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this chapter are listed below. Others are found in the general list in the appendix.

DOA U.S. Department of Agriculture

FPPA Farmland Protection Policy Act

NRCS Natural Resource Conservation Service

(3) *Glossary*

Farmland of Statewide or Local Importance – Farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oil-seed crops, as determined by the state or local govern-ment agency or agencies, using U.S. Dep-artment of Agriculture guidelines.

Indirect Conversion – Acres remaining in a tract that is partially taken for right of way which (a) could no longer be farmed because the project would restrict access, or (b) would likely be con-verted because of accessibility to a new highway.

Prime Farmland – Land that has the best com-bin-ation of physical and chemical character-istics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and with-out intolerable soil erosion. Prime farm--land inc-ludes land that possesses the above charac-teristics and may include land currently used as cropland, pastureland, rangeland, or forestland. It does not include land already in or committed to urban development or water storage.

Site – Any alternative alignment on a highway project, including areas converted directly (within the right of way) or indirectly by a proposed action (see "Indirect Conversion").

Unique Farmland – Land other than prime farmland that is used for production of specific high-value food and fiber crops. It has the spec-ial combination of soil quality, location, growing season, and moisture supply to economically produce sustained high quality or high yields of specific crops when treated and managed acc-ording to acceptable farming methods. Exam-ples of such crops include lentils, nuts, annual cropped white wheat, cranberries, fruits, and vegetables.

454.02 Applicable Statutes and Regulations

(1) *National Environmental Policy Act/ State Environmental Policy Act*

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts to farmland are given due weight in project decision-making. The State Environmental Pol-icy Act (SEPA) mandates a similar procedure for state and local actions. Federal implemen-ting reg-ul-ations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details see **Section 410** through **Section 412.**

(2) *Farmlands Protection Policy Act*

The purpose of the Farmlands Protection Policy Act (FPPA) of 1981 (7 USC 42014209) is to minimize impacts on farmlands and maximize com-patibility with state and local farmland prog-rams. Farmlands are classified as prime, unique, or of statewide or local importance. The foll-owing types of land are exempt under the FPPA:

- Soil types not suitable for crops (such as rocky terrain and sand dunes).
- Urban sites where the right of way required for a highway project is wholly within a delineated urban area and the project requires no property from prime or unique farmlands or farmlands of statewide or local impor-tance.
- Farmland that has already been converted to industrial, commercial, residential, or recre-ational activity.

Information about the FPPA is online at the NRCS web site:

http://www.fhwa.dot.gov/

Click on Programs, then Farmland Protection Act.

Or by direct link:

http://www.nrcs.usda.gov/programs/fppa/index.html

Implementing Regulations in 7 CFR 658 include a scoring system for determining a project's potential impacts (7 CFR 658.4) that could hasten the conversion of farmland. Also available on the NRCS web site:

http://www.nrcs.usda.gov/

Click on Programs, then Farmland Protection Act, then FPPA Rules.

Or by direct link:

http://www.nrcs.usda.gov/programs/lesa/cfr/7cfr658.html

(3) State Growth Management Act

The Growth Management Act (GMA) requires all counties and cities in rapidly growing areas to designate resource lands, including agri-cultural lands of long term significance. The policies may be included in the Countywide Planning Policies or codified in the County or City's Compre-hen-sive Plan and implementing regulations. These regulations may specify per-mit-ted uses and the size and type of infra-structure allowed in the resource areas. For example, the jurisdiction's art--er-ial plan must provide roadway designations that are consistent with the agricultural character and needs of designated resource areas. For details on the GMA, see **Section 451.02**.

(4) Farmlands Preservation Executive Order

Washington's Farmlands Preservation Executive Order 8001 of 1980 requires state agencies to consider farmland preservation during program development.

(5) Local Right-to-Farm Ordinances

Some counties and cities have right-to-farm ord-in-ances that are designed to provide some pro-tection to farmers from nuisance complaints by urban dwellers in a farming community.

454.03 Policy Guidance

None.

454.04 MOUs, MOAs, IAs

(1) State Conservation Commission

This memorandum between the State Conser-vation Commission and WSDOT (see **Exhibit 454-1**), aims to enhance cooperation to preserve agricultural and forest lands; to prevent and treat erosion problems adjacent to or associated with farm-lands and state highways; to maintain drainage ways; and to reclaim abandoned road-ways for agricultural purposes.

Memorandum of Understanding, WSDOT-Washington State Conservation Commission, Agreement GC 7147.

(2) Other

None.

454.05 Technical Guidance

(1) WSDOT Discipline Report

NEPA implementing regulations require evalu-ation of potential project impacts on farmlands classified as prime, unique, or of statewide or local significance. WSDOT's checklist for pre-paring a Farmlands Discipline Report is attached as **Exhibit 4542**. The checklist focuses on coor-d--ination with Natural Resource Conser-vation Service (NRCS) and completion of the Farmland Conversion Impact Rating (Form AD 1006 or NRCS-CPA-106); see details below. WSDOT and FHWA guidance for preparing the rating and environmental docu-ments is given below. Note that since farmland often contains regulated wetlands, the potential for wetland impacts should also be considered (see **Section 437.05**).

(2) Other WSDOT Guidance

(a) Overview

Following is a summary of the steps required in considering potential impacts on farmland.

- During the development of the Environ-mental Review Summary, the regional office reviews the impact of the project on preservation of farmland (see **Section 320.03**).
- Identify all new projects requiring new right of way that contain farmlands or that may cause indirect con-version of farmlands.
- Contact local governments to identify any farm-lands of local importance and any farm-land protection programs.
- Determine if the project is federally exempt.
- If not, complete Form AD-1006 or NRCS-CPA-106 (see below) and consider alternatives that could lessen the adverse effects on farmlands.
- Document the determination process.
- Determine if an EIS is required.
- Complete the environmental document.

(b) *Exempt Projects*

The following projects are generally exempt:

- Construction within existing rights of way purchased before August 6, 1984.
- All resurfacing and normal road repairs.
- Rights of way taken from existing residents and/or businesses.
- Borrow areas and disposal sites not arranged for under the direction of WSDOT.
- Land committed to water storage.

(c) *Farmland Conversion Rating (Form AD-1006 or NRCS-CPA-106)*

Form AD-1006 is used if the project is site-specific, for example a farmland parcel being acquired for wetland mitigation. Form NRCS-CPA-106 is used for "corridor type" projects such as highways. If the project is not exempt, the regional office completes Part I and III of the rating form and submits the required number of copies to the appropriate NRCS office. If the project is located within only one District, the form should be sent to the NRCS District (Field) office, the NRCS, State Con-servationist and Pro-ject Development Office. If the project is located within more than one NRCS district, the correspondence should be sent to the NRCS State Conservationist and the headquarters Project Development Office. (See below for NRCS web site.)

When requesting information from local governments or submitting the rating form to the NRCS, include the following:

- Vicinity map.
- Description of all proposed project alterna-tives, including possible right of way needs.
- Soil survey area number (available from local NRCS office or web site shown below).

The NRCS area conservationist will determine whether the proposed alternative (site) converts land meeting the definition of farmland. If the FPPA does apply, the NRCS will complete the rating form, Part II, IV and V, within 45 calendar days. If they do not respond within the 45 days, causing delays that interfere with construction, the project may proceed without the NRCS determination.

If the local government and/or NRCS indicates that the proposed project would convert farm-lands, the region completes Parts VI and VII of the rating form

Forms AD-1006 and NRCS-CPA-106, with detailed instructions, are on line at the NRCS web site:

http://nrcs.us.gov

Click on Programs, then Farmland Protection Policy Act, then Form AD-1006 or Form NRCS-CPA-106.

Or by direct link:

http://www.nrcs.usda.gov/programs/fppa/CPA106.pdf

Or

http://www.nrcs.usda.gov/programs/fppa/AD1006.PDF

To reach the Washington NRCS web site, go to the NRCS home page at:

http://www.nrcs.usda.gov/

Click on About NRCS, then Organization, then State Offices, then select Washington.

Or by direct link:

http://www.wa.nrcs.usda.gov/

(d) NEPA Determination

Upon completion of documentation, the region makes the final evaluation for a NEPA Finding of No Significant Impact (FONSI). Using alternative comparisons and subsequent mitig-ation, the regional office coordinates with FHWA to decide whether or not to proceed with a farm-land conversion.

(e) Contents of Environmental Document

See below for specific FHWA guidance. In gen-eral, the project environmental document should discuss or include each of the following items:

- Would an alternative route location or design require losing less farmland important to agri-culture?
- What are the secondary effects of the pro-posed action on farmlands important to agriculture?
- What benefits are foregone if farmlands important to agriculture are taken?
- A copy of completed Form AD-1006 or NRCS-CPA-106.
- A summary of the farmland protection pro-cess, including the final decision.
- Any mitigation measures that will reduce farm-lands impacts.

(3) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing NEPA and Section 4(f) documents, including specifically sections on farmland impacts. See also **Section 455.05** for Section 4(f) requirements. If it is determined that an EIS is necessary, the draft should summarize the results of early con-sultation with the NRCS and state and local agri-culture agencies where any of the four specified types of farmland could be directly or indirectly impacted by any alternative under consideration.

Where farmland would be impacted, the draft EIS should contain a map showing the location of all farmlands in the project impact area, discuss the impacts of the various alternatives and iden-tify measures to avoid or reduce the impacts. The Farmland Conversion Impact Rating (Form AD-1006 or NRCS-CPA-106) should be processed, and a copy included in the draft EIS. Where the Land Evaluation and Site Assessment score (from the rating form) is 160 points or greater, the draft EIS should discuss alternatives to avoid farmland impacts.

If avoidance is not possible, measures to minim-ize or reduce the impacts should be evaluated and, where appropriate, included in the proposed action.

The FHWA Advisory is online at:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A, then Farmland Impacts.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

454.06 Permits

No permits are usually required that specifically address impact to or conversion of agricultural land. Local grading permits may be required (see **Section 451.06**).

454.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road projects.

454.08 Exhibits

Exhibit 454-1 – Memorandum of Understanding, Washington State Conservation Com-mission and WSDOT.
Exhibit 454-2 – Farmland Discipline Report Checklist.

MEMORANDUM OF UNDERSTANDING
between the
Washington State Conservation Commission
and
Washington State Department of Transportation

This Memorandum of Understanding between the Washington State Conservation Commission (WSCC) and the Washington State Department of Transportation (WSDOT) is executed because of a mutual concern to enhance cooperation in preserving agricultural and forest lands; to prevent and treat erosion problems adjacent to or associated with farmlands and state highways; and to maintain drainage ways and to reclaim abandoned roadways for agricultural purposes.

Provisions

The WSCC acting independently or through their Conservation Districts, agrees to:

(1) Consult with WSDOT District Maintenance Engineers regarding highway rights-of-way which exhibit serious erosion problems.

(2) Work with WSDOT Headquarters in developing techniques for management of farmlands and roadsides for erosion control in coordination with WSDOT maintenance practices.

(3) Work with WSDOT District Location Engineers to assure that roadway projects minimize agricultural land conversion.

(4) Work with WSDOT District Location Engineer to reclaim abandoned roadways for agricultural uses wherever feasible and practical.

(5) Consult and work with WSDOT District Maintenance Engineers to maintain adequate highway drainage so it does not adversely affect agricultural lands.

(6) Consult and work with WSDOT District Maintenance Engineers to maintain adequate agricultural land drainage, of precipitated or irrigation water, so that it does not adversely affect highway drainage facilities.

(7) Work with County Weed Control Boards or other County officials to maintain or develop a noxious weed control program.

(8) Furnish the WSDOT Project Development Engineer annually seven (7) copies of the WSCC Directory that contains maps showing boundaries of Conservation Districts and current list of each district's board of supervisors with addresses.

The WSDOT agrees to:

(1) Furnish the WSCC a WSDOT directory and updates as required, containing the names and phone numbers of Headquarters and District Staff and a map showing each district's boundaries.

(2) Review existing policies and specifications that address agricultural land preservation and reclamation and rights-of-way management, and propose changes as may be necessary. The WSDOT Project Development Office will work with the WSCC to rectify any concerns and develop guidance for the WSDOT Districts. A copy of such guidance will be provided to the WSCC.

(3) Through the WSDOT Districts, contact local Conservation Districts during the design stage of projects to coordinate concerns and recommendations.

(4) Work with Conservation Districts through County Weed Control Boards or appropriate county officials to control noxious weeds.

(5) WSDOT Headquarters will request Department of Ecology to send draft environmental impact statements and assessments to Conservation Districts near the project area for review and comment.

(6) WSDOT will review Conservation District's comments to environmental documents and make appropriate revisions considering acceptable economic tradeoffs in roadway alignment. Resolution of WSCC comments will normally be determined by the Project Development Engineer. If a satisfactory solution cannot be mutually agreed upon, the Conservation District may appeal to the Assistant Secretary for Highways and, if necessary, to the Secretary of Transportation.

Duration

It is mutually agreed that this Memorandum of Understanding becomes effective at the time of the last signature and will continue in effect until:

(1) Both parties agree to its termination; or

(2) 45 days after either party notifies the other in writing of its intent to terminate the M.O.U.

This Memorandum of Understanding may be modified at any time and in any manner that is mutually acceptable to both parties.

(original signed by person named below)	(original signed by person named below)
Washington State Conservation Commission	Washington State Department of Transportation Assistant Secretary for Highways
September 16, 1982	September 30, 1982
Date	Date

File No. GC7141

Washington State Department of Transportation

Discipline Report Checklist
Farmland

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Studies and Coordination

(Refer to: Memorandum of Understanding, WSDOT-Washington State Conservation Commission Agreement GC 7141; Farmland Protection Policy Act [FPPA], 7 USC 4202, Rules, 7 CFR Part 658; FHWA *Farmland Protection Policy Act Supplemental Guidelines for Implementing the Final Rule for Highway Projects*, October 1984; Governor's Executive Order 80-01, Farmland Preservation, January 4, 1980; and FHWA Technical Advisory T 6640.8A.)

Include results of coordination with the Natural Resources Conservation Service and state and local agencies, as appropriate.

SAT	INC	MIS	N/A	
❒	❒	❒		A. Determined if project will convert farmland?
❒	❒	❒	❒	B. Farmland Conversion Impact Rating (Form AD-1006 or NCRS-CPA-106) Part 1 and Part 3 completed.
❒	❒	❒	❒	C. Form AD-1006 or NCRS-CPA-106 accompanied by:
❒	❒	❒	❒	1. Vicinity map.
❒	❒	❒	❒	2. Project alternatives.
❒	❒	❒	❒	3. Soil Survey Area number.
❒	❒	❒	❒	D. Farmland Conversion Impact Rating (Form AD-1006 or NCRS-CPA-106) submitted to appropriate Natural Resources Conservation Service (NRCS) office return receipt mail. (Part 'D' retained for files.)

Date Farmland Conversion Impact Rating (Form AD-1006 or NCRS-CPA-106) received at NRCS office. (NRCS has 45 days from receipt to complete evaluation. CFR 658.4(a) states that if 45 days have passed without an evaluation and this may hold up the project, proceed as if no farmland is being converted.)

SAT	INC	MIS	N/A	
❒	❒	❒	❒	E. Completed Form AD-1006 or NCRS-CPA-106 returned by NRCS.
❒	❒	❒	❒	F. Section VI and VII completed per CFR 658.5(b).
❒	❒	❒	❒	G. Coordinated with FHWA (if federal funds) for review and concurrence.
❒	❒	❒	❒	H. Incorporated evaluation in environmental document.

February 1999

455 Public Lands (Section 4(f), 6(f) and Forests)

455.01 Introduction
455.02 Applicable Statutes and Regulations
455.03 Policy Guidance
455.04 MOUs, MOAs, and IAs
455.05 Technical Guidance
455.06 Permits
455.07 Non-Road Project Requirements
455.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

455.01 Introduction

This section includes information needed for projects that will affect Section 4(f) public lands and Section 6(f) outdoor recreation lands. These requirements often overlap with those for projects affecting historic properties (Section 106), and cultural and archaeological resources, which are discussed in **Section 456**. See also **Section 411.09** for guidance on preparing Section 4(f) and Section 106 reports for NEPA projects.

The section also includes information needed for projects affecting state and national forest lands, which are designated for timber harvest. Projects affecting public forest lands are not subject to Section 4(f) or Section 6(f); however, other regulations apply.

(1) Summary of Requirements

The major legislative mandates and requirements discussed in this section are:

Public Lands – Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303) applies to projects using a significant publicly owned park, recreation area, wildlife or waterfowl refuge, or historic site (23 CFR 771.135). Section 4(f) may also apply to Wild and Scenic Rivers (see **Section 453**). Section 4(f) is not a SEPA requirement and should not be addressed in SEPA documents. Section 4(f) is a federal requirement and needs to be considered in any NEPA document (see **Section 411.09**). However, a NEPA action does not always require a 4(f) evaluation. For example, if there is no Section 4(f) nexus, the NEPA document need only explain that Section 4(f) does not apply to the project. Always consult with the Regional Environmental Manager if it is not clear whether or not Section 4(f) applies to a specific project.

Outdoor Recreation – Section 6(f) of the Land and Water Conservation Funds Act applies to conversion of outdoor recreation property acquired or developed with grant assistance from an Interagency Committee for Outdoor Recreation.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

Forest Lands – An MOU between FHWA and the United States Forest Service (USFS) establishes procedures for coordinating transportation activities on National Forest Lands. Washington's Forest Practices Act applies to projects affecting state forest lands; a permit must be obtained from the Washington Department of Natural Resources (DNR).

(2) Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

DNR Washington Department of Natural Resources

DOI United States Department of Interior

NF National Forest

USFS United States Forest Service

(3) Glossary

None.

455.02 Applicable Statutes and Regulations

Projects that involve impacts to public lands and/or national forest are subject to the state and federal regulations summarized below. Note that some of the following laws and regulations apply to historic and archeological sites as well as to other public lands. See **Section 456.02** for laws and regulations applying specifically to historic sites.

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to public lands are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT).
For details see **Section 410** through **Section 412**, particularly **Section 411.09**.

(2) Section 4(f) - Department of Transportation Act and Implementing Regulations

Protection of certain public lands and all historic sites was originally mandated in Section 4(f) of the 1966 Department of Transportation Act. This section was repealed in 1983 and later codified without substantive changes as 49 USC 303. However, it is still referred to as Section 4(f) in the FHWA Environmental Procedures (23 CFR 771) and popularly by many WSDOT staff.

Section 4(f) declares a national policy to preserve, where possible, "the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Highway projects can only cross these special lands if there is no feasible and prudent alternative and the sponsoring agency demonstrates that all possible planning to minimize harm has been accomplished. Visual resource mitigation may be required in certain instances as part of these plans.

Under Section 4(f), the FHWA and other USDOT agencies cannot approve the use of land from a publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site, unless a determination is made that:

- There is no feasible and prudent alternative to using the property; and
- The proposed action includes all possible planning to minimize harm to the property resulting from such use.

In addition, before approving use of these lands for a transportation project, supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitude.

In addition to mandating protection of certain land uses, FHWA rules require that when the project's impacts in the proximity of the protected area are so severe that the resources' activities, features, or attributes are substantially impaired, then Section 4(f) is also called into effect even if the project does not actually intrude into the protected use. Impacts may include:

- Resources affected by noise levels.
- Aesthetic features of the resource compromised by the transportation facility.
- Access restricted, substantially diminishing the utility of the resource.
- Vibrations impair use of the resource and diminish the value of wildlife habitat.

(3) Section 6(f)—Land and Water Conservation Funds Act

This statute applies to all projects which impact recreational lands purchased or improved with land and water conservation funds. The Secretary of the Interior must approve any conversion of property acquired or developed with assistance under this act to other than public, outdoor recreation use.

(4) DOT Design, Arts, and Architecture Program

To further implement NEPA, Section 106(h) and Section 4(f), the Department of Transportation inaugurated its Design, Arts, and Architecture in Transportation Program in 1978. Outlined in DOT Order 5610.1C, revised Attachment 2, the program requires that environmental impact statements document the consideration of design quality in projects which involve public use areas or sensitive locations such as parks or historic districts.

(5) Washington Forest Practices Act and Implementing Regulation

The Forest Practices Act (RCW 76.09.020) guides the management of public and private forest lands consistent with sound policies of natural resource protection. The Forest Practices Board is authorized to implement this act, including issuance of a permit to alter forest lands to non-forest uses. Implementing regulations include definitions (WAC 222-16) and application and notification procedures (WAC 222-20).

455.03 Policy Guidance

(1) DNR Forest Management Plan

Washington Department of Natural Resources is responsible for managing the state's forests for the welfare of the people of the state, through the various trust funds associated with timberlands. This responsibility includes issuing permits for alterations to forestlands.

(2) Local Plans and Policies

City and county comprehensive plans and parks and recreation plans may contain policy guidance on public lands, including significant trees or groves, wildlife habitat, parks, and recreation areas. These documents should be considered in preparing the public lands section of environmental documents.

455.04 MOUs, MOAs, and IAs

(1) National Forest Lands

A July 12, 1991 memorandum of understanding, updated March 22, 2002, establishes procedures for coordination of transportation activities on National Forest lands. It states the WSDOT and the USFS will agree on the needed environmental documentation and lead agency responsibility. The agreement covers coordination, project programming and planning, pre-construction, rights-of-way, construction/re-construction, maintenance, signs, access control, and third party occupancy. The new MOU is available online via the USFS home page:

http://www.fs.fed.us/

Click on Publications, then Directives, then Field Issuances, then 1000 Organization and Management – select Region 6, then 1561.9b.

Or by direct link:

http://www.fs.fed.us/im/directives/field/r6pnw/fsm/1500/1561_9b.doc

(2) Other

None identified.

455.05 Technical Guidance

(1) Section 4(f) Evaluations

The Section 4(f) evaluation is a separate analysis of impacts to covered resources that could result from one or more alternatives being considered for a transportation project. In addition to property acquisition, "constructive use" of Section 4(f) land may include impacts on aesthetics, access, air quality, noise levels, water quality, or land use in the area. The use of Section 4(f) land may involve concurrent requirements of other federal agencies. Examples include consistency determinations for the use of public lands managed by the Bureau of Land Management (BLM), compatibility determinations for the use of land in the National Wildlife Refuge System and National Park System, determinations of direct and adverse effects on Wild and Scenic Rivers (see **Section 453.05**), and approval of land conversion under Section 6(f) of the Land and Water Conservation Fund Act. Mitigations planned for the project should include measures to satisfy all such requirements.

Nationwide or programmatic Section 4(f) evaluations and approvals have been prepared for certain transportation projects having minor impacts (see below).

(a) WSDOT Section 4(f) Evaluation Checklist

The WSDOT checklist for preparing Section 4(f) Evaluations is attached as **Exhibit 455-1**. The report should cover the basic NEPA requirements for affected environment, impacts, and studies and coordination as related to Section 4(f). An outline for a Section 4(f) Evaluation is attached as **Exhibit 455-2**. For additional guidance, see **Section 411.09**.

(b) *FHWA Guidance*

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental documents and Section 4(f). Section IX gives detailed guidance on format and content of Section 4(f) evaluations. For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/ techadvs/t664008a.htm

FHWA's *Complete Section 4(f) Policy Paper as Revised June 7, 1989* provides comprehensive guidance on preparing Section 4(f) evaluations. The complete paper (html format), and the October 5, 1987 version plus 1989 revisions (pdf format) is available on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Section 4(f).

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm

(c) *Section 4(f) Programmatic Evaluations*

As an alternative to preparing an individual Section 4(f) evaluation, WSDOT may in certain circumstances have the option of applying a programmatic evaluation. A programmatic Section 4(f) evaluation specifies conditions which, if met, will satisfy the requirements of Section 4(f) that there are no feasible and prudent alternatives and that all possible planning has been done to minimize harm. These conditions generally relate to the type of project, the severity of impacts to Section 4(f) property, the evaluation of alternatives, the establishment of a procedure for minimizing harm to the Section 4(f) property, and adequate coordination with appropriate entities. Section 4(f) park and recreation areas may have national, regional, statewide or local significance.

FHWA has prepared four programmatic evaluations to be used for projects having impacts on resources covered by Section 4(f). A separate 4(f) evaluation is not needed for projects meeting the criteria set forth in these programmatic evaluations:

Historic sites – Final Nationwide Section 4(f) Evaluation and Approval for Federally Aided Projects with Minor Involvements with Historic Sites (December 23, 1986).

Historic Bridges – Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges (July 5, 1983).

Public parks, recreation lands, and wildlife and waterfowl refuges – Final Nationwide Section 4(f) Evaluation and Approval for Federally Aided Projects with Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges (December 23, 1989)

Bikeways and walkways – Negative Declaration/Section 4(f) Statement [i.e. Determination of Nonsignificance, DNS] for Independent Bikeway or Walkway Construction Projects (May 23, 1977).

These documents are available online on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Section 4(f).

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm

The fact that the nationwide programmatic Section 4(f) evaluations are approved does not mean that these types of projects are exempt from or have advance compliance with the requirements of Section 4(f). Section 4(f) does apply to each of the types of projects addressed by the programmatic evaluations. Furthermore, the programmatic Section 4(f) does not relax the Section 4(f) standards; i.e., it is just as difficult to justify using Section 4(f) land with the programmatic Section 4(f) evaluation as it is with an individual Section 4(f) evaluation.

These programmatic Section 4(f) evaluations may be applied only to projects meeting the applicable criteria. How the project meets the criteria must be documented. The documentation needed to support the conclusions required by the programmatic Section 4(f) evaluation is comparable to the documentation needed for an individual Section 4(f) evaluation.

These programmatic Section 4(f) evaluations streamline the amount of interagency coordination that is required for an individual Section 4(f) evaluation. Interagency coordination is required only with the official(s) with jurisdiction and not with the federal Department of Interior (DOI), Department of Agriculture, or Department of Housing and Urban Development (unless the federal agency has a specific action to take, such as DOI approval of a conversion of land acquired using Land and Water Conservation Funds).

(d) Projects in Wild and Scenic River Corridors

An FHWA Administrator Memorandum (June 6, 1978) discusses the applicability of Section 4(f) to projects in Wild and Scenic River Corridors. The document is online at FHWA's web site:

http://fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Section 4(f)

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm

(2) *Section 6(f) Evaluations*

(a) *WSDOT Discipline Report, Outdoor Recreation Property (6(f))*

The Discipline Report Checklist for studies done in compliance with the Land and Water Conservation Funds Act, Section 6(f) for conversion of IAC Outdoor Recreation Property is attached as **Exhibit 455-3**. Detailed WSDOT guidance is found in **Exhibit 455-4**.

FHWA Guidance

FHWA's online Environmental Guidebook contains documents on wilderness areas and Section 6(f) properties. Available on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Wilderness Areas/Section 6(f) Properties.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch16.htm

(3) *WSDOT Environmental GIS Workbench*

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available data sets relevant to public lands include major public lands, national forests, national parks, national recreation areas, and public land survey. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

455.06 Permits

(1) *Forest Practices Application*

This application is required when project activities affect forest lands, defined as land capable of supporting a merchantable stand of timber and is not being actively used for a use incompatible with timber growing. See **Exhibit 455-5** for details.

(2) *Other*

None identified.

455.07 Non-Road Project Requirements

Ferry, rail, airport, and non-motorized transport systems are generally subject to the same policies, procedures, or permits that apply to road systems.

455.08 Exhibits

Exhibit 455-1 – Discipline Report Checklist, Public Lands, Section 4(f).

Exhibit 455-2 – WSDOT NEPA/Section 4(f) Evaluation Outline.

Exhibit 455-3 – Discipline Report Checklist, Outdoor Recreation Property, Section 6(f).

Exhibit 455-4 – Conversion of IAC Outdoor Recreation Property, Procedures for Section 6(f) Resolutions with IAC.

Exhibit 455-5 – Forest Practices Application/ Notification.

Washington State Department of Transportation

Discipline Report Checklist
Public Lands, Section 4(f)

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

Reports should include a brief introduction which identified:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. The basic requirements of Section 4(f).
❑	❑	❑	❑	B. The Section 4(f) resource(s) affected.
❑	❑	❑	❑	C. The alternatives under consideration that would affect the Section 4(f) resource(s).

II. Affected Environment

Report should include a description of each Section 4(f) resource:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. A detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property(ies).
❑	❑	❑	❑	B. Size (acres or square feet) and location (maps, sketches, etc.) of the affected Section 4(f) property(ies).
❑	❑	❑	❑	C. Type of property(ies) (recreation, historic, etc.) and ownership (city, county, state, etc.).
❑	❑	❑	❑	D. Function of or available activities on the property(ies) (swimming, golfing, baseball, etc.).
❑	❑	❑	❑	E. Description and location of all existing and planned facilities (tennis courts, baseball diamonds, etc.).
❑	❑	❑	❑	F. Access (pedestrian, vehicular) and usage (approximate number of users/visitors, etc.).
❑	❑	❑	❑	G. Relationship to other similarly used lands in the vicinity.
❑	❑	❑	❑	H. Applicable clauses affecting the ownership, such as lease, easement, covenants, restrictions, or conditions, including forfeiture.
❑	❑	❑	❑	I. Unusual characteristics (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property(ies).

III. Impacts

Report should identify and discuss the environmental impacts **during construction** for each alternative on each Section 4(f) property (quantify where possible):

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Acquisition of land (acres or square feet), facilities (include map), and functions.
❑	❑	❑	❑	B. Access.
❑	❑	❑	❑	C. Aesthetics.
❑	❑	❑	❑	D. Air quality.
❑	❑	❑	❑	E. Noise (quantified).
❑	❑	❑	❑	F. Water.
❑	❑	❑	❑	G. Land use in the vicinity.
❑	❑	❑	❑	H. Functions of or available activities on the property.

Report should identify and discuss the environmental impacts **during operation** for each alternative on each Section 4(f) property:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	I. Acquisition of land (acres or square feet), if different from construction impact, and facilities (include map).
❑	❑	❑	❑	J. Access.
❑	❑	❑	❑	K. Aesthetics.
❑	❑	❑	❑	L. Air quality.
❑	❑	❑	❑	M. Noise (quantified).
❑	❑	❑	❑	N. Water.
❑	❑	❑	❑	O. Land use in the vicinity. Included impacts of growth induced by project.
❑	❑	❑	❑	P. Functions of or available activities on the property.
❑	❑	❑	❑	Q. Identified and evaluated location and design alternatives which would avoid each and all Section 4(f) property(ies).
❑	❑	❑	❑	R. Explained whether any avoidance alternatives which were eliminated from further detailed study are "feasible and prudent," and, if not, stated the reasons why.
❑	❑	❑	❑	S. Discussed all possible measures which are available to minimize the impacts of the proposed action on the Section 4(f) property(ies), commitments made and monitored procedures to minimize harm. (Detailed discussions of mitigation measures in the EIS or EA may be referenced and appropriately summarized, rather than repeated. (T 6640.8A, p. 46.)

IV. Studies and Coordination

Included discussion of specifies coordination with the following agencies and persons concerning avoidance alternatives, impacts, measures to minimize harm, joint development (if applicable) with the following as appropriate:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. State Historic Preservation Officer (SHPO).
❑	❑	❑	❑	B. Local officials with jurisdiction.
❑	❑	❑	❑	C. Historic societies, museums, or academic institutions [DOT 5610.1C, Attachment 2, paragraph 5(a)].
❑	❑	❑	❑	D. Historic consultant.
❑	❑	❑	❑	E. Archaeological consultant.
❑	❑	❑	❑	F. Advisory Council on Historic Preservation (ACHP).
❑	❑	❑	❑	G. Indian tribes.

Included the determination that there are no feasible and prudent alternatives (not normally addressed in the Draft Section 4(f) Evaluation (T 6640.8A, p. 46).

Final Section 4(f) Evaluation: (Required when the preferred alternative includes the use of Section 4(f) property(ies)).

Included all the information required for the draft evaluation.

Included discussion of why there are no feasible and prudent alternatives for each Section 4(f) property involved. The discussion shall include supporting information that demonstrates that "there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community distribution resulting from such alternatives reach extraordinary magnitudes" (23 CFR 771.135(a)(2)).

Used the language in the previous paragraph to introduce the supporting evidence.

V. Feasibility and Prudence

Described all the following factors that apply to the feasibility and prudence of the alternatives:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Unique engineering or construction problems.
❑	❑	❑	❑	B. Extraordinary costs.
❑	❑	❑	❑	C. Community disruption of extraordinary magnitude.
❑	❑	❑	❑	D. Severe adverse environmental impacts.
❑	❑	❑	❑	E. Greater impacts on this or other 4(f) lands.
❑	❑	❑	❑	F. Failure to fulfill urgent public needs.
❑	❑	❑	❑	G. Alternatives that avoid 4(f) lands cause deterioration of property or prevent development.
❑	❑	❑	❑	H. Other truly unusual factors.
❑	❑	❑	❑	I. Included a discussion of the basis for concluding that the proposed action includes all possible planning to minimize harm to the Section 4(f) property.
❑	❑	❑	❑	J. If there are no feasible and prudent alternatives which avoid the use of Section 4(f) land, the final Section 4(f) evaluation demonstrated that the preferred alternative is a feasible and prudent alternative with the least harm on the Section 4(f) resources after considering mitigation to the Section 4(f) resources.
❑	❑	❑	❑	K. Included copies of all formal coordination comments received and an analysis and response to any questions raised.
❑	❑	❑	❑	L. If Section 6(f) land is involved, documented the Interagency Committee for Outdoor Recreation and National Parks Service's position on the land transfer.

Included the following concluding statement:

❑	❑	❑	❑	M. Based upon the above considerations, there is no feasible, and prudent alternative to the use of land from the (Section 4(f) property) and the proposed action includes all possible planning to minimize harm to the (Section 4(f) property) resulting from such use.

VI. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.

The summary should include:

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. The objectives of the project.
❑	❑	❑	❑	B. Current land use in project area.
❑	❑	❑	❑	C. Unique problems requiring use of 4(f) property.
❑	❑	❑	❑	D. Impacts of all alternatives including the no-build alternative.
❑	❑	❑	❑	E. Recommended mitigation.
❑	❑	❑	❑	F. Comparison of alternatives based on impacts and cost effectiveness of mitigation.
❑	❑	❑	❑	G. Agency coordination.

General Comments: _____

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February 1999

NEPA/Section 4(f) Evaluation Outline

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

NEPA
SECTION 4(f) EVALUATION
OUTLINE

M 31-11

Prepared by
Project Development Office

Transportation Building
Olympia, Washington

March 1988

SECTION 4(f) EVALUATION

(Refer to FHWA T 6640.8A, p. 44; 23 CFR 771.135; 49 USC 303.)

Section 4(f) of the Department of Transportation Act states that the FHWA will not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

(1) There is no feasible and prudent alternative to the use of land from the property; and

(2) The proposed action includes all possible planning to minimize harm to the property resulting from such use.

The Section 4(f) evaluation is a separate analysis of impacts to Section 4(f) resources that would be caused by the various alternatives under consideration. "Use" of Section 4(f) land is not limited to property acquisition. Significant impacts on aesthetics, access, air quality, noise levels, water quality, land use in the area, etc., may constitute "constructive use" of Section 4(f) land.

The FHWA has approved nationwide programmatic Section 4(f) evaluations for certain types of projects: projects which use minor amounts of land from publicly owned parks, recreation areas, and wildlife and waterfowls refuges; projects which use minor amounts of land from historic sites which are on or eligible for the National Register of Historic Places; projects involving historic bridges; and bikeway projects. These programmatic evaluations may be used for individual projects; however, programmatic evaluations are NOT always applicable to projects for which an EIS is prepared, unless the use of Section 4(f) lands is discovered after approval of the final EIS. Individual Section 4(f) evaluations must be prepared for projects for which one of the programmatic evaluations can not be used. (See Section 3-6 of this manual for guidance regarding the use of programmatic Section 4(f) evaluations.)

For projects processed with an EIS or an EA, the Section 4(f) evaluation should be included as a separate section of the document. For projects processed as categorical exclusions, the Section 4(f) evaluation should be a separate document. Pertinent information from various sections of the EIS or EA may be summarized in the Section 4(f) evaluation to avoid duplication. Care should be taken in documenting impacts due to constructive use. Should the FHWA decide that constructive use impacts are not substantial, and therefore, do <u>not</u> require a Section 4(f) evaluation, the EIS/EA must contain sufficient analysis and information to demonstrate that the resource is not substantially impaired.

The use of Section 4(f) land may involve concurrent requirements of other Federal agencies. Examples include consistency determinations for the use of public lands managed by the Bureau of Land Management, compatibility determinations for the use of land in the National Wildlife Refuge System and the National Park System, determinations of direct and adverse effects for Wild and Scenic Rivers, and approval of land conversions under Section 6(f) of the Land and Water Conservation Fund Act. The mitigation plan developed for the project should include measures which would satisfy the various requirements. For example, Section 6(f) directs the Department of the Interior (National Park Service) to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions.

Therefore, where a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. Regardless of the mitigation proposed, the draft and final Section 4(f) evaluations should discuss the results of coordination with the public official having jurisdiction over the Section 4(f) land and document the National Park Service's position on the Section 6(f) land transfer, respectively. (T 6640.8A, p. 44.)

The Section 4(f) evaluation must provide supporting information to demonstrate that there are unique problems or unusual factors involved in the use of alternatives that would avoid these properties, or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes (23 CFR 771.135(a)(2)).

A. The following information should be included as appropriate in the Draft Section 4(f) Evaluation

1. When a separate Section 4(f) evaluation is prepared, for processing with a categorical exclusion (CE) for example, describe the proposed project, including the purpose and need for the project.

2. A brief introduction which identifies:

   a. The basic requirements of Section 4(f).

   b. The Section 4(f) resource(s) affected.

   c. The alternatives under consideration that would affect the Section 4(f) resource(s).

3. Description of each Section 4(f) resource:

   a. A detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property.

   b. Size (acres or square feet) and location (maps, sketches, etc.) of the affected Section 4(f) property.

   c. Type of property (recreation, historic, etc.) and ownership (city, county, state, etc.).

   d. Function of or available activities on the property (swimming, golfing, baseball, etc.).

   e. Description and location of all existing and planned facilities (tennis courts, baseball diamonds, etc.).

   f. Access (pedestrian, vehicular) and usage (approximate number of users/visitors, etc.).

   g. Relationship to other similarly used lands in the vicinity.

h. Applicable clauses affecting the ownership, such as lease, easement, covenants, restrictions, or conditions, including forfeiture.

i. Unusual characteristics (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property.

4. Environmental impacts during construction for each alternative on each Section 4(f) property (quantify where possible):

   a. Acquisition of land (acres or square feet) and facilities (include map).

   b. Access.

   c. Aesthetics.

   d. Air Quality.

   e. Noise.

   f. Water.

   g. Land use in the vicinity.

5. Environmental impacts during operation for each alternative on each Section 4(f) property:

   a. Acquisition of land (acres or square feet), if different from construction impact, and facilities (include map).

   b. Access.

   c. Aesthetics.

   d. Air Quality.

   e. Noise.

   f. Water.

   g. Land use in the vicinity. Include impacts of growth induced by project.

6. Avoidance alternatives and their impacts.

   Identify and evaluate location and design alternatives which would avoid the Section 4(f) property. Generally, this would include alternatives to either side of the property. Where an alternative would use land from more than one Section 4(f) property, the analysis needs to evaluate alternatives which avoid each and all properties (23 CFR 771.135(i)). The design alternatives should be in the immediate area of the property and consider minor alignment shifts, a reduced

facility, retaining structures, etc., individually or in combination, as appropriate. Detailed discussions of alternatives in an EIS or EA need not be repeated in the Section 4(f) portion of the document, but should be referenced and summarized. However, when alternatives (avoiding Section 4(f) resources) have been eliminated from detailed study the discussion should also explain whether these alternative are feasible and prudent and, if not, the reasons why. (T 6640.8A, p. 45.)

7. Mitigation measures, commitments, and monitoring procedures to minimize harm.

   Discuss all possible measures which are available to minimize the impacts of the proposed action on the Section 4(f) property(ies). Detailed discussions of mitigation measures in the EIS or EA may be referenced and appropriately summarized, rather than repeated. (T 6640.8A, p. 46.)

8. Coordination with other agencies. The coordination should include a discussion of avoidance alternatives, impacts, and measures to minimize harm:

   a. State Historic Preservation Officer (SHPO).

   b. Local officials with jurisdiction.

   c. Historic societies, museums, or academic institutions [DOT 5610.1C, Attachment 2, paragraph 5 (a)].

   d. Historic consultant.

   e. Archaeological consultant.

   f. Advisory Council on Historic Preservation (ACHP).

The determination that there are no feasible and prudent alternatives is not normally addressed in the Draft Section 4(f) Evaluation (T 6640.8A, p. 46).

B. Final Section 4(f) Evaluation

When the Preferred Alternative includes the use of Section 4(f) land, a Final Section 4(f) Evaluation shall be included as a separate section of the Final EIS, or for an EA, in the FONSI. The final Section 4(f) evaluation must contain:

1. All the information required for the draft evaluation.

2. A discussion of why there are no feasible and prudent alternatives for each Section 4(f) property involved. The discussion shall include supporting information that demonstrates that "there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes" (23 CFR 771.135(a)(2)).

Use this language to introduce supporting evidence. The following factors should be considered in the development of the discussion:

(a) Feasible means that it's possible to construct using sound engineering practices. Disregard limitations and cost. The question is: Is there an alternative that avoids the 4(f) property?

(b) Prudent means that an alternative doesn't involve extraordinary cost or community disruption. For example, if an avoidance alternative cost ten times more than other alternatives and would cause severe community disruption, it probably wouldn't be prudent. (But it would be feasible). Factors to be considered are:

(Describe all that apply.)

(1) Unique engineering or construction problems.

(2) Extraordinary costs.

(3) Community disruption of extraordinary magnitude.

(4) Severe adverse environmental impacts.

(5) Greater impacts on this or other 4(f) lands.

(6) Failure to fulfill urgent public needs.

(7) Alternatives that avoid 4(f) lands cause deterioration of property or prevent development.

(8) Other truly unusual factors.

3. A discussion of the basis for concluding that the proposed action includes all possible planning to minimize harm to the Section 4(f) property. When there are no feasible and prudent alternatives which avoid the use of Section 4(f) land, the final Section 4(f) evaluation must demonstrate that the preferred alternative is a feasible and prudent alternative with the least harm on the Section 4(f) resources after considering mitigation to the Section 4(f) resources.

4. A summary of the appropriate formal coordination with and concurrence by DOI, and as appropriate, USDA and HUD.

5. Copies of all formal coordination comments received and an analysis and response to any questions raised. Where Section 6(f) land is involved, document the National Park Service position on the land transfer.

6. Concluding statement as follows: "Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the (Section 4(f)) property) and the proposed action includes all possible planning to minimize harm to the (Section 4(f) property) resulting from such use."

Washington State Department of Transportation

Discipline Report Checklist
Outdoor Recreation Property, Section 6(f)

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Overview and Coordination

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Determined if the project use or impact Outdoor Recreation property as described in Chapter 3-7 of the *Environmental Procedures Manual*?
❑	❑	❑	❑	B. Identified owner of Recreation property.
❑	❑	❑	❑	C. Coordinated with owner of Outdoor Recreation property.
❑	❑	❑	❑	D. Written agreement from owner to relinquish Recreation property included.
❑	❑	❑	❑	E. Coordinated with WSDOT Real Estate Services for appraisal of property.
❑	❑	❑	❑	F. Coordinated with owner to identify replacement property of equal value.
❑	❑	❑	❑	G. Coordinated with IAC and owner concerning conversion package.
❑	❑	❑	❑	H. Prepared conversion package and submitted to owner (sponsor).

1. Sponsor submits conversion package to IAC.
2. IAC staff reviews conversion package.
3. If federal 6(f) funds involved, IAC submits conversion package to National Park Service for review/concurrence.
4. IAC sends approved conversion package to sponsor.
5. Sponsor signs conversion package and returns one copy to IAC.

SAT	INC	MIS	N/A	
				6. Sponsor sends copy of signed conversion package to WSDOT region.
				7. IAC will coordinate with sponsor and allow conversion to proceed.
❑	❑	❑	❑	I. Sent copy of signed conversion package to OSC and Region Real Estate Services.
❑	❑	❑	❑	J. Sent copy of signed conversion package to Region Real Estate Services.
❑	❑	❑	❑	K. Sent copy of signed conversion package to OSC Environmental.

General Comments: _____

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February 1999

Conversion of IAC Outdoor Recreation Property Procedures for Section 6(f) Resolutions with IAC

INTRODUCTION

Recreational property acquired or developed with grant assistance from any Interagency Committee for Outdoor Recreation (IAC) source obligates the title holder to follow IAC conversion policies if the property is to be converted to nonrecreational use.

Conversion of recreational property acquired or developed with Land and Water Conservation Funds (section 6(f) of the Land and Water Conservation Act) to purposes other than public outdoor recreation requires Section 6(f) compliance. This section requires agencies to secure IAC and National Park Service (NPS) approval before converting the property to uses other than outdoor recreation.

Similar approvals will be required for any property acquired or developed with funds from the Outdoor Recreation Account (RCW 43.99.080) created under the "Marine Recreation Land Act of 1964" and funded from any (IAC) source. The IAC staff will evaluate each conversion request to determine the steps required for IAC concurrence.

These guidelines are provided to assist in the steps leading to the required approval to convert outdoor-recreation property and to identify procedures for replacing converted outdoor recreation property where IAC or Land and Water Conservation Funds was used.

REFERENCES

Land and Water Conservation Fund Act Title 16, Part B, 16 USC 460L 4-11 (Public Law 88-578).

IAC Manual No. 3, Section 03.09, 03.10, 03.28, 03.28A, 03.28B, 03.29, 03.30, and Appendix H.

IAC Manual No. 7, Section 07.19, 07.19A, and 07.19B.

Land and Water Conservation Fund Grants Manual Chapter 650.2.

Marine Recreation Land Act – Initiative Measure No. 215.

Marine Recreation Land Act of 1964 Title 43 RCW Chap. 43.99.

RCW 43.99.100 Conversion of Marine Recreation Land to Other Uses – Approval – Substitution.

Title 286 WAC – Interagency Committee for Outdoor Recreation – WAC 286-24-050 Restriction on Conversion of Facility to Other Uses.

DEFINITIONS

Section 6(f) of the Land and Water Conservation Fund Act of 1965

> No property acquired or developed with assistance under this section shall, without the approval of the Secretary (of the Interior), be converted to other than public recreation uses. The Secretary shall approve such conversions only if he finds it to be in accord with the then existing comprehensive state outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of the recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

Interagency Committee for Outdoor Recreation (IAC)

The IAC was created in 1964 with the passage of the Marine Recreation Act, Chapter 43.99 RCW. This Act designated IAC as the administering agency of an outdoor recreation grant-in-aid program for state and local agencies of government.

The IAC administers funds from various sources. These funding sources include:

State Bond Monies

Chapter 12 of the Extraordinary Session of 1963 provides for the sale of bonds that are available for outdoor recreation projects.

Land and Water Conservation Fund (LWCF) – 6(f)

This continuing source of funds is administered by the Department of Interior, National Park Service (NPS) and the IAC. All projects funded with 6(f) must follow federal rules and regulations.

Off-Road Vehicle Funds (ORV)

This account is funded through ORV permits and a portion of the gasoline excise tax.

Initiative 215 – Marine Recreation Land Act

> An act providing for the use of monies, derived from existing motor vehicle fuel taxes paid by purchasers of fuel used in watercraft and not reclaimed by them as presently allowed by law, for the acquisition or improvement of land on fresh or salt water for marine recreational purposes. The act provides methods for determining the proportion of motor vehicle tax paid for marine fuel, and it provides for distributing the unreclaimed monies one-half to the state and one-half to local government units. The act also creates a committee for outdoor recreation and makes appropriations.
>
> Initiative 215 funds are outlined in the Marine Recreation Land Act, Initiative 215, Section 6 Outdoor Recreation Account. These funds include: monies from the Marine Fuel Tax Refund Account; proceeds from the bond issue authorized by Chapter 12, Laws of 1963, Extraordinary Session (an act providing funds for the development of outdoor recreational facilities in the state through

the sale of general obligation bonds); and monies made available by the federal government for outdoor recreation not specifically designated for another fund or agency.

WAC 286-24-050 – Restriction on Conversion of Facility to Other Uses

Sponsors shall not at any time convert any property or facility acquired or developed with money granted to the sponsor by the interagency committee to uses other than those for which the property or facility was originally approved for funding without the prior approval of the interagency committee, in the manner provided by RCW 43.99.100 for marine recreation land, whether or not the property was acquired with Initiative 215 (Marine Recreation Land Act) funds.

RCW 43.99.100 Conversion of Marine Recreation Land to Other Uses – Approval – Substitution

Marine recreation land with respect to which money has been expended under RCW 43.99.080 (Outdoor Recreation Account) shall not, without the approval of the committee, be converted to uses other than those for which such expenditure was originally approved. The committee shall only approve any such conversion upon conditions which will assure the substitution of other marine recreation land of at least equal fair market value at the time of conversion and of as nearly as feasible equivalent usefulness and location.

Sponsor

The agency with jurisdiction over the recreation property that is to be converted becomes the project sponsor once the agency has agreed to conversion.

Applicant

The agency that wishes to convert the recreation property, for our purposes WSDOT.

Conversion Package

This refers to the information required by the IAC staff to get IAC concurrence or, in the case of recreation property acquired or developed using Land and Water Conservation Funds (6(f)), Department of Interior, National Park Service concurrence. This term will apply to all conversions that use IAC assistance.

PROCEDURES

A. 6(f) DOCUMENT PREPARATION AND COORDINATION

When it has been determined that a project will require the use of outdoor recreation property, the applicant (Region) must contact the agency with jurisdiction over the recreation property. This initial contact may be on an informal basis and should include the following: (1) Determine if IAC assistance was used in acquiring or developing the property. If there was no IAC involvement, the following procedures are not appropriate. (2) It must be determined that the agency in question is willing to relinquish the property

and accept the proposed replacement property. (3) The local agency (sponsor) should also be informed of the need to coordinate with the IAC. The applicant, sponsor and IAC should begin informal coordination/discussions early in the project.

Once an agreement has been reached and the sponsor has agreed to relinquish title to the property in question for suitable replacement recreation property, the applicant (Region) must complete the following procedures:

1. Coordinate with the sponsor and IAC staff. IAC staff will evaluate the procedures required for successful conversion of the outdoor recreation property. This evaluation will be based, in part, on the funding originally used to acquire or develop the outdoor recreation property in question. Execution of this step early in the process is vital if the conversion is to be completed in a timely manner.

   The IAC generally meets three times a year, in March, July, and November. Proposals must be submitted to the IAC staff two months prior to the next scheduled meeting to be on the IAC agenda. The IAC staff will review the proposal and prepare recommendations for the IAC. The IAC will generally arrive at a decision at the IAC meeting. Formal notification from IAC will follow in approximately 7 days. If the outdoor recreation property in question used 6(f) funds, a minimum of 60 days must be allowed for Department of Interior (DOI) concurrence. Formal notification from the IAC can be expected about 30 days after DOI concurrence.

2. Obtain from the sponsor an agreement in writing to relinquish the outdoor recreation property and to accept the replacement property, if approved by the IAC.

3. Prepare an Environmental Impact Assessment (EIA) as per IAC Manual No. 7, Section 07.19A and the Land and Water Conservation Fund Grants Manual Chapter 650.2 (see attached). This document should include: a description of the proposed action, alternatives to the proposed action, environmental impacts and a list of agencies and individuals contacted.

4. Obtain an appraisal of the outdoor recreation property as outlined in IAC Manual No. 3. This appraisal may be done by WSDOT Real Estate Services (IAC Manual No. 3 Section 03.10 notes that RCW 39.33.010 provides for the transfer of public land from one agency to another without compensation; however, an appraisal is required to establish the fair market value).

5. Identify and obtain an appraisal of the proposed replacement property. The fair market value of the replacement property must be at least equal to the outdoor recreation property to be converted. The replacement property must be of reasonably equal recreational value. The property must also meet the following IAC criteria; it must be a viable recreation area on its own or it must be part of an existing recreation area. The replacement property must ultimately be administered by the same political jurisdiction as the original outdoor recreation property to be converted and must be identified in that agency's Comprehensive Recreation Plan.

6. If the appraised value of either the outdoor recreation or replacement parcel is greater than $5,000.00, the appraisal is subject to an Appraisal Review. This review must follow the guidelines as stated in IAC Manual #3 Section 03.29, 03.30 and Appendix H, which state, in part, that the Appraisal Review will be performed by the WSDOT Appraisal Review Section. The WSDOT Appraisal Review Section is located in WSDOT's Olympia Service Center (OSC), with satellite locations throughout the Regions. This Appraisal Review must then become a part of the conversion package submitted to the IAC for approval.

7. For conversions that constitute a significant change and include federal assistance, a Clearinghouse review will be required. This step requires the sponsor to submit the information concerning conversion to the Intergovernmental Agency Review. This information will be published for review and comment by interested agencies and individuals.

B. REVIEW AND APPROVAL

1. Once the appraisals and Environmental Impact Assessment have been completed, the Region shall begin to prepare a conversion package for presentation by the sponsor to the IAC and, if required, the National Park Service for concurrence. This package should include the above noted EIA, the appraisal of the outdoor recreation and replacement property, the Appraisal Review (if necessary) and any coordination/agreements between WSDOT and the sponsor. A boundary map showing the existing and proposed boundary of the recreation property is required. A map showing the boundary of the replacement property and a location map is also required.

2. Upon completion of the draft conversion package, the Region submits the package to the WSDOT Project Development Engineer for review and concurrence.

3. Upon receiving OSC concurrence, the Region submits the draft conversion package to the sponsor for review and concurrence. A copy of the transmittal letter to the sponsor is submitted to OSC.

4. Upon concurrence by the sponsor, the sponsor will submit the final conversion package to the IAC for IAC and/or NPS concurrence. A letter requesting approval of the conversion and noting that all other alternatives have been evaluated and rejected on a sound basis must accompany the conversion request package. (If the conversion involves federal participation/concurrence this evaluation of alternatives would be included in the EIA.)

5. The request will be reviewed and submitted by IAC staff to the IAC Committee and, if required, the NPS for concurrence. Upon concurrence the conversion package is made a part of the permanent IAC project file and kept for future record. An amendment approving the conversion is sent to the sponsor.

6. The sponsor, upon receipt of the amendment approving the conversion, will execute the amendment and send an original to the IAC and a copy to the applicant.

7. After the conversion is approved the properties may be exchanged. However, no action may be taken without direction by the IAC.

C. DISTRIBUTION

Copies of the signed conversion amendment will be sent to the following:

WSDOT Region Real Estate Services
WSDOT OSC Real Estate Services
WSDOT Environmental Services Office
WSDOT Region Environmental
WSDOT OSC Location Design

Forest Practices Application/Notification

WHO APPLIES

Region.

WHO GRANTS

Department of Natural Resources (DNR) Area Office.

CONDITIONS REQUIRING

When conducting activities (e.g., road construction, pit site work, pesticide use, work affecting the waters of the U.S. within forest lands, reforestation) in areas that are by definition considered to be "forest land" (RCW 76.09.020). Forest Land means all land that is capable of supporting a merchantable stand of timber and is not being actively used for a use which is incompatible with timber growing. A merchantable stand of timber is a stand of trees that will yield logs and/or fiber suitable in size and quality for the production of lumber, plywood, pulp, or other forest products and of sufficient value at least to cover all the cost of harvest and transportation to available markets.

The four classes of forest practices are not all applicable to WSDOT projects because the Forest Practices Act is directed toward timber harvesting and reforestation. Only Classes II and IV forest practices are applicable.

A Class IV approval is required when new right of way acquired by WSDOT supports a merchantable stand of timber. The approval is needed, regardless of the number of board feet being harvested, where forested land is being converted to nonforest use. "Conversion to a use other than commercial timber operation" shall mean a bona fide conversion to an active use which is incompatible with timber growing.

Once the purchased right of way has been converted to a nonforest land use, such as a highway corridor or rest area, no further permits are required from DNR for the cutting of trees on the right of way.

A Class II Forest Practices Application must be filed with DNR for renewal of a Class IV application when there has been no action taken within one year.

WHEN TO INITIATE

The Region contacts the DNR Area Office and the county or local government as soon as the amount of right of way being converted from forest land can be determined during the project's environmental documentation and design phase. The Region may schedule an early review of a proposed application with the DNR prior to the official filing, or submit an application with a delayed effective date. Such early review allows DNR to comment on any concerns prior to the official filing (WAC 222-20-090). The coordination with local government should be done in

order to obtain their concurrence with the plans, since they can block the issue of the Forest Practice Approval (RCW 76.09.050 [6,11] and RCW 76.09.240).

The Forest Practice Application/Notification form should be submitted to the DNR Area Office a minimum of 60 days prior to commencing a forest practice.

TIME REQUIRED

Usually 30 to 60 days. Processing time may be less if agreed upon by DNR and local government.

A properly completed application shall be approved, approved with conditions, or disapproved within 30 calendar days for Class IV forest practices except where the DNR has determined that a detailed environmental statement must be made. In that case, the application must be approved, approved with conditions, or disapproved within 60 calendar days, unless the Commissioner of Public Lands promulgates a formal order specifying a later date for completion of the detailed environmental statement and final action on the application.

Unless the county has waived its rights under the act or consents to approval, DNR cannot approve an application involving lands to be converted to another use (Class IV practice) until 14 business days have elapsed from the date DNR transmits the application to the county.

If DNR fails to approve or disapprove an application or any portion thereof within the applicable time limit and the county has not objected and no additional environmental documents are needed, the application shall be deemed approved and operations may commence.

APPLICATION REQUIREMENTS

The application must contain a description of the type of forest practice involved, the legal description of the land, and name of owner and participants. A map, to the scale of 1 inch to 1,000 feet, must be included. The map must show the details as described on the application form.

An environmental checklist is necessary for all Class IV applications. DNR transmits copies of the application and the checklist to Department of Ecology, Department of Wildlife, Department of Fisheries, and the county having jurisdiction.

PERMIT COST

No cost.

PERMIT DURATION

One year (RCW 76.09.60(6)).

PERMIT RENEWAL

A Class II application is filed as long as the forest practices have not changed.

CONTACT FOR INFORMATION

DNR Area Office – addresses and phone numbers can be found in *Design Manual* Chapter 240.

LAW AND REGULATION REFERENCES

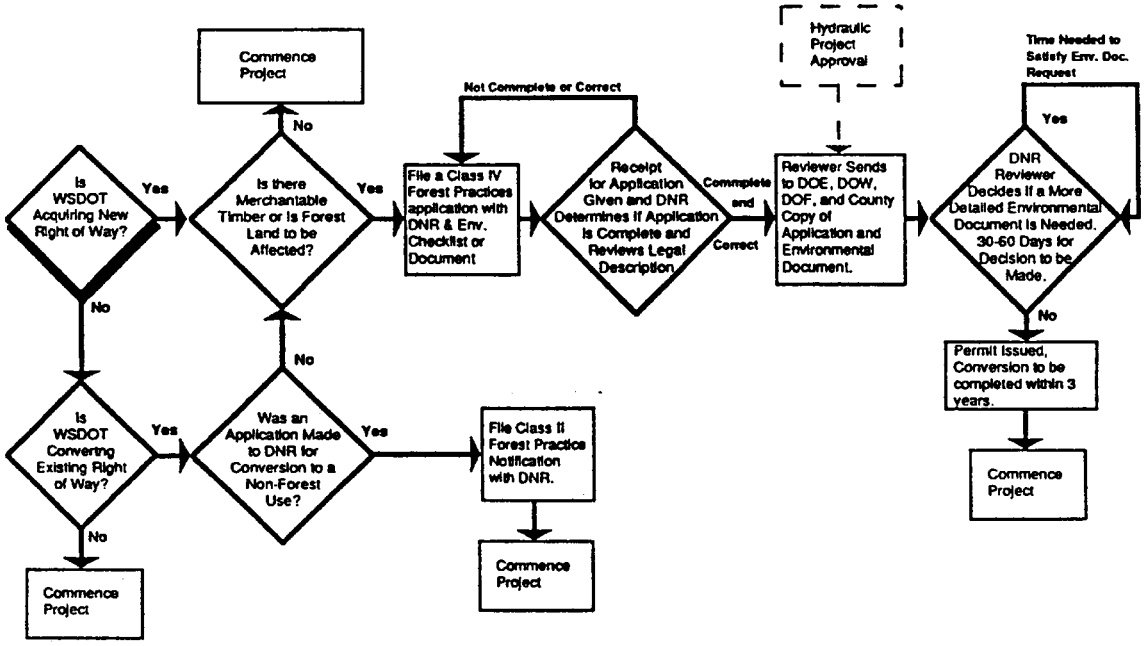
RCW 76.09
WAC 222

CONSEQUENCES FOR VIOLATION

Civil fines of $500 per violation per day and/or lawsuit stopping defendant from any forest practice for up to one year. Criminal fine of $100 to $1,000 or up to one year in jail per violation. District Court may require defendant to correct problems (RCW 76.09.140, .170, .190; WAC 222-46).

April 1989 /revised March 2001

Forest Practices Permits



INSTRUCTIONS FOR COMPLETING FOREST PRACTICE APPLICATION/NOTIFICATION FORM

PLEASE READ INSTRUCTION SHEET BEFORE MAKING ANY ENTRIES ON THE APPLICATION/NOTIFICATION FORM.

ASSISTANCE IS AVAILABLE AT THE REGIONAL OFFICE, DEPARTMENT OF NATURAL RESOURCES OR TELEPHONE 1-800-527-3305 AND ASK OPERATOR FOR THE REGION WHERE YOUR PROPERTY IS LOCATED (SEE NOTE ON NUMBER 18). IF YOU INTEND TO CONVERT TO OTHER THAN TIMBER PRODUCTION, SEE ITEM 17. LOCAL GOVERNMENT MAY HAVE ADDITIONAL REGULATIONS THAT APPLY.

TYPE OR PRINT IN PERMANENT BLACK INK AND FILL-IN LINES AND BOXES IN ITEMS 1-17. SHADED AREAS ARE FOR AGENCY ONLY. USE LEGAL SIGNATURE IN BLOCK 18.

NOTE REQUESTS, UPLAND MANAGEMENT AREAS (UMAS) AND RIPARIAN MANAGEMENT ZONES (RMZ'S). RMZ'S ARE REQUIRED ON TYPE 1, 2, AND 3 WATERS (SEE WAC 222-30-020(4)). UMAS ARE VOLUNTARY SET-ASIDE AREAS BY THE LANDOWNER FOR WILDLIFE WHERE THERE IS NO DISTURBANCE OR FOREST AREA IS MANAGED FOR WILDLIFE. PLEASE CONSULTANT DEPARTMENT OF WILDLIFE REGIONAL OFFICE IF YOU INTEND TO LEAVE UMA'S.

Complete the form and the required map. Incomplete forms or maps and false information are grounds for disapproving the application. SEE MAP SYMBOLS AND INSTRUCTIONS. YOU MAY CHANGE APPLICATION BY WRITTEN NOTICE AND DEPARTMENT ACCEPTANCE OR APPROVAL OF CHANGE(S). A NEW APPLICATION MAY BE REQUIRED.

RENEWAL Applications: Enter prior application or notification number in the blank and complete the signatures in Item 18 of the form. If a Hydraulic renewal is needed, fill in Item 16 and check the block near the top of the form. Forest practices renewals may be accepted if there are no significant changes in the previous accepted notification or approved application. Minor changes should be noted in the appropriate blank(s) of the form and shown on the map, if possible. Renewals are subject to the forest practices rules in effect at that time. (See WAC 222-16-050(4)(b)(iii)).

Describe your operation using appropriate blanks on the form. Use additional sheet(s) if there is not enough space on the application/notification form.

Item numbers below refer to the item numbers on the application/notification form.

1-3. Print the name, address and phone number of the operator(s), landowner(s) and timber owner(s). If there is more than one of each, use a supplemental sheet.

4. It is unlawful to harvest timber unless you are registered with the Washington State Department of Revenue. (See RCW 82.32.030.) If any timber is to be harvested, enter the tax number and legal name of the timber owner paying the Forest Excise Tax to the Department of Revenue. Enter the type of legal entity and the unified business identifier number. If you have questions about the tax or numbers, call 1-800-548-TTAX, Washington State Department of Revenue.

5. Print the name of the County where your forest practices operation is located. More than one County can be listed on the same form if your operation crosses boundaries.

6. If operation is within the boundary of an incorporated city or town, print the name.

7. Indicate whether the operation is occurring on land platted after Jan. 1, 1960. Call County Assessor if uncertain or tax lot/parcel number unknown. (Information may be on your real estate tax statement.)

8. If operation is within 500 feet of any public park (port, city, county, state, federal) boundary or is an inholding, print the name of the park.

9. Enter the complete legal description of operation(s) using subdivision, section, township, and range (East or West). Describe subdivisions by 40-acre tract, government lot, or portion. If a conversion, also enter parcel, or tax lot number. WAC 222-30-020(6) requires that you indicate if there are any critical wildlife habitats on or near your operation. Refer to the Forest Practices Board Manual for Federal Threatened and Endangered Species and for other critical wildlife habitat. If any are present, note them in Item 9 and identify on the operation map. Call Regional office, Department of Wildlife for information.

10. Indicate whether operation is on unstable or highly erodible soils. Slumps, slides, exposed soil and avalanche paths, etc. Indicate soil movement and possible instability. Fine, loose soils and scoured stream channels may indicate erodible soils. Contact Regional office of Department of Natural Resources about soils maps and information. Percent slope means the vertical rise in feet of elevation over a 100 foot horizontal distance, e.g., 10 foot rise over 100 feet horizontal distance is 10% slope. Slope percentage can be calculated from measurements on topographic maps or by use of a clinometer on the site. Enter slope percentage for both the steepest 10 percent of operation areas and the general or average slope.

11. Enter the approximate start and end dates of the total operation.

12. Enter each type of operation: road construction, clearcut logging, partial cutting, land clearing, aerial spraying, etc. One or several types of operation(s) may be entered. Check and see that each operation corresponds with the legal description in Item 9, i.e., 9A and 12A, 9B and 12B, etc. If advance roading, indicate area to be served.

13. Method of operation and type of equipment: state how each type of operation is planned to be accomplished. For example, logging may be skyline, balloon, high lead, tractor skidding, etc.: dormant spraying may be aerial, hand, etc; road construction may include ridgetop road with bulldozer, midslope road with bulldozer and shove, betterment with grader and small bulldozer, etc.; and site preparation may include hand methods, bulldozer with land clearing teeth, cable scarification, broadcast burning or pile and burn, etc.

14. A. Enter the acreage of each operation except roads.

    B. Enter the miles of road to be constructed (include rebuilt roads) on each operation, show on the attached map(s). If road abandonment is planned, mark yes box and show planned road abandonment on map.

15. A. Enter the estimated <u>total</u> timber volume to be cut on this operation and

    B. <u>the percent of stand</u> in the one-year period of the application. (Reforestation requirements and Shoreline Management Act may apply. See Items 16 and 17.)

16. If you are operating within or above the ordinary high-water mark of any water, you may need a Hydraulic Project Approval. By filling out this item, you are applying for that approval. Indicate activities and structures by water type for your operation(s). If operation is within 200 feet of a shoreline of statewide significance or a shoreline of the state, contact local government about additional regulations or conditions.

Check box indicating whether or not you are aware of water intake(s) on or within ¼ mile of the operation.

Indicate the proposed starting and ending dates for forest practices that may involve water.

(For water types, see WAC 222-16-030 of the Forest Practices Rules, and water type maps supplied by the Department.) Sketch on the map any water intakes and additional waters that you know of on the operation.

17. Indicate whether the land will be converted to a use other than timber production. (A Landowner's signature or suitable signed consent form is required for any conversion.) If land use will be other than timber production a detailed statement signed by the landowner must be attached containing: a. the proposed use of the land, b. the method, c. the date land clearing and slash abatement will be completed. If land is or is to be platted or developed within three or within six years, indicate the date local government site or platting approvals or permits were approved. Lands not converted within three years are to be reforested (unless exempt). If conversion is not stated at time of harvest, local government may deny permits for land use changes up to six years. (See WAC 222-20-050, RCW 76.09.060.)

    Agricultural conversions must state whether to cropland or pasture and the expected date land will be in production. (Unimproved stump land is not considered a conversion to agricultural use.)

    Conversions for residential purposes (two or more family residences) must state (1) the approximate date local government will act on short plat or subdivision plat, (2) road locations and the date these roads will be completed and whether to approved private or public road standards. Other conversions, such as: gravel pits and roads for other than forestry purposes, industrial areas, single family dwellings and recreation parks must state: I. The location of any roads, and II. The completion date for conversion of the application area.

    Indicate date(s) or hearing(s) for zone changes or other hearings (i.e., shorelines).

    In all cases of conversion(s), there may be special requirements not listed in these instructions; these are only general guidelines and are not intended to answer all conversion requirements. (NOTE: Utility rights-of-way are not considered conversions and may be processed as in Item 18.)

    The operator is responsible for post-harvest site preparation unless the landowner assumes the responsibility (WAC 222-30-090). Enter the name of person who will complete post-harvest site preparation and date of completion. Describe site preparation method: none, lop and scatter, burn, pile and burn, scarify, etc. (Site preparation and harvest should not damage soil on low productivity sites.)

    If acceptable stocking will be left following harvest, indicate species and average number of stems per acre. If acceptable stocking is not to be left, check which method of reforestation you plan to use. If you check "other," specify your method on an additional sheet. Indicate reforestation species and if different than harvested species, see WAC 222-34-010 and 020. If method is to plant, write size of stock and the number of stems per acre to be planted. If you check "natural," check either seed trees or seed blocks. The seed source must be on land of the owner that is harvesting or attach an agreement to leave seed source signed by the adjacent landowner. Indicate how you propose to control competing vegetation if it interferes with reforestation of the site.

18. The operator, landowner and timber owner must sign the application or notification unless the landowner's signature is on attached consent form and the application or notification is signed by the timber owner and operator. When an operator or timber owner has a valid timber or other legal right and the landowner's signature cannot be obtained, a cash deposit, bond, or other

acceptable surety or savings account assignment must be deposited or filed in favor of the Department. The necessary Forest Practices surety forms can be obtained at your local Regional office. When surety is provided in lieu of landowner's signature, the name and address of the landowner(s) must be printed in Item 2 or on an attached sheet (see WAC 222-20-010).

NOTE: The application or notification must be delivered in person or mailed to the Regional office. Applications are valid for one year from the date of approval. Assistance may be obtained from employees of the Department of Natural Resources. Call 1-800-527-3305 for one of the Regional offices.

REGION OFFICE	COUNTIES SERVED
Central	Thurston, Lewis, Pacific, south half of Grays Harbor
Northeast	Lincoln, Spokane, Stevens, Pend Oreille, Ferry, Okanogan
Northwest	Whatcom, Island, San Juan, Skagit, Snohomish
Olympic	Clallam, Jefferson, north half of Grays Harbor
South Puget Sound	Pierce, King, Kitsap, Mason
Southeast	Chelan, Kittitas, Yakima, Klickitat, Walla Walla, Columbia, Whitman, Garfield, Asotin
Southwest	Wahkiakum, Cowlitz, Clark Skamania

Operations may begin when the applicant has a valid Department signature accepting a notification or approving an application or when the time limits in WAC 222-20-020(1) and 222-12-030 have expired, EXCEPT WHEN the operation is subject to environmental review. If environmental review is required, the review must be completed before the operation may begin.

The landowner is responsible for ensuring proper reforestation and continuing road maintenance of active and inactive roads following completion of a forest practice. Roads will be considered inactive when operations are complete. Inactive road maintenance will be required unless the landowner continues active road maintenance or properly abandons road (WAC 222-24-050).

March 1990

MAP OF OPERATIONS — INSTRUCTIONS

STANDARD MAP SYMBOLS

Use the following standard map symbols on your map as required to describe your operation(s). A scale of 1" = 1000 feet or 1" = 400 feet is recommended when details need to be shown. Clear marginal notes may be helpful. The map must show topography at a scale of 1" = 1000 or 1" = 2000 feet. Other maps require Department approval prior to acceptance of the application/notification. (Department Water Type Maps are available with water type and topography.)

Submit map on paper no larger than 8½ x 14 inches. Contact the Regional office about submitting larger maps. The map should indicate section, township and range. Remember the map is an important part of your application/notification and it should be as complete and accurate as possible. Use black ink and standard symbols. Color does not copy adequately.

- Public Road
- Existing Forest Road
- Proposed Forest Road
- Abandoned Forest Road or (Proposed = P)
- Major Tractor Yarding Roads or (Proposed = P)
- Riparian Leave Tree Area (RLT) Type 4 Water
- Proposed Culvert (Write in diameter of culverts in inches and length in feet)
- Trails (Name Type)
- Roads with Water Bars
- Landing or Cold Deck
- Existing Bridge
- Proposed Bridge (Write in Span Length and Height Above Ordinary High Water)
- Upland Management Area (UMA) (Voluntary leave areas for wildlife)
- Surveyed Corner Found
- Not Found
- Utility (name type), Proposed = P
- Rock Pit, Quarry or Borrow Pit
- Forest Practice Boundary (Also show type of logging or cutting e.g., cc, clearcut; pc, partial cut; cable or skid, etc.)
- Riparian Management Zone Type 1, 2, 3 Water
- Year Round Stream
- Intermittent Stream
- Water Source for Chemical Mixing
- Water Source for Fire Control Other Purposes (Write Intake if pipe or ditch)
- Debris or Spoils Disposal Area (Vegetation or Dirt)
- Chemical Storage Area
- Heliport or Pad
- Threatened or Endangered Species (Name animal. If critical wildlife habitat, name animals.)

Add symbols and definitions as needed for map legend. Plan and profile maps are recommended for extensive or difficult road construction.

REMEMBER, MAPS MUST ACCOMPANY EACH APPLICATION AND NOTIFICATION AND RENEWALS THAT HAVE CHANGES.

Washington State
Department of Transportation

Dixon Sundquist
Secretary of Transportation

RECEIVED
SEP 30 1988
CENTRAL REGION

September 27, 1988

Department of Natural Resources
Central Area Office
P.O. Box 1004 (S-3)
Chehalis, WA 98532

ATTN: Mr. Gene Nielsen
Area Manager

RE: L-7593, Palix River Bridge, SR-101.
Application for Forest Practices Permit.

Dear Mr. Nielsen:

Attached for your review and approval is an application for a Forest Practices Permit for the project referenced above.

We have attached a vicinity map and plan sheets to assist in your review of this application. We have attached copies of the Hydraulic Project Approval and the Shoreline Management Permit to demonstrate compliance with applicable State and local laws.

If you have any questions or need more information, please feel free to contact Steve Laske, District Environmental Engineer, at (SCAN)476-6338.

Very truly yours,

KEITH E. ANOLA, P.E.
Acting District Administrator

By: ED J. BLODGETT, P.E.
District Plans and Design Engineer

KEA:nms
EJB:SDZ

Attachments

cc: B.L. Chaplin
Records Control

FOREST PRACTICES
APPLICATION/NOTIFICATION

24. The landowner (Washington State Department of Transportation) intends to convert this land to other than commercial timber production.

Proposed use of the land: State highway right of way.

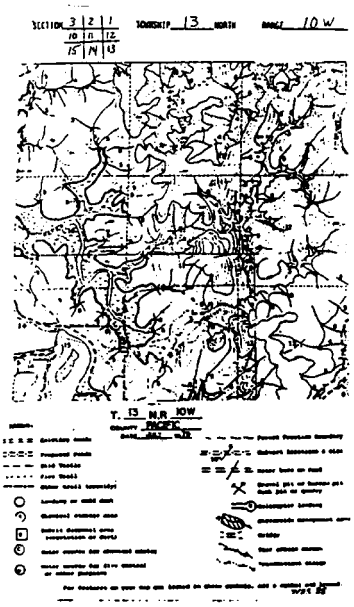
Land clearing method: Approximately 1650 lineal feet of right of way 120 feet wide will be logged using tractors or skidders. The right of way will then be cleared and grubbed with dozers and a hydraulic shovel, and the stumps and slash will be piled and burned.

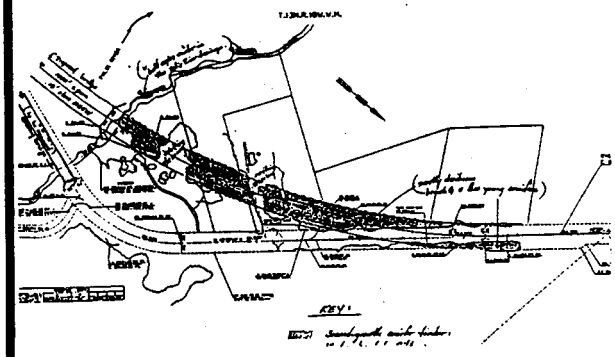
Date land clearing and slash abatement will be completed: September, 1989 (tentative).

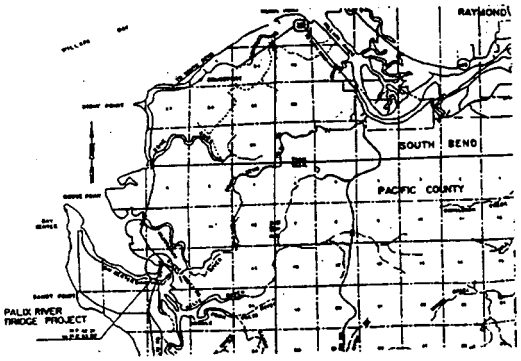
The location of the new highway alignment (SR-101): will be as shown on the attached map and plan sheets. Approximately 4000 feet of SR-101 (including the new bridge) will be reconstructed to State and Federal standards.

A public hearing on the Shorelines Permit for this project was held on July 7, 1988. The permit was approved on August 9, 1988 by the Pacific County Commissioners.

FOREST PRACTICES APPLICATION/NOTIFICATION
PROCESS AND CONDITIONS


SECTION 3 2 1
10 11 12
15 14 13
TOWNSHIP 13 NORTH
RANGE 10 W
T. 13 N.R. 10W
PACIFIC


KEY:


RAYMOND
SOUTH BEND
PACIFIC COUNTY
PALIX RIVER
BRIDGE PROJECT

CHUCK CLARK
Director

STATE OF WASHINGTON
DEPARTMENT OF COMMUNITY DEVELOPMENT
OFFICE OF ARCHAEOLOGY AND HISTORIC PRESERVATION
111 West Twenty-fifth Avenue, GH-11 • Olympia, Washington 98504-5411 • (206) 753-4011

RECEIVED
OCT 20 1988
CENTRAL REGION

October 17, 1988

Dept. of Transportation
P.O. Box 1709
Vancouver, WA 98668

Log Reference: 1180-5-00B-01
Re: Forest Practice Application
[illegible]
Sec. 15 T13N R10W

Dear Sirs:

We have reviewed the materials forwarded to us by the Department of Natural Resources for the above referenced project.

In the event that archaeological or historic resources are discovered during project activities, please notify the Office of Archaeology and Historic Preservation in Olympia, Washington.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(206) 753-4405

ar

cc: [illegible]

Archaeology and Historic Preservation • Community Services • Emergency Management • Energy Policy Services • Land Development and Planning • Local Government Services • Public Works

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RECEIVED
OCT 21 1988
CENTRAL REGION

MEMORANDUM

DATE: October 20, 1988

FROM: Washington Natural Heritage Program
Department of Natural Resources
Mail Stop: EX-13
Olympia, WA 98504

SUBJECT: FP-04-18628

The following features were identified on the TRAX system for this proposed activity:

- ☐ E/T PLANT
- ☐ SPECIAL PLANT
- ☐ NATURAL AREA
- ☒ NATURAL COMMUNITY
- ☐ PLANT COMMUNITY

These significant natural features are not known to be in the immediate vicinity of the proposed project and are unlikely to be directly affected by it.

Sandra S. Norwood
Signature

WASHINGTON NATURAL HERITAGE PROGRAM

WASHINGTON STATE DEPARTMENT OF
Natural Resources

BRIAN BOYLE
Commissioner of Public Lands

OLYMPIA, WA 98504

November 28, 1988

DATE 12/6/88
BLODGETT
MACDALD
MICHELES
KEMBLAKE
BOSSEL
HAGEN
COTTON
PUNETTI
[illegible]
MICHALIEVYK
GRAHAM
SCHOENHOVER
NORWOOD
C.E. [illegible]

Department of Transportation
Attention: Mr. Vic Punetti
District 4
4200 Main Street
Mail Stop: 3-15
Vancouver, WA 98663

Dear Mr. Punetti:

The Department of Natural Resources has no objections for the Department of Transportation removal of the bridge and shear boom over the Palix River, covered in SR-243.

If you have any questions, please contact me at (206) 586-6386.

Sincerely,

Steven Lee Richie
Division of Natural Resources

kv

456 Historic, Cultural, and Archaeological Resources

456.01 Introduction
456.02 Applicable Statutes and Regulations
456.03 Policy Guidance
456.04 MOUs, MOAs, PAs and IAs
456.05 Technical Guidance
456.06 Permits
456.07 Non-Road Project Requirements
456.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

456.01 Introduction

This section includes information needed for projects that will affect historic, cultural, and archaeological resources, including historic highway bridges. Requirements often overlap with those for projects affecting public lands, requiring a Section 4(f) evaluation (Section 411.09 and Section 455). See also Section 459 for related information on visual quality impacts.

Projects that involve impacts to historic or archaeological resources are subject to state and federal regulations. This section summarizes the compliance process and may also be used as guidance by consultants for typical projects where a consultant is employed.

It is WSDOT policy to avoid any adverse impacts, where practical, to cultural resources in planning, constructing, operating, or maintaining the state's transportation system. These resources include prehistoric and historic archaeological sites, historic structures, and traditional cultural properties. If it is not practical to avoid adverse impacts, WSDOT will minimize and mitigate the impacts. This WSDOT policy is implemented by the federal Section 106 review process for all projects whether or not there is a federal nexus.

(1) Summary of Requirements

The major legislative mandates and requirements discussed in this section are:

Historic Properties – The Historic Preservation Act, Section 106, applies to transportation projects affecting a historic property listed on or eligible for listing on the National Register of Historic Places. Special provisions apply to use of historic bridges for highway projects.

Archaeological Resources – The Archaeological Resources Protection Act applies to projects affecting archaeological resources on Tribal or Federal land.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) *Abbreviations and Acronyms*

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

ACHP	Advisory Council on Historic Preservation
CRS	Cultural Resource Specialist
OCD	Washington State Office of Community Development
OAHP	Office of Archaeology and Historic Preservation
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer

(3) *Glossary*

See **Exhibit 456-1** for a glossary of terms related to historic, cultural and archaeological resources.

456.02 Applicable Statutes and Regulations

Projects that involve impacts to historic, cultural, or archaeological resources are subject to the state and federal regulations summarized below. Laws and regulations that apply to historic and archaeological sites on public lands are listed in **Section 455.02**.

(1) *National Environmental Policy Act/ State Environmental Policy Act*

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to historic and cultural resources are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). CEQ rules include sections on urban quality, historical and cultural resources, and the design of the built environment. For details see **Section 410** through **Section 412**, particularly **Section 411.09.**

(2) *Federal*

(a) *Department of Transportation Act, Section 4(f), and Implementing Regulations*

Protection of certain public lands and National Register eligible or listed historic properties was originally mandated in Section 4(f) of the 1966 Department of Transportation Act. This section was repealed in 1983 and later codified without substantive changes as 49 USC 303. However, it is still referred to as Section 4(f) in the FHWA Environmental Procedures (23 CFR 771) and popularly by many WSDOT staff.

Section 4(f) declares it a national policy to preserve, where possible, "the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Highway projects can cross these special lands only if there is no feasible and prudent alternative and the sponsoring agency demonstrates that all possible planning to minimize harm has been accomplished. Visual resource mitigation may be required in certain instances as part of these plans. For details, see **Section 455.02**.

(b) *Historic Preservation Act, Section 106, and Implementing Regulations*

The National Historic Preservation Act of 1966, as amended (16 USC 470f, Section 106), requires federal agencies including FHWA to take into account the effects of a project on properties included in or eligible for inclusion in the National Register of Historic Places. Prior to approving the project, the agency must give the Advisory Council on Historic Preservation a reasonable opportunity to comment. Federal agency heads must, to the maximum extent possible, complete planning and actions necessary to minimize harm to any National Historic Landmark.

This "Section 106 process" is designed to identify potential conflicts between the historic preservation concerns and the needs of federal agency undertakings, and to resolve such conflicts. The agency official must consult with the State Historic Preservation Officer (SHPO/THPO) and other interested persons during the early stages of planning. Properties must be adequately identified and considered. Historic bridges are one type of property likely to be impacted by transportation projects.

The implementing regulations of the Advisory Council on Historic Preservation, Protection of Historic Properties (36 CFR 800), focus on preservation options including avoidance, rehabilitation, modified use, marking, and relocation. New regulations took effect January 11, 2001.

http://www.achp.gov/

Click on Working with Section 106.

Or by direct link:

http://www.achp.gov/work106.html

(c) *Surface Transportation and Uniform Relocation Assistance Act of 1987, Section 123(f)*

In 1987, a new provision in Section 123(f) of this statute created a fund for preservation or mitigation of historic bridges (23 USC 144 (o)). It mandates that states give special consideration to rehabilitating, reusing, and preserving historic bridges. STURAA legislation makes funds which otherwise would have been used for bridge demolition available for actions to preserve a historic bridge or reduce the impact of a project on a historic bridge. For example, if a historic bridge can be retained by relocation, it could be part of a federal-aid proposal. Reasonable costs associated with relocation and preservation of the historic integrity of the bridge are eligible for reimbursement, under 23 USC Section 109(h) and Section 144, with reference to cost of demolition. See **Section 456.05 (3) (f).**

The application of this act is described in an FHWA memorandum, *FHWA Guidance on the Consideration of Historic and Archaeological Resources in the Highway Project Development Process,* (December 23, 1988). This document is online via FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Historical and Archaeological Preservation, then name of document.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch10.htm

(d) DOT Design, Arts, and Architecture Program

To further implement NEPA, Sections 106 and 110 (16 USC 470(f)(h-2)) and Section 4(f), the U.S. Department of Transportation inaugurated its Design, Arts, and Architecture in Transportation Program in 1978. Outlined in DOT Order 5610.1C, revised Attachment 2, the program requires that environmental impact statements document the consideration of design quality in projects which involve public use areas or sensitive locations such as parks or historic districts.

(e) Intermodal Surface Transportation Efficiency Act (ISTEA)

ISTEA (1991) established a Transportation Enhancement Program (23 U.S.C. 101(g)-133(b)), which offers broad opportunities and federal dollars to take unique and creative actions to integrate transportation into communities and the natural environment. Eligible activities include: acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, preservation of abandoned railway corridors (including the conversion and use for pedestrian or bicycle trails), control and removal of outdoor advertising.

Historic bridge preservation and rehabilitation projects qualify for federal funding under several enhancement categories. Funding may be used for specific transportation projects and also for preservation activities. This legislation provides for more flexible design standards in order to preserve historic structures.

(f) TEA-21 – Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) continues the national transportation policy directions established by ISTEA. TEA-21 was enacted June 9, 1998 as Public Law 105-178. TEA-21 authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003. The TEA 21 Restoration Act, enacted July 22, 1998, provided technical corrections to the original law.

ISTEA also mandated creation of a Scenic Byways Program (23 U.S.C. 101 (g)-133(e). FHWA has set criteria for designating scenic byways, based upon their scenic, historic, recreational, cultural, archaeological, and/or natural intrinsic qualities. For details on scenic byways, see FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Scenic Byways.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch14.htm

For detail on transportations enhancements see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Transportation Enhancements.

Or by direct link:

http://www.fhwa.dot.gov/environment/te.htm

(g) ***Archaeological Resources Protection Act***

The Archaeological Resources Protection Act of 1979 (ARPA) applies to archaeological resources on tribal lands and non-tribal lands under federal jurisdiction; for example: the Bureau of Land Management (BLM), National Park Services, or U.S. Army Corps of Engineers (COE). Under this legislation, WSDOT must apply for and obtain a permit when such resources could be impacted by a project (see **Section 456.06**).

(h) ***Other Related Federal Statutes***

For references on the following other federal statutes relating to historic, cultural, and archaeological resources, see the glossary, **Exhibit 456-1**:

- American Indian Religious Freedom Act (1978)
- Antiquities Act (1906)
- Archaeological and Historic Preservation Act (1974)
- Archaeological Resources Protection Act (1979)
- Economic Recovery Tax Act (1981)
- North American Graves Protection and Repatriation Act (NAGPRA) (1990)
- Surface Transportation and Uniform Relocation Assistance Act (STURAA, 1987)
- Tax Reform Act (1986)

(3) ***State***

The Abandoned and Historic Cemeteries Act (RCW 68.04-05) and Indian Graves and Records Act (RCW 2744) protect Indian graves and historic cemeteries, making disturbance of such sites, without a permit, a Class C felony. The Archaeological Sites and Resources Protection Act (RCW 27.53) protects archaeological resources.

456.03 Policy Guidance

(1) ***Transportation Commission***

The Transportation Commission's Policy Catalog contains specific policies on heritage resources in Section 6.3.9, which state that the transportation system's interest in preserving, enhancing, and interpreting heritage resources is to:

- Provide access and directional signing to resources identified by federal, tribal, state and local agencies.
- Assist in preserving and enhancing resources within transportation corridors or part of the travelling experience along a corridor.
- Avoid, minimize, or mitigate impacts of transportation projects on heritage resources.
- Cooperate in promoting heritage resources to aid tourism and achieve economic benefits.
- Commit state funding to leverage other funds to preserve, enhance, and interpret heritage resources within transportation corridors.

The policy and action strategies are online at WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(2) *WSDOT Roadside Classification Plan*

Under this 1996 plan, WSDOT considers natural environment and heritage resources contained within the state highway roadsides as valuable to roadside functions and a conspicuous symbol of the state's character. The plan gives implementation guidance for the design and maintenance of roadside treatments.

(3) *Local Plans and Policies*

City and county comprehensive plans and parks and recreation plans may contain policy and plan guidance on historic resources, sites, and/or structures of local importance. Local governments may also maintain inventories of historic sites. These documents should be considered in preparing the cultural resources section of environmental documents. See *Local Agency Guidelines* (M 36-63) Chapter 24.

http://www.wsdot.wa.gov/

Click on Site Index, then H, then Highways and Local Programs, then LAG.

Or by direct links:

http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM

http://www.wsdot.wa.gov/TA/Operations/LAG/

456.04 MOUs, MOAs, PAs and IAs

(1) *Nationwide Programmatic Agreement on Historic Properties*

This agreement (**Exhibit 456-2**) is intended to reduce the time spent by state transportation agencies in implementing transportation enhancement activities, including historic preservation projects. However, the agreement is not mandatory, and state agencies are authorized to develop their own agreements (see below).

National Programmatic Agreement among the Federal Highway Administration (FHWA), National Conference of State Historic Preservation Officers (SHPOs), and the Advisory Council on Historic Preservation (ACHP) for Implementation of Transportation Enhancement Activities (June 11, 1997).

(2) *State Programmatic Agreement on Historic Properties*

A programmatic agreement (**Exhibit 456-3**) has been developed among the FHWA, WSDOT, Advisory Council of Transportation, and the WSHP Officer regarding implementation of Section 106 requirements for federal-aid highway projects in Washington.

Programmatic Agreement among the Federal Highway Administration, the Washington State Department of Transportation, the Advisory Council on Historic Preservation, and the Washington State Historic Preservation Officer Regarding Implementation of the Federal Aid Highway Program in Washington State.

456.05 Technical Guidance

(1) *Discipline Report, Cultural Resources*

WSDOT's discipline report checklist for cultural resources is attached as **Exhibit 456-4.**

If it is determined that an EIS is required under either NEPA or SEPA, the document should contain a discussion demonstrating that historic and archaeological resources have been identified and evaluated in accordance with the requirements of 36 CFR 800.4 for each alternative under consideration.

The information and level of effort needed to identify and evaluate historic and archaeological resources will vary from project to project as determined by the FHWA after considering existing information, the view of the State Historic Preservation Officer (SHPO) and the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation.*

The information for newly identified historic resources must be sufficient to determine their significance and eligibility for the National Register of Historic Places. The information for archaeological resources must be sufficient to identify whether each warrants preservation in place or whether it is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. Where archaeological resources are not a major factor in the selection of a preferred alternative, the determination of eligibility for the National Register of newly identified archaeological resources may be deferred until after circulation of the draft EIS.

(2) *Section 106 Compliance*

Except where noted, this procedure applies to all projects that may impact a historical or cultural resource, regardless of funding source. Use the procedures below, along with the federal regulations, as guidance for Section 106 compliance. When designed to do so, determinations and agreements made under the Section 106 review process may also satisfy Section 4(f) requirements for historic properties. Refer to **Section 411.09** and **Section 455.05** for further information on Section 4(f) and Section 106 evaluations, particularly FHWA's programmatic Section 4(f) evaluations for historic sites and historic bridges. See also the Section 106 eligibility criteria in **Exhibit 456-5,** the Section 106 regulations flow chart in **Exhibit 456-6.**

(a) *Annual Review*

Each Region holds an annual meeting to review and identify proposed projects and construction programs for the next biennium that might affect historic properties. The meeting is set up by the WSDOT Environmental Services Office (ESO) Cultural Resources Specialist (CRS), and includes personnel from the Region Environmental and Project Development sections, an FHWA representative, an OAHP representative, and Tribal representatives.

In general, the review should include the projects: (1) for which new right of way will be required, (2) for which a stream or other watercourse enters or crosses the right of way, (3) which involve ground disturbance, or (4) where historic properties are known or believed likely to exist. The Region Environmental Manager and the CRS, in consultation with the FHWA, OAHP and Tribal representatives, identify those projects that require cultural resource studies.

(b) *Coordination*

Review the Programmatic Agreement (PA) dated July 18, 2000 that sets forth the process the FHWA/WSDOT /OAHP and the Advisory Council uses to meet their responsibilities for undertakings pursuant to Section 106. Determine whether your

project constitutes an undertaking or meets the exemption stipulations detailed in the PA. If the Region determines the project is included in one of the types of exempted activities listed in the PA, the Region must document this determination in the Environmental Review Summary. The Region must then coordinate with affected federal, state and local agencies, Tribe(s) and interested parties on the project.

If you are representing a local agency, work through your WSDOT Regional Highways and Local Programs Contact. Refer to the Local Agency guidelines Chapter 24 at:

http://www.wsdot.wa.gov/TA/Operations/LAG

Effective June 1, 2001, as afforded under the revised 106 regulations, the FHWA delegated authority to WSDOT to conduct the initiation of consultation letters directly to the Tribes. Under previous regulations, this authority could not be delegated and the initiation of consultation had to come from the lead federal agency.

To begin the Section 106 process for a project, the Region initiates consultation by letter with the appropriate Tribal governments and includes project specific documentation. The Region should include sufficient copies of the documentation to provide two copies for each identified Tribe and a copy for FHWA. The documentation should contain a detailed project description, legal description, vicinity map, photos, ages of any structures present, if known.

If a response from the Tribe(s) is not received within thirty (30) days after the delivery date of the initiation of consultation letter, project development (i.e. compliance procedures proceeding the cultural resources study) will be allowed to move forward. Tribe(s) have 30 days to respond on whether they wish to participate in the proposed project or not. They do have the option, however, of entering consultation at a later date. Consultation with the Tribe(s) is encouraged throughout the project. Therefore, continue to keep them informed of the project, unless they have indicated they have no interest or concur with the proposed project.

The Region or CRS will assume the lead in conducting Section 106 consultation with the Tribal governments. FHWA is available to participate with a Tribe to the extent necessary, to ensure the Tribe's meaningful participation in the process.

The agency must coordinate with the SHPO/THPO and Tribe(s) to determine the Area of Potential Effects (APE) to historic properties within the project. Tribes must be given the opportunity to concur on the APE prior to survey. Meetings held on-site with the Tribes and consultant are an effective way to determine the APE, get Tribal involvement, thereby expedite the Section 106 process. It is extremely important to make a good faith effort to involve the Tribal parties early in the process

(c) Cultural Resources Study

After the annual review and early in the project development process, the Region should hire a cultural resources consultant to perform a cultural resources study. The Environmental Services Office (ESO) CRS has on-call consultant agreements that can be used to complete these duties. The survey must be conducted by a

professional (consultant or in-house staff) who meets the Secretary of the Interior's Standards. The Region provides the consultant with a full description of the proposed project and its limits – staked on the ground and mapped, if possible – so that the survey can be conducted accurately. A background research through the records stored at OAHP is required.

The consultant prepares a summary report of the findings which:

- Includes a description of the proposed highway project.
- Specifies types of study tasks performed (e.g., archival research, ground survey methods) and the date of the survey.
- Documents the kinds of historic properties looked for and the effect the project might have on them.
- Identifies the project location, both in writing and illustrated on a map, showing the boundaries of the area surveyed.
- Describes the historic/ethnographic/ prehistoric background of the area, as appropriate.
- Describes the geographic setting, including topography, land use, vegetation, ground surface conditions, and soil types.
- Gives results of the survey.
- Identifies any previously recorded historic properties in the vicinity that are listed in the National Register and other inventories.
- Identifies any historic properties found as a result of the survey and preferably includes a map or sketch of the locations of such resources. The consultant completes Washington State Site Inventory forms (available through the Office of Archaeological and Historic Preservation) for previously unrecorded archaeological sites and Historic Property Inventory Forms for historic structures that are identified during the survey and that are believed to be eligible for the National Register or other inventories. Complete site addendum forms for previously identified and recorded sites.
- Provides an opinion on the eligibility for the National Register of any historic properties potentially affected by the project, with a description of the properties and their specific locations and whether there is a need for further testing or evaluation to determine eligibility or evaluation.
- Recommends possible avoidance treatment, mitigation and measures to reduce adverse effects to potentially eligible historic properties.
- Provides bibliographic references.

The report should be prepared even if no historic properties are found during the survey, and should document places examined that did not contain historic properties. For additional information, refer to National Register Bulletin No. 24: *Guidelines for Local Surveys: A Basis for Preservation Planning*, available through the CRS.

Once the survey is completed, the consultant submits the cultural resources survey report (including background research) to the Region with copies for the SHPO, all

relevant tribes, and any other interested parties. In some cases, additional surveys or other field testing may be needed to identify and evaluate potential historic properties.

The CRS reviews the survey report and provides copies to the SHPO/THPO, and Indian tribes, and other interested parties as appropriate, to review and comment within thirty (30) days. SHPO coordination is required for federal aid projects, but it is done as a matter of course for all projects.

(d) National Register Eligibility

The CRS evaluates identified historic properties using the criteria of eligibility set forth in the Section 106 regulations. Depending upon the evaluation and the extent of the project's impacts, as well as any comments received, the CRS prepares forms for determining possible eligibility of any historic properties identified during the survey. If no historic properties are already listed or determined eligible for listing in the National Register, and the SHPO/THPO concurs (SHPO/THPO review is 30 days), the Section 106 review process concludes (unless unexpected cultural materials are located during project activities).

Section 106 gives equal treatment to historic properties that have already been included in the Register and those that are eligible for inclusion.

Criteria for determining eligibility for listing in the National Register of Historic Places are given in **Exhibit 456-5**. For state-funded projects, the evaluation must include historic properties listed in or proposed for inclusion in the national, state (Washington Heritage Register), or local inventories of historic sites.

(e) Determination of Effect

If historic properties that are eligible for or already listed in the National Register are found in the project area, the CRS consults with the SHPO/THPO and the Region to determine what effect the project will have on the properties. The effect evaluation is based on the criteria of effect and adverse effect set forth in the Section 106 regulations. As part of this consultation, the CRS assists in determination of effect.

There are three possible effect determinations set forth in the Section 106 regulations (36 CFR 800.4 and 800.5):

(1) No historic properties affected

In this case, the CRS determines that either there are no historic properties present or there are historic properties present but the undertaking will have no effect upon them.

If there is no effect on historic properties, the CRS coordinates with the SHPO/THPO and provides documentation that supports the finding of no effect. If the SHPO/THPO concurs, the Section 106 review process is concluded (unless unexpected cultural materials are located during project activities. If this happens, halt work and contact the CRS/SHPO/THPO immediately).

(2) No Historic Properties are Adversely Affected

If the project will affect one or more historic properties, but the effect is not considered adverse, the CRS obtains the SHPO/THPO's concurrence with the finding of no adverse effect and notifies the FHWA (36 CFR 800.5(c)).

For state-funded projects, the CRS notifies the SHPO.

(3) Historic Properties are Adversely Affected

If there is an adverse effect on one or more historic properties, the CRS consults with the Region, the FHWA, the SHPO/THPO, interested persons, and the Council to resolve adverse effects by means of a Memorandum of Agreement (36 CFR 800.6).

For state-funded projects, the CRS consults with the Region, the OAHP, and interested parties on means to resolve adverse effects.

(f) Memorandum of Agreement

If an adverse effect will occur, a Memorandum of Agreement will be developed to resolve adverse effects. In the case of an archaeological site, mitigation of adverse effects usually involves excavation of the site and preparation and publication of a report of excavation. In the case of a standing structure, mitigation measures range from simple documentation to moving the structure. Other measures may be appropriate and would be developed, case-by-case, in consultation with the SHPO/THPO. The Region may initiate a request to the CRS for supplemental consultant work that will require additional funds and an extension of the consultant's schedule and scope of work.

WSDOT (Regional Environmental Manager and CRS), FHWA, SHPO/THPO, interested persons, and the Advisory Council on Historic Preservation confer to find ways to reduce/minimize adverse effects. Consultation will result in a Memorandum of Agreement (MOA) which outlines measures WSDOT will take to reduce, avoid, or mitigate the adverse effect. In some cases, the consulting parties may agree that no such measures are feasible, but that the adverse effects must be accepted in the public interest. The CRS, in consultation with the SHPO/THPO, the Council, interested parties, and the Region, will prepare the MOA. The Regional Environmental Program Manager signs the MOA for WSDOT.

The Advisory Council on Historic Preservation may either help develop the MOA by direct participation, or WSDOT, via the FHWA, can obtain Council comment by submitting the MOA to the Council for review and acceptance. The Council can accept the MOA, request changes, or opt to issue written comments.

If an MOA is executed, WSDOT proceeds with the project under the terms of the MOA. The executed MOA becomes part of the project's environmental documentation. In the absence of an MOA, the WSDOT, via the FHWA, must take into account the Council's written comments in deciding whether and how to proceed.

For state-funded projects, WSDOT should consider SHPO's comments in deciding how to proceed.

(3) Historic Bridges

Section 106 requirements, described in the previous section, also apply to many Washington State highway bridges that are significant for their historical, architectural, or engineering features. For additional Section 106 guidance see **Section 411.09 (2)**, eligibility criteria in **Exhibit 456-5,** and the regulations flow chart in **Exhibit 456-6.**

For projects that may involve structural changes, removal and/or destruction of a historic highway bridge, it is also necessary to complete a Section 4(f) evaluation. When designed

to do so, determinations and agreements made under the Section 106 review process can also satisfy Section 4(f) requirements. For guidance on Section 4(f) evaluations, see **Section 411.09 (1)**, **Section 455.05 (1)**, and **Section 456.05 (4)**, particularly the references to FHWA's Programmatic Section 4(f) Evaluation on Historic Bridges.

Guidance is given in this section for each of the following alternatives: (1) preservation in place through repair, rehabilitation, and/or adaptive reuse; (2) sale or donation to a responsible party; and (3) documentation and demolition. FHWA encourages preservation under the Intermodal Surface Transportation Efficiency Act (ISTEA) and Surface Transportation and Uniform Relocation Assistance Act (STURRA), which make federal funds are available to states to rehabilitate and otherwise preserve bridges of historical and engineering significance (see **Section 456.02**).

See **Exhibit 456-7** for additional, detailed WSDOT guidance on rehabilitation of historic bridges. See **Exhibit 456-8** for the highway bridges currently listed in the National Register, eligible for listing, or nominated for listing; note that Category II bridges are covered under the July 18, 2000 Programmatic Agreement. **Exhibit 456-9** gives examples of historic bridge rehabilitation projects. **Exhibit 456-10** is a sample memorandum of agreement, required when a transportation project will affect a historic bridge.

(a) Applicability of Procedures

This guidance applies to historic bridges that are either listed in or eligible for listing in the National Register of Historic Places, or are listed as "Category II" bridges, and also are part of either a federal aid highway system or a state or local highway system. WSDOT policy is to follow these principles and guidelines even when no federal funds, licenses, or other assistance is required.

(b) Historic Bridge Inventory

Exhibit 456-8 is the current inventory of publicly-owned highway bridges listed in, nominated to, or eligible for the National Register, as well as county and state Category II bridges. Almost all bridges in the inventory are over 50 feet long, since bridges shorter than that rarely have engineering or historical significance.

Category II bridges are bridges built before 1941 that are of local historic or engineering significance but not eligible for or listed in the National Register. Before a Category II bridge is replaced, the Region arranges for large-format photographs to be taken of the structure. For guidance, see the Programmatic Agreement in **Exhibit 456-3** under Stipulation 4 on Historic Bridges. If commemorative plaques or markers are associated with the bridge, the Region usually arranges to donate these to the county or local historic preservation association or museum.

The Cultural Resources Specialist (CRS) in WSDOT Environmental Services Office (ESO) maintains the Historic Bridge Inventory for the state. The historic bridge inventory is updated regularly to facilitate long-range planning. To date, bridges built between 1941 and 1960 have been inventoried. The 2005 update will inventory bridges built from 1961 through 1965, and so on in five-year intervals.

In 1980, the State Office of Archaeology and Historic Preservation (OAHP), in cooperation with WSDOT and the Historic American Engineering Record (HAER) of the Department of the Interior, conducted a systematic inventory of historic bridges built prior to 1941 throughout Washington State. The inventory was authorized by the Surface Transportation Act of 1978 (Public Law 95-599) and

funded by WSDOT and OAHP. In 1990, WSDOT updated the initial inventory to include bridges built between 1941-50 and in 2002 added bridges built between 1951-60.

(c) Assessing, Selecting, and Documenting Alternatives

Many historic bridges have become or are becoming structurally deficient, physically deteriorated, or functionally obsolete. In order to maintain the transportation network, these bridges often must be replaced with new bridges or rehabilitated to carry out their intended function safely. Sometimes it is feasible to build a replacement bridge on a new alignment, thereby bypassing the old bridge. However, when replacement bridges must be built on an existing alignment, the old bridge is either demolished or moved to another location. Some bridges can be rehabilitated to meet modern structural standards and traffic requirements, while maintaining their historic character. To choose among these alternatives, the process outlined below is recommended. For further guidance on project scoping and preparation of environmental documentation, see **Section 320**, **Sections 410-412**, and **Section 455**. For assistance, contact the Region Environmental Office or Environmental Services Office.

(1) Preliminary Assessment

Historic bridge rehabilitation and replacement projects can be complex and sometimes controversial. A preliminary planning meeting among representatives from the offices named below may facilitate the planning process.

- WSDOT Region Local Programs Office (if local agency project), Region Design Office, and Region Environmental Office, Bridge and Structures Office, or Environmental Services Office.
- State Office of Archaeology and Historic Preservation.
- FHWA (when the project involves federal funds).
- Tribal Historic Preservation Officer or other Tribal representatives

The meeting should occur after the need for the project and a proposed budget are identified. The purpose of the meeting is to discuss appropriate alternatives for the proposed project and eliminate alternatives that are not prudent or feasible.

(2) Review of Alternatives

A management review of possible alternatives should be held to determine whether sufficient information is available to reject some alternatives. If an alternative is selected that does not adversely impact historic features of the bridge, Section 4(f) procedures may not apply.

Alternatives with adverse impacts to the historic bridge:

- The existing bridge is demolished and replaced with a new bridge at the same location.
- Rehabilitation to the existing bridge impairs its historical integrity, as determined by procedures implementing National Historic Preservation Act. (See **Exhibit 456-5** for Section 106 Criteria.)

Alternatives that avoid adverse impacts to the historic bridge:

- Do nothing.
- Build a new structure at a different location without affecting the historic integrity of the old bridge, as determined by procedures implementing NHPA.
- Rehabilitate the historic bridge without affecting the historic integrity of the structure, as determined by procedures implementing NHPA.

(3) Determination of Effect

If historic bridges that are eligible for or already listed in the National Register are found in the project area, the CRS consults with the SHPO/THPO and the Region to determine what effect the project will have.

Known historic properties. Conduct a cultural resource analysis of alternatives to determine the effect of the project. (See **Section 456.05 (2)** for analysis guidelines and **Exhibit 456-5** for Section 106 Criteria). For historic bridges, the project manager, with the assistance of the Cultural Resources Specialist (CRS), assesses potential effects to the bridge according to the criteria of adverse effect.

Historic structure discovered during study. The CRS evaluates the historic structure using the criteria of eligibility and effect, and consults with the SHPO/THPO and the Region to consider ways to avoid or mitigate adverse effects. The Regional Environmental Program Manager or CRS makes a determination of effect and requests concurrence from SHPO/THPO. If the effect is adverse and there is no prudent or feasible alternative, the CRS, FHWA, and SHPO/THPO develop a Memorandum of Agreement (MOA) to identify appropriate measures to mitigate adverse effects.

Determination of no adverse effect. If it is determined and documented that project alternatives do not adversely affect the historic integrity of the bridge, Section 4(f) procedures may not apply.

(4) Environmental Documentation – NEPA, 4(f), 106

When a bridge that is listed or eligible for inclusion in the National Register of Historic Places must be demolished, or when rehabilitation will impair its historic integrity, appropriate environmental documentation must be prepared. This may include an Environmental Impact Statement (EIS) or Environmental Assessment (EA), and Section 4(f) and Section 106 report (see **Section 411.09**, **Section 455.05**, **and Section 456.05 (4)**).

A MOA specifying measures to avoid or reduce the adverse effects of the project on the historic bridge, may be executed as a part of the environmental process. The MOA becomes part of the environmental document. (See **Exhibit 456-10** for a sample MOA.)

If the decision is made to select an alternative that has no effect on the historic bridge, document the conclusion in the Final Environmental Impact Statement.

(d) Preservation Alternatives

If a bridge remains in place, it may be preserved in three ways: by rehabilitation allowing continued highway use, by conversion to an alternate use, or by continued deterioration (either of the latter two options may constitute an adverse effect under 36 CFR FR 800.5).

(1) Rehabilitation

A bridge may be rehabilitated to maintain its historic features. Consider other alternatives only when on-site rehabilitation is neither feasible nor prudent. See **Exhibit 456-7** for detailed rehabilitation guidelines on structural upgrading, geometric modifications, and materials repair and maintenance. See **Exhibit 456-9** for examples of historic bridge rehabilitation projects, such as the Grays River Covered Bridge in Wahkiakum County, which was built in 1905 and rehabilitated in 1989.

The general rehabilitation guidelines below are summarized from *The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* and TRB's *Guidelines for Rehabilitation of Historic Bridges* (available through WSDOT ESO's Cultural Resources Specialist).

- Make every reasonable effort to continue the historic bridge in useful transportation service. Give primary consideration to on-site rehabilitation.
- Respect the original historically significant qualities of a bridge, its site, and its environment. Avoid removing, concealing, or altering any historic material when possible. Avoid proposed alterations that have no historical basis and that seek to create a false historical appearance. Wherever possible, make additions or alterations in such a manner that their subsequent removal will not impair the essential form and integrity of the bridge.
- Changes that may have taken place in the course of time may be evidence of the history and development of a bridge, its site, and its environment. Recognize and respect that these changes may have acquired significance in their own right.
- Repair rather than replace deteriorated structural members and architectural details. If replacement is necessary, match new materials to original materials being replaced in design, color, texture, and other visual qualities. Use surface cleaning techniques that will not damage historic materials.
- If rehabilitation is not possible, consider a nonvehicular (intermodal) transportation use of the structure at its original site or at a new location. This may involve marketing the structure to a responsible party for such an adaptive use. The marketing process is required in cases where demolition is proposed as an alternative. (See "Marketing" later in this section.)
- If the existing structure cannot be rehabilitated and reused, then it must be documented and replaced. Consider contemporary designs for new

bridges located in historic Regions and contemporary designs for proposed additions and alterations to historic bridges: these designs shall be compatible with the size, scale, visual quality, and character of the historic bridges, Region, and environment.

(2) Conversion to Alternative Use

Conversion to an alternate use, preferably a transportation use, is the second preservation option. Bridges that continue to serve transportation purposes on less demanding public roads may continue to be eligible for federal highway funding. Historic bridges also can be converted to a nonvehicular use such as pedestrian walkway or bikeway, or nontransportation uses such as craft centers, museums, restaurants, or housing.

(e) Marketing (Sale or Donation)

STURAA legislation requires that, prior to demolition, historic bridges must be offered for sale or donation to a state or local government agency or responsible private party interested in preserving the bridge for adaptive uses or transportation purposes. To the extent permitted by law and department policy, WSDOT will cooperate with other agencies and private entities that seek to adapt a bridge to non-transportation uses, but it will not actively pursue non-transportation alternatives. Refer to WSDOT Engineering Publication 2601, *Right of Way*, for further guidance pertaining to transfers or marketing of surplus historic bridges.

(1) Marketing Plan

Where demolition is being considered as the preferred alternative, prepare a marketing plan (in coordination with Region Real Estate Services, SHPO/THPO, FHWA, and Council). The plan should describe the availability of the bridge for other uses including nonpublic or nonmotorized vehicular transportation. The marketing plan shall:

1. Be prepared by the current owner.
2. Contain a summary statement of the historic significance of the structure, existing structural conditions and needed repairs, estimated costs for rehabilitation alternatives, potential traffic or nontraffic uses and what preservation work is needed, structural dimensions, maintenance requirements, and location map.
3. Describe public funding available to the recipient for relocation and/or rehabilitation work. Reasonable rehabilitation and/or relocation costs, when the bridge is to serve other than motorized public traffic, are reimbursable up to the estimated cost of demolition. Any additional cost will be the responsibility of the recipient. In other words, the FHWA and the current owner of the structure are responsible to provide funds up to the estimated cost of demolition, rehabilitation, and/or relocation. If the recipient proposes to relocate the structure for motorized use and would be eligible for federal aid, reimbursement can be made without reference to demolition.
4. State that recipients must agree to:
   - Provide a comprehensive plan for the preservation and future use of the structure, including any desired modification and estimated cost of rehabilitation.

- Maintain the structure and the features that give it historic significance according to prescribed standards.
- Assume all future legal and financial responsibility for the structure, including "hold harmless" agreements to the current owner, WSDOT, and FHWA, and the posting of a performance bond.
- Provide proof of their ability to assume the financial and administrative responsibilities of bridge ownership throughout its existence.

5. Note that any bridge preserved with federal funding shall thereafter not be eligible for any other highway funds pursuant to Public Law 100-17, Section 123(f) (Historic Bridges).
6. Provide for advertising the availability of the bridge to interested parties for at least 60 days prior to decision to remove or demolish the structure. Within the time period, potential recipients should forward proposals on the structure to the bridge owners. Longer response periods may be considered for more complex projects. Shorter periods may be possible with approval by SHPO/THPO, WSDOT, and FHWA. Advertising guidelines are:
   - Develop advertisements to be placed in newspapers and other media. They should include the structure location, type, dimensions, existing condition and needed repairs, and a date by which interested parties should present their proposed plan. All ads should state the estimated cost of demolition, the availability of public funds, potential options for rehabilitation or relocation, and maintenance responsibilities.
   - Submit the ad copy to WSDOT/FHWA for approval prior to publication in order to ensure compliance with requirements.
   - Place the ads in newspapers that cover a regional area. Transportation or historic publications, trade or planning journals, and electronic media should also be considered. Advertising for a minimum of three newspaper circulations, including one Sunday, and also in the area legal paper, is recommended. Send letters soliciting interest to state and local agencies, historical societies, and individuals who have expressed interest. Identify the length of time during which formal proposals will be accepted.
   - In the event that no acceptable recipient is found by a good-faith effort and within the established response period, the marketing requirements will be considered satisfied.

(2) Memorandum of Agreement

Incorporate provisions of the marketing plan in a proposed MOA (see sample in **Exhibit 456-10**). After obtaining approval from OSC Real Estate Services, SHPO/THPO, and the Attorney General's Office, submit the MOA to FHWA for approval and forwarding to the Council. The marketing effort will normally be concurrent with preparation of the Final EIS or EA and 4(f) evaluation and should be completed at the same time as the beginning of the Final EIS. The approved MOA and results of the marketing effort are included in the revised EA and Finding of No Significant Impact (FONSI), or the Record of Decision (ROD).

(g) Documentation and Demolition

Demolition should be considered the last resort. However, when it is required, the adverse effect can be mitigated through procedures (such as photos, archives, writings, models, etc.) agreed upon in consultation with SHPO and Advisory Council on Historic Preservation. See **Exhibit 456-10**.

The level of required documentation will be determined in concurrence with guidance from HAER. Documentation must be complete prior to the beginning of construction. As the bridge owner, WSDOT is responsible for providing the documentation material. That material mainly consists of the photographs, historic documentation, and measured drawings requested by SHPO/THPO.

(4) Section 4(f) Evaluations

The Section 4(f) evaluation is a separate analysis of impacts to covered resources that could result from one or more alternatives being considered for a transportation project. For some historic and archaeological properties, including historic bridges, a Section 4(f) evaluation may be required in addition to a Section 106 evaluation. For such projects, note that a Section 106 conclusion of "no adverse impact" does not necessarily waive the need to prepare a Section 4(f) document. For guidance on Section 4(f) evaluations, see **Section 411.09 (1)** and **Section 455.05**.

For certain projects having minor impact on historic properties or requiring use of historic bridges, Section 4(f) requirements may be met using FHWA's nationwide or programmatic evaluation and approval documents:

- ***Historic Sites*** – Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Historic Sites (December 23, 1986).
- ***Historic Bridges*** – Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges (July 5, 1983).

These documents are available via FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Section 4(f), then the title of document.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm

(5) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental and Section 4(f) documents. A draft EIS, if required, should include a discussion demonstrating that historic and archaeological resources have been identified and evaluated in accordance with the requirements of 36 CFR 800.4 for each alternative under consideration. Section 4(f) also applies to any archaeological site in or eligible for the National Register and which warrants preservation in place (see **Section 455.05**).

For guidance on format and content of Section 4(f) evaluations for historic and archaeological sites, see the Technical Advisory on FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/ techadvs/t664008a.htm

(6) ***Office of Community Development***

The Washington State Office of Community Development (OCD) has an Archaeology and Cultural Preservation Program which offers additional resource information. See the OCD web site:

http://www.ocd.wa.gov/

Click on Our Programs, then Office of Archaeology and Historic Preservation.

Or by direct link:

http://www.ocd.wa.gov/info/lgd/oahp/

(7) ***Procedures for Discovery During Construction***

Use the General Special Provisions in the contracts for highway construction projects pertaining to Archaeological and Historical Objects, and Archaeological and Paleontological Salvage for treatment of cultural resources that may be encountered during construction. See **Exhibit 456-11**.

456.06 Permits

(1) ***Archaeological Resources Protection Act Permit***

This permit is needed for actions on both federal and tribal lands. For guidance on obtaining a permit, see **Exhibit 456-12** and **Exhibit 456-13.**

(2) ***Historic and Cultural Resources***

No specific permits are required; however, close agency coordination is required on studies, documentation of impacts, possible mitigation, and project construction. Excavation permits from State Architect/SHPO apply only to projects without a federal nexus; for cultural resources, WSDOT practice is to consider all projects as if they were federally funded.

456.07 Non-Road Project Requirements

Ferry, rail, airport, or non-motorized transport systems are generally subject to the same policies, procedures, or permits that apply to road systems.

456.08 Exhibits

Exhibit 456-1 – Glossary of Terms Related to Historic, Cultural, and Archaeological Resources.

Exhibit 456-2 – National Programmatic Agreement among the Federal Highway Administration (FHWA), National Conference of State Historic Preservation Officers (SHPOs), and the Advisory Council on Historic Preservation (ACHP) for Implementation of Transportation Enhancement Activities (June 11, 1997).

Exhibit 456-3 – Programmatic Agreement among the FHWA, WSDOT, Advisory Council of Transportation, and the SHPO Regarding Historic Registers and Implementing Section 106 of the National Historic Preservation Act (16 USC 470f).

Exhibit 456-4 – Discipline Report Checklist, Cultural Resources.

Exhibit 456-5 **–** Section 106 Criteria for Eligibility for National Register of Historic Places.

Exhibit 456-6 **–** Section 106 Regulations Flow Chart.

Exhibit 456-7 **–** WSDOT Historic Bridge Rehabilitation Guidelines.

Exhibit 456-8 **–** Washington State Historic Highway Bridges.

Exhibit 456-9 **–** Examples of Historic Bridge Rehabilitation Projects.

Exhibit 456-10 **–** Sample Memorandum of Agreement on Projects Affecting Historic Bridges.

Exhibit 456-11 **–** Contract General Special Provisions on Discovery of Cultural Resources during Construction.

Exhibit 456-12 **–** Archaeological Resources Protection Act – Permit Process on Federal Lands (Non-Tribal).

Exhibit 456-13 **–** Archaeological Resources Protection Act – Permit Process on Tribal land

Glossary – Historic, Cultural and Archaeological Resources

Adverse Effect – Occurs when an effect on an historic property diminishes the integrity of the property's aspects of integrity (see below). See also Determination of Effect. [Criteria of adverse Effect: 36 CFR 800.9(b).]

Advisory Council on Historic Preservation – An independent federal agency, established under the NHPA, which: (1) advises the President and Congress on matters of historic preservation; (2) carries out Section 106 reviews; and 3) provides technical assistance in historic preservation actions.

Affect (Verb) – Action that may change the character of an historic property.

American Indian Religious Freedom Act – Requires federal agencies and their representatives to consult with native groups (American Indians, Eskimos, Aleuts, and Native Hawaiians) "to protect and preserve Native American religious cultural rights and practices." [PL 95-341, 1978; 92 Stat. 469.]

Antiquities Act – Protects archaeological resources on federal lands, and established a permitting system for legal removal of materials. Most provisions have been superseded by the Archaeological Resources Protection Act; thus "antiquities" permits have become "ARPA" permits. [Antiquities Act: 16 USC 431, 1906.]

Archaeological and Historic Preservation Act – Addresses mitigation for cultural resources to be lost due to federal actions. Most often invoked after decisions for a federal project are reached through the Section 106 process, that is in "late discover" situations whereby the Secretary of the Interior may prescribe mitigative measures without consulting the Advisory Council. The Act also authorizes federal agencies to spend up to 1% on cultural resources work of the total cost of a construction project. [16 USC 469; PL 93-291, 1974.]

Archaeological Resources Protection Act – Establishes permitting process for archaeological excavation on *federal* land. Required "ARPA" permit applicants to demonstrate: (1) qualifications; (2) activity to be done to further archaeological knowledge; (3) curation plan for recovered artifacts. Requires federal land manager to notify Indian tribes of possible harm to sites having religious or cultural importance. Prohibits unauthorized excavation, removal, or defacement of archaeological resources, and sets civil penalties. [16 USC 470; PL 96-95 1979; Implementing regulations: 43 CFR 3.]

Area of Potential Effects (APE) – The geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist. APE should be defined before historic properties are identified. APE is not defined on the basis of land ownership, and should be determined based upon potential direct *and* indirect effects. [36 CFR 800.2(c).]

Aspects of Integrity – The seven (7) physical features of historic properties as they relate to properties' significance: location, design, setting, materials, workmanship, feeling, or association. See Integrity below, and National Register *Bulletin* 15, pp. 44-45.

Building – A construction created to shelter any form of human activity, including animal husbandry.

Certified Historic Structure – A depreciable building or structure which is either listed in the National Register or located in a National Register Historic District, or in a state- or local-designated historic district, and certified by the Secretary of the Interior as being of historical significance to (i.e., a contributing element in) the district. [36 CFR 67.2.]

Certified Local Governments (CLGs) – Local government historic preservation entities participating in the national historic preservation program, certified by the SHPO. Existence may afford property owners in the CLG jurisdiction the opportunity to participate in local (state, county, etc.) preservation incentives (e.g., tax incentives).

Certified Rehabilitation – On a certified historic property (see definition), work that is certified by the Secretary of the Interior as being consistent with the historic character of the property and, where applicable, with the district in which it is located. [36 CFR 67.2.]

Contributing Element (or Resource) – A building, site, structure, or object that adds to the historic architectural qualities, historic associations, or archaeological values for which a property is significant because: (a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period; or (b) it independently meets the National Register criteria. See National Register *Bulletin 16A*, p. 16.

Council (Advisory Council on Historic Preservation) – An independent federal agency that administers the Section 106 review process.

Criteria for Evaluation (National Register Eligibility Criteria) – Standards used for determining the eligibility of properties for inclusion in the National Register of Historic Places. [36 CFR 60.4(a-d)]. See National Register *Bulletin* 15, pp. 11-24.

Criteria Considerations – Additional standards applying to certain kinds of historic properties. [36 CFR 60.4(a-g). See National Register *Bulletin* 15, pp. 24-43.

Cultural Landscape – Also known as Rural Historic Landscape or Historic Landscape. A geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features. See National Register Bulletin 30 and C.A. Birnbaum and C.C. Peters, *The Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes*, NPS, GPO, Washington, D.C., 1996.

Cultural Patrimony – Regarding cultural items, defined in NAGPRA as material remains of "historical, traditional, or cultural importance to the Native American group or culture itself."

Cultural Resource – A place, object, or event that is important to a community or region's history, traditions, beliefs, customs, or social institutions.

Cultural Resource Specialist (CRS) – A WSDOT employee in the Environmental Services Office who advises department staff on policies relating to items of historic/archaeology significance that may be affected by a project and who conducts regulatory compliance procedures.

Cultural Resources Management – The body of laws and regulations pertaining to historic, archaeological, and cultural properties, and the manner in which those directives are implemented.

Data Recovery Plan – A plan developed in consultation with the SHPO and interested parties for conducting research, gathering information, and documenting an historic property that will be adversely affected by a WSDOT project.

Department of Transportation Act – Section 4(f) (see definition) relates to historic properties. [49 USC 303, 1966, recodified 1983.]

Designed Historic Landscape – A landscape that has significance as a design or work of art; that was consciously designed and laid out to a design principle or recognized style or tradition; that has an historical association with a significant person, trend, or event in landscape architecture; or that has a significant relationship to the theory or practice of landscape architecture. See National Register *Bulletin 18*.

Determination of Effect – A finding, by a federal agency in consultation with SHPO, pursuant to compliance with Section 106 (see definition) that a proposed undertaking will have an effect on historic properties. If an effect is identified, the Criteria of Adverse Effect is applied to determine potential Adverse Effect (see definition). Other possibilities are determinations of No Effects and No Adverse Effect.

Determination of Eligibility – Formal recognition (by the SHPO, state Advisory Council, the Keeper of the National Register, or an agency) of a property's eligibility for inclusion, but not actual listing, in the National Register of Historic Places. Determinations of Eligibility may be prepared on National Register Registration Forms (NPS 10-900).

District – A significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. May be an archaeological or historic district, or may contain elements of both.

Easement (Preservation Easement) – An agreement between a private property owner and a public body obligating the owner and future owners to preserve historic features of the property. The owner surrenders opportunities for development potential at "fair market value" for income, estate, and gift tax benefits of equal value.

Economic Recovery Tax Act of 1981 (ERTA) – Establishes the Investment Tax Credit (ITC) program for rehabilitation of older buildings, including certified historic buildings (see definition). [PL 97-34] Amended by the Tax Reform Act of 1986 (see definition).

Effect (Noun) – Occurs when an undertaking may alter characteristics that qualify a property for inclusion in the National Register. [Criteria of Effect: 36 CFR 800.9(a).]

Eligible – A property is eligible for inclusion in the National Register of Historic Places if it meets the National Register Criteria (see Criteria for Evaluation).

Environmental Impact Statement (EIS) – Required by NEPA and SEPA (see definitions), to include identification of known cultural resources in a federal or Washington State project area and disclosure of potential impacts.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations – Requires federal agencies to identify and address "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Section 6-606 requires consultation with federally recognized tribes to "coordinate steps" to pursue compliance with this executive order. [42 USC 4321.]

Executive Order 13006 – Requires federal government to "utilize and maintain, wherever operationally appropriate and economically prudent, historic properties and districts, especially those located in our central busin4ess areas … when locating Federal facilities, Federal agencies shall give first consideration to historic properties within historic districts…. Any rehabilitation or construction that is undertaken pursuant to this order must be architecturally compatible with the character of the surrounding historic district or properties." (1996)

Executive Order 13007 – Requires federal agencies, "to the extent practicable, [to] (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites." (1996)

FONSI – Finding of No Significant Impact.

Growth Management Act (GMA) (Washington) – Requires counties and cities to "identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance." (1990)

HABS/HAER (Historic American Building Survey/Historic American Engineering Record) – The official documentary collections of the National Parks service, the Library of Congress, and the American Institute of Architects preserving the heritage of historic structures through graphic and written records. HABS/HAER documentation may be assembled and used to mitigate adverse effects to historic structures that meet the National Register eligibility criteria; for example, when an historic bridge that cannot be rehabilitated is scheduled to be replaced, photos with records, etc., can be collected and archived as a way to preserve it.

Historic American Building Survey (HABS) and Historic American Engineering Record (HAER) – The historical architecture and engineering programs of the National Park Service that promote preservation through documentation in the Library of Congress of significant structures. HABS/HAER documentation can be sponsored by NPA, individuals, or organizations, but often is completed by agencies pursuant to Sections 106 or 110(b) of the National Historic Preservation Act. Those HABS/HAER mitigation projects record properties to be demolished or substantially altered as a result of agency action or assisted action.

Historic Context – A body of information about historic properties organized by theme, place, and time. It is the organization of information about prehistory and history according to the states of development occurring at various times and places.

Historic Preservation – Identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance and reconstruction, or any combination of the foregoing activities relating to historic properties. [16 USC 470w(8)]

Historic Property – A property or cultural resource that is listed in or eligible for listing in the National Register and, under SEPA, in state and local historic registers. Historic properties may be buildings or other structures, objects, sites, districts, archaeological resources, and traditional cultural properties (landscapes).

Indian Graves and Records Act (RCW 27.44), Archaeological Excavation and Removal Permit (WAC 25-48), Abandoned and Historic Cemeteries Act (RCW 68.04-05) (Washington) – State laws and regulations protecting Indian graves and historic cemeteries, and making disturbance of such sites, without a permit, a Class C felony.

Integrity – A measure of a property's evolution and current condition, especially as it relates to the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period.

Investment Tax Credit (ITC) – Credit granted by the federal government against tax liability for the certified rehabilitation of buildings for income-producing purposes. Made available by the Economic Recovery Tax Act of 1981.

ISTEA (Intermodal Surface Transportation Efficiency Act of 1991) – A national act that provides funding for historic bridge preservation and rehabilitation projects and provides for more flexible design standards in order to preserve historic structures.

Keeper of the National Register – Maintains the National Register of Historic Places, and makes final decisions on listing of properties nominated to the National Register.

Management Plan – Typically addressed appropriate treatments and preservation strategies for managing historic properties. Often included as an item in a Programmatic Agreement (PA – see definition).

Memorandum of Agreement (MOA) – A formalization of the means of resolving adverse effects agreed upon by the consulting parties, serving to specify mitigation, identify responsibility, render Advisory Council comment, and acknowledge effects of the undertaking on historic properties. May also be a Programmatic Agreement (PA).

Mitigation Measures – Actions required to mitigate adverse effects to historic properties. Usually stipulated in an MOA/PA.

Multiple Property Nomination – A registration of several significant properties linked by a common property type or historic context. Submitted to SHPO and NPS on National Register Multiple Property Documentation Forms (NPS 10-900-b), known as "MPDs." See National Register Bulletin 16B.

National Environmental Policy Act (NEPA) – Creates a national policy for environmental protection, to include the cultural environment. Requires federal agencies sponsoring projects to identify cultural resources and disclose potential impacts in Environmental Assessments (EA) or Environmental Impact Statements (EIS). Requires that all federal laws and regulations "be interpreted and administered in accordance with the policies set forth in this chapter; triggers Section 106 compliance." [PL 91-190, 42 USC 4321-4347, 1969.]

National Historic Landmark – Historic properties of national significance, established by the Historic Sites Act of 1935 [PL 74-292]. NHLs are also listed in the National Register. [National Historic Landmark Program, 36 CFR 65.]

National Historic Preservation Act (NHPA) – Establishes a national policy for historic preservation, the National Register of Historic Places, SHPOs, the Advisory Council on Historic Preservation, CLGs, and other programs. Contains Sections 106 and 110 (see definitions). [16 USC 470, PL 89-655, 1966, amended 1976, 1980, 1992.]

National Register of Historic Places – The nation's official listing of properties significant in national, state and/or local history, meeting one or more criteria for evaluation (36 CFR 60.4). Listing is commemorative, but may require compliance by property owners with federal/state/local laws and regulations. May also provide private property owners with opportunities to take advantage of preservation incentives, such as easements and tax relief.

Native American Graves Protection and Repatriation Act (NAGPRA) – Provides American Indians, Native Hawaiians, and Native Alaskans a formal role in activities occurring on *federal and tribal lands* that may affect archaeological resources. Mitigative actions developed pursuant to Section 106 of the NHPA, and the disposition of human remains, must meet with the approval of appropriate tribal authorities. In advertent discover of human remains and other cultural materials requires immediate "reasonable" protection of the items and a 30-day suspension of project-related activities. NAGPRA also sets forth a process for repatriation of human remains, and: funerary and sacred objects, and items of "cultural patrimony" (see definition) and provides penalties for illegally trafficking in same. [PL 101-601; 104 Stat. 3048.]

Nomination – Official request to have a property listed in the National Register. Documentation is placed on a National Register of Historic Places Registration Form (NPS 10-900) and submitted to the CLG (if appropriate), the SHPO, and the Keeper of the National Register (see definitions). See National Register *Bulletin 16A*.

Non-contributing Element (Resource) – A building, site, structure, or object that *does not* add to the historic architectural qualities, historic associations or archaeological values for which a property is significant because: (a) it was not present during the period of significance; (b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or (c) it does not independently meet the National Register criteria. See National Register *Bulletin 16A*.

Object – A construction primarily artistic in nature or relatively small in scale.

Office of Archaeology and Historic Preservation (OAHP) – A branch of the Department of Community, Trade, and Economic Development, this office houses the Washington State Historic Preservation Officer (SHPO). SHPO locations in state governments are unique to each state.

Patent – Legal title to real property. Granted by the federal government for parcels of the public domain when alienation occurs as the result of homesteading or similar action.

Programmatic Agreement (PA) – An agreement typically developed for a large or complex project or types of undertakings that would otherwise require a number of individual actions under Section 106, especially when effects on historic properties are repetitive or multi-state or national in scope; or when effects cannot be fully determined prior to project approval; or when effects consist of routine maintenance of historic properties. Management Plans (see definition) are often stipulated in Pas. [36 CFR 800.13(a).]

Property Type – Historic properties sharing physical or associative characteristics.

Protection of Historic and Cultural Properties (36 CFR 800) – Federal regulations implementing Section 106 of the National Historic Preservation Act.

Registration Requirements – Attributes of significance and integrity qualifying a property for listing in the National Register; especially important in establishing eligibility for each property type in Multiple Property submissions.

Rehabilitation – The process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values. [36 CFR 67.2]

Request for Proposal (RFP) – Issued by agencies soliciting contracted cultural resource studies.

Rural Historic Landscape – See Cultural Landscape, and National Register Bulletin 30.

Secretary of the Interior's Standards for Rehabilitation – Ten general rules outlining appropriate rehabilitation (see definition) for historic properties. Used to evaluate whether the historic character of a building is preserved in the process of rehabilitation, and to determine eligibility of certified rehabilitation (see definition) projects. [36 CFR 67.]

Section 4(f) – Requirement in the Department of Transportation Act of 1966 that federally-funded highway projects may affect historic properties *only if*: no prudent and feasible alternatives exist and adverse effects are minimized. [Also appeared in the Federal-Aid Highway Act of 1968; recodified in 49 USC 303, 1983.] See Environmental Procedures Manual, **Section 455**.

Section 106 Review – Section 106 of the Advisory Council's regulations (36 CFR Part 800), which implements the National Historic Preservation Act of 1966, as amended. This is the federal review process that ensures that historic properties are considered during federal aid project planning and execution. Section 106 applies to historic properties that have not yet been listed or formally determined to be eligible for listing; even properties that have not yet been discovered (such as archaeological sites) are subject to Section 106 review. The Section 106 review process satisfies SEPA requirements.

Section 110 – Section in the National Historic Preservation Act of 1966 assigning broad responsibilities to federal agencies to: designate an agency preservation officer; locate and nominate properties to the National Register; record historic properties that must be altered or destroyed (HABS/HAER documentation); undertake preservation; and other responsibilities. [16 USC 470h-2.]

Section 304 – Section of the National Historic Preservation Act of 1966, as amended in 1992, directing federal agencies or other public officials receiving federal grant assistance to withhold from disclosure to the public, information regarding the location, character, or ownership of an historic resource if that disclosure may: (1) cause invasion of privacy; (2) risk harm to the resource; or (3) impede the use of a traditional religious site by practitioners. Section 304 serves as an exemption from disclosure requirements of the Freedom of Information Act.

Section 404 Permit – Requirement of the Clean Water Act of 1977, as amended, for modification of wetlands, and for dredging and filling of navigable waterways. [33 USC 1344.] Permit requirement triggers compliance with Section 106 of the National Historic Preservation Act.

Setting – Quality of integrity applying to the physical environment of an historic property.

Site – The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

State Environmental Policy Act (SEPA) (Washington) – Procedural aspect: impacts on historic resources must be identified. Substantive aspect: counties and cities can adopt policies that provide authority to stop or limit adverse impacts to historic resources. [SEPA Rules: WAC 197-11.]

State Historic Preservation Officer (SHPO) – Coordinates preservation activities in each state; one SHPO per state, usually appointed by the governor. SHPO is charged with reflecting the interests of the state and its citizens in preserving their cultural heritage, which involves a variety of responsibilities. [36 CFR 61.4(b).] In Washington State, SHPO is housed in the Office of Archaeology and Historic Preservation (OAHP).

Structure – Functional constructions made usually for purposes other than creating shelter.

STURAA (Surface Transportation and Uniform Relocation Assistance Act of 1987) – A national act that mandates states to give special consideration to rehabilitating, reusing, and preserving historic bridges.

Tax Reform Act (TRA) of 1986 – Amended the Economic Recovery Tax Act of 1981 (see definition) reducing: (1) to 20% of the ITC (see definition) allowable for rehabilitation costs for certified historic structures (see definition); and (2) to 10% of the ITC allowable for buildings first placed in service before 1936. [PL 99-514.]

TEA 21 – Transportation Equity Act for the 21st Century (PL 105-178), continues national transportation policy directions established by ISTEA. (1998)

Traditional Cultural Property – A place eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that are (a) rooted in that community's history, and (b) important in maintaining the continuing cultural identity of the community. The concept is based upon the introductory section of the National Historic Preservation Act, which states that "the historical and cultural foundations of the Nation should be preserved as a living part of our community life in order to give a sense of orientation to the American people." [16 USC 470(b)(2)] See National Register *Bulletin 38*. Authorized by the 1992 Amendments to the National Historic Preservation Act. [Section 101(d)(6)(A).]

Tribal Historic Preservation Officer – Authorized by the 1992 Amendments to the national Historic Preservation Act. When approved by NPS, Tribal HPO replaces SHPO in compliance process on "tribal" lands. [Section 101(d)(2).]

Undertaking – Any activity that can result in changes in the character or use of historic properties. The activity must be under the direct or indirect jurisdiction of a federal agency or licensed or assisted by a federal agency. [36 CFR 800.2(o).]

Universal Transverse Mercator (UTM) Grid System – Method for locating historic properties using USGS maps and measurements cited in linear, decimal units. Measurements are referred to as "UTMs."

National Programmatic Agreement on Transportation Enhancements

Memorandum

U.S. Department
of Transportation

Federal Highway Administration

Subject: **INFORMATION**: Programmatic Agreement on Transportation Enhancements

Date: June 11, 1997

From: Chief, Environmental Analysis Division

Reply to Attn. of: HEP-40

To: Regional Administrators
Federal Lands Highway Program Administrator

Attached for your information, consideration, and use by State DOTs is a copy of the new programmatic agreement on transportation enhancements. This nationwide agreement with the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers (SHPOs) is expected to reduce the time spent by State DOTs in project review, consultation, and processing of transportation enhancement activities. It will accomplish this by encouraging local coordination and public participation, and reducing the need for project-by-project coordination with out-of-State groups. In addition, the agreement permits the SHPO and the State DOT to exercise judgment in weighing the benefits of the project against minor, but measurable, adverse changes to historic qualities. The net result, as one State DOT noted, will be to greatly assist in the implementation of the ISTEA, and to reduce the time to process projects by 30 to 60 days.

The Acting Administrator has signed this nationwide programmatic agreement on behalf of the FHWA. Individual States may activate this programmatic agreement by sending concurrent letters of acceptance to the three signatories and to the SHPO and the FHWA Division Office. The FHWA Division Administrator will be the Agency official with responsibility for ensuring that the agreement is carried out.

Use of this nationwide programmatic agreement is NOT mandatory. States DO NOT have to adopt it for their enhancements projects. Many States have already developed agreements that work for them; and those agreements remain in effect. Some States may wish to adapt the approach conveyed in this agreement and further tailor it for their specific program needs. Please

advise the State that if they choose to adapt this agreement and create a new one, they will need to develop it in consultation with the FHWA Division, the SHPO, and the ACHP.

If you have any questions please contact Mr. Bruce Eberle, FHWA Historic Preservation Officer. He may be reached at (202) 366-2060.

(original signed by person named below)
James M. Shrouds

Attachment

NATIONWIDE PROGRAMMATIC AGREEMENT
AMONG
THE FEDERAL HIGHWAY ADMINISTRATION (FHWA),
THE NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS
(NATIONAL CONFERENCE OF SHPOs), AND
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP),
FOR IMPLEMENTATION OF TRANSPORTATION ENHANCEMENT ACTIVITIES

WHEREAS, Section 316(2) (23 U.S.C. 133(e)(5)(B)) of the National Highway System Designation Act of 1995 (Pub. L. 104-59, 109 Stat. 568) requires the development of a nationwide programmatic agreement to expedite and improve implementation of transportation enhancement activities; and

WHEREAS, Section 1007(a) (23 U.S.C. 133(b)(8)) of the ISTEA authorizes the expenditure of Federal Surface Transportation Program funds for transportation enhancement activities; and

WHEREAS, Section 1007(c) (23 U.S.C. 101(a)) of ISTEA defines the term "transportation enhancement activities" to include a variety of project categories that can be beneficial to the preservation of historic properties; and

WHEREAS, the FHWA has determined that transportation enhancement activities may have effects upon properties included in or eligible for the National Register of Historic Places and has consulted with the ACHP, and the National Conference of SHPOs pursuant to 36 CFR 800.13 of the regulations implementing section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the signatories to this agreement desire to expedite the necessary historic preservation review for transportation enhancement activities beneficial to historic preservation and thereby encourage the use of transportation enhancement funds for historic preservation purposes; and

WHEREAS, the signatories to this agreement recognize that although most projects advanced as transportation enhancement activities should benefit historic properties, the State Transportation Agency (STA) shall make known any findings regarding effects to historic properties through its normal public participation process; and

WHEREAS, the STA, after consultation with the individual State Historic Preservation Officer (SHPO), may activate this programmatic agreement by sending concurrent letters of acceptance to the three signatories and to the SHPO and the FHWA Division Office.

NOW, THEREFORE, the FHWA, the ACHP, and the National Conference of SHPOs, pursuant to § 316(2) of the National Highway System Designation Act of 1995, agree that transportation enhancement activities shall be implemented in accordance with the following stipulations to satisfy the FHWA's section 106 responsibilities for all individual undertakings of

transportation enhancement activities which may affect historic properties in any State where this programmatic agreement is activated.

STIPULATIONS

The FHWA shall ensure that the following measures are carried out:

I. Expediting the Processing of the Following Categories of Transportation Enhancement Activities:

1. Provision of facilities for pedestrians and bicycles.
2. Acquisition of scenic easements and scenic or historic sites.
3. Scenic or historic highway programs.
4. Landscaping and other scenic beautification.
5. Historic preservation.
6. Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals).
7. Preservation of abandoned railway corridors (including conversion and use for pedestrian or bicycle trails).
8. Control and removal of outdoor advertising.
9. Archaeological planning and research.
10. Mitigation of water pollution due to highway runoff.

II. Identifying and Evaluating Historic Properties

A. The STA will be responsible for identifying and evaluating all historic properties within each activity's area of potential effect, and evaluating eligibility for the National Register of Historic Places, in consultation with SHPO, following the procedures set out in 36 CFR 800.4.

B. The STA, in consultation with the SHPO, may encourage or require project sponsors to include historic property documentation or survey results as part of the transportation enhancement activity application.

III. Determining Effect on Historic Properties

The STA will assess the effects of the proposed transportation enhancement activities on historic properties by applying the Criteria of Effect and Adverse Effect (36 CFR 800.9). The STA will ensure that the SHPO is provided adequate documentation to review the STA's effect determination. The SHPO will promptly inform the STA if more information is necessary to make its determination.

A. No Effect

If the STA determines that the undertaking will have no effect on historic properties, it will notify the SHPO in writing. The SHPO will review this determination and provide written comments to the STA within 15 working days after receipt of the STA's finding and adequate documentation. If the SHPO concurs with the STA's no effect determination, or fails to provide comments

within 15 working days, the undertaking may proceed as planned. If the SHPO objects to the STA's finding, the SHPO will indicate the reasons for nonconcurrence and the STA and the SHPO shall consult further to identify project alternatives that may result in the undertaking having no effect on historic properties or shall apply the Criteria of Adverse Effect and continue the review of the project pursuant to Stipulation III.B. of this agreement.

B. No Adverse Effect and Adverse Effect

1. If the STA determines that the undertaking will have no adverse effect on historic property, it will notify the SHPO in writing. The SHPO shall review this determination and provide written comments to the STA within 30 days after receipt of the STA's finding and adequate documentation.

   a. If the SHPO concurs with the STA's no adverse effect determination or fails to provide comments within 30 days, the STA shall document that finding, which shall be available for public inspection, and proceed with the activity as planned without further review by the ACHP.

   b. If the SHPO objects to the STA's finding, the SHPO will indicate the reasons for nonconcurrence and the STA and the SHPO shall consult further to identify project alternatives that may result in the undertaking having no adverse effect on historic properties or shall proceed in accordance with Stipulation III.B.2 or III.B.3.

2. If the STA and the SHPO cannot agree that the proposed transportation enhancement activity will have no adverse effect, or if they agree there is an adverse effect, then the STA shall notify the FHWA and the FHWA shall complete the section 106 process in accordance with 36 CFR 800.5 and 800.6, unless stipulation III.B.3 applies.

3. Transportation enhancement activities may advance without further comment from the ACHP, provided that the FHWA and the SHPO concur with the STA that: (a) the benefits to historic property(ies) outweigh any minor adverse effects (e.g., when a proposed rehabilitation substantially meets the Secretary of the Interior's Standards for Preservation Projects); and that (b) agreed upon measures will be implemented to mitigate those effects (e.g., appropriate recordation measures). The STA shall document the effect finding, which shall be available for public inspection.

IV. Amending this Programmatic Agreement, If Requested

Any party to this Programmatic Agreement may request that it be amended, whereupon the parties to this Agreement shall consult to consider such amendment in accordance with 36 CFR 800.13. No amended agreement shall take effect until it has been executed by all parties, and all the STAs and SHPOs have been duly notified.

V. Processing of Any Public Objections

If at any time during the implementation of the measures contained in this Agreement, an objection to any such measure or its manner of implementation should be raised by an interested person, as that term is defined at 36 CFR 800.1(c)(2), the FHWA shall consult with the objecting party, the SHPO, and, as needed, the ACHP to resolve the objection. In light of the ACHP's views, the FHWA should reconsider the finding. An objection by the public, however, does not require the FHWA to suspend action on an undertaking. If the objection concerns the eligibility of a property for the National Register, the FHWA may refer the matter to the Keeper of the National Register, if it considers referral appropriate.

VI. Resolving Disputes Among Parties

Should any party to this Agreement object within 30 days to any action pursuant to this Agreement, the FHWA shall consult with the objecting party to resolve the objection. If the FHWA determines that the objection cannot be resolved, the FHWA shall forward all relevant documentation to the ACHP. Within 30 days after receipt of all pertinent documentation, the ACHP will either:

A. Provide the FHWA will recommendations, which the FHWA will take into account in reaching a final decision regarding the dispute; or

B. Notify the FHWA that it will comment pursuant to 36 CFR 800.6(b), and proceed to comment. Any ACHP comment provided in response to such a request will be taken into account by the FHWA in accordance with 36 CFR 800.6(c)(2) with reference to the subject of the dispute.

Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute; the FHWA's responsibility to carry out all actions under this Agreement that are not the subjects of the dispute will remain unchanged.

VII. Monitoring Transportation Enhancement Activities

The SHPO and the ACHP may monitor any activities carried out pursuant to this Agreement, and the ACHP will review such activity if so requested. The FHWA will cooperate with the SHPO and the ACHP in carrying out these monitoring and review responsibilities.

VIII. Terminating this Programmatic Agreement

Any party to this Programmatic Agreement may terminate it by providing 30 days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the FHWA will comply with 36 CFR 800.4 through 800.6 with regard to individual undertakings covered by this Agreement.

IX. Establishing Duration of this Programmatic Agreement

This Programmatic Agreement will continue in full force until such time as it is terminated or funds for projects undertaken pursuant to this Programmatic Agreement are no longer authorized or available.

X. Submitting a Report

The STA will compile a list of projects that are processed under this programmatic agreement. This list may be included with or incorporated into periodic reports provided to the FHWA. The list shall include, at minimum, the project name, location, and the amount of authorization. The STA will provide a copy of the list to the FHWA division office either periodically throughout the year, or by March 31, each year beginning the year after implementation of this programmatic agreement. The FHWA division will provide copies of the list to the ACHP and the National Conference of SHPOs by April 21.

XI. Failing to Comply with this Programmatic Agreement

In the event the FHWA does not carry out the terms of this Agreement, the FHWA will comply with 36 CFR 800.4 through 800.6 with regard to individual undertakings covered by this Agreement.

EXECUTION AND IMPLEMENTATION of this Programmatic Agreement evidence that the FHWA has afforded the Council a reasonable opportunity to comment on its Transportation Enhancement Program and that the FHWA has taken into account the effects of the Transportation Enhancement Program on historic properties.

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: (original signed by person named below)
Date: 5/1/97
Chairman

FEDERAL HIGHWAY ADMINISTRATION

By: (original signed by person named below)
Date: _____
Acting Administrator

NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS

By: (original signed by person named below)
Date: April 29, 1997
President

Programmatic Agreement — Implementation of Section 106 for Federal-Aid Highways

Programmatic Agreement
Between the Federal Highway Administration
the Washington State Department of Transportation
the Advisory Council on Historic Preservation
and the Washington State Historic Preservation Officer
Regarding Implementation of the Federal Aid Highway Program
in Washington State

Whereas, the Federal Highway Administration (FHWA) administers the Federal Aid Highway Program in Washington State authorized by 23 U.S.C. §§ 101 et seq., through the Washington State Department of Transportation (WSDOT) (23 U.S.C. § 315); and,

Whereas, the FHWA has determined that the Federal-Aid Highway Program may have an effect upon properties included or eligible for inclusion in the National Register of Historic Places and has consulted with the Advisory Council on Historic Preservation (Council) and the Washington State Historic Preservation Officer (SHPO) pursuant to Section 800.14 of the regulations (36 CFR Part 800) implementing Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f); and,

Whereas, WSDOT maintains cultural resource staff and consultants meeting the Secretary of Interior's Professional Qualification standards in the fields of archaeology, history and architectural history; and,

Whereas, WSDOT participated in the consultation and has been invited to execute this Programmatic Agreement,

Now, therefore, the FHWA, the Council and the SHPO agree that the Federal Aid Highway Program shall be administered in accordance with the following stipulations to satisfy the FHWA Section 106 responsibility for all aspects of the program.

STIPULATIONS

FHWA shall ensure that the following measures are carried out:

1. Purpose and Scope

A. This Programmatic Agreement sets forth the process by which FHWA with the assistance of WSDOT will meet its responsibilities for undertakings pursuant to Sections 106 and 110 of the National Historic Preservation Act (NHPA) (16 U.S.C. § 470f).

B. FHWA Responsibilities - In compliance with its responsibilities under the NHPA, and as a condition of its award to WSDOT of any assistance under the Federal Aid Highway Program, FHWA will ensure that WSDOT carries out the requirements of 36 CFR Part 800 and applicable Council standards and guidelines for undertakings subject to this agreement. FHWA will be directly responsible for initiating consultation on individual projects with tribal governments pursuant to 36 CFR 800.2(c)(2) and (3).

C. WSDOT Responsibilities - Pursuant to this agreement, WSDOT will ensure that all cultural resource staff and/or consultants, employed under its contract to conduct work in the field of cultural resources, meet the qualifications set forth in the Secretary of Interior's Professional Qualifications Standards for such work. Annual Review Meetings shall be conducted for the WSDOT's regions with SHPO or its representatives and FHWA, to review upcoming projects and to update staff on any changes to Section 106, SHPO coordination and/or Cultural Resources processes.

2. Projects Exempted from Review

The following types of undertakings are activities in which WSDOT routinely utilizes Federal Aid highway funds. These projects generally do not affect historic properties, provided they are limited to the activities specified and are not part of a larger project within or adjacent to a historic property or historic district. These types of activities shall not require Section 106 consultation with the SHPO:

A. All work to be done on bridges of the National Highway System (NHS) and non-NHS state highways which are less than 40 years old, unless an inventory has shown the bridge to be exceptionally significant.

B. All work within interchanges and within medians of divided highways unless the median has been undisturbed by construction.

C. All work between a highway and an adjacent frontage road, unless the area between is undisturbed.

D. Replacement or extension of culverts and other drainage structures with waterway openings of 100 square feet (9.3 square meters) or less and which *do not* extend beyond previous construction limits.

E. Roadway surface replacement, overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking where there will be no expansion of wearing surface, unless within a historic district.

F. Installation of new lighting, signals, and other traffic control devices, and replacement or repair of lighting, signals, and traffic control devices where the existing units were installed less than 50 years ago, except if the project is immediately adjacent to, or located within, eligible bridges, historic properties, or historic districts.

G. Installation, replacement, or repair of safety appurtenances such as guardrails, barriers, glare screens, and energy attenuaters (except on National Register listed or previously determined eligible bridges, properties, or districts).

H. Fencing, including salvage yards, provided no grading or other landscaping is involved.

I. Landscaping on fillslopes and backslopes only. All landscaping beyond toe of fillslopes or beyond top of backslope must be reviewed.

J. Repair or replacement in kind of curb and gutter, sidewalk and catch basins on the same location except the following: Replacement projects and construction of handicapped access ramps projects adjacent to National Register eligible or listed properties.

K. Railway crossing signs and signal installation or modification and surface improvement.

L. Emergency structural repairs to maintain the structural integrity of a bridge (except National Register listed or eligible bridges), roadway overlays, and painting. Bridge reconstruction which does not include roadway widening or modification of existing piers and abutments, but which may include bridge repairs, deck replacement or repair, railing repair and other maintenance work.

M. Construction of turning lanes and pockets, auxiliary lanes (e.g., truck climbing, acceleration and deceleration lanes) and shoulder widening where only placement of fill material is involved, or within an area previously disturbed by vertical and horizontal construction activities.

N. Placement of fill material on the side slopes of intersection crossroads and accesses for purposes of flattening these slopes to meet safety criteria, provided that no topsoil is removed beyond the area of previous horizontal and vertical disturbance.

O. Hazardous waste removal and disposal from within an area previously disturbed by vertical and horizontal construction activities, which constitute a public hazard and which require immediate removal.

P. Placement of riprap within an area previously disturbed by vertical and horizontal construction activities, to prevent erosion of waterways and bridge piers.

Q. Routine roadway, roadside, and drainage system maintenance activities necessary to preserve existing infrastructure and maintain roadway safety, drainage conveyance, and stormwater treatment in previously disturbed areas.

3. Review

For those projects not exempt from review under terms of Stipulation 2, the following process shall be followed:

A. Initiation of Section 106 Process - 36 CFR Part 800.3

The WSDOT will be responsible for establishing the undertaking and defining the area of potential effect (APE). Prior to defining the APE, the WSDOT shall request the FHWA to initiate consultation with appropriate tribal governments. The WSDOT shall identify and invite other appropriate parties (such as local governments) to participate in the consultation.

B. Identification of Historic Properties - 36 CFR Part 800.4

The WSDOT will be responsible for identifying all historic properties within the APE, and evaluating the eligibility of any historic properties for the National Register of Historic Places. These activities will be carried out in consultation with the SHPO and any consulting parties, in accordance with 36 CFR Part 800.4. All cultural resources, including landscapes and traditional cultural places identified in the APE, will be examined for their integrity and eligibility in accordance with the criteria for listing in the National Register of Historic Places.

C. Finding of No Historic Properties Affected

If WSDOT determines that no historic properties will be affected by the undertaking, the finding and documentation will be forwarded to the SHPO for concurrence. Copies of this documentation will be provided to all consulting parties. If the SHPO does not concur with WSDOT's findings, the documentation will be submitted to FHWA for resolution. If, through consultation, the FHWA, the SHPO and WSDOT reach consensus, the process will move forward in accordance with this agreement, either to a finding of effect or documenting that no historic properties are affected. If consensus is not achieved the undertaking will not be developed under this agreement, but instead will proceed in accordance with 36 CFR Part 800.3 through 800.6.

D. Finding of Effect

1) If the WSDOT determines, and the SHPO concurs, that historic properties will be affected by the undertaking, the WSDOT shall apply the Criteria of Adverse Effect, 36 CFR Part 800.5(a)(1). If the WSDOT determines that the undertaking will have no adverse effect on historic properties, it will notify the SHPO in writing. The SHPO will review this determination and provide written comments to the WSDOT within 30 calendar days after receipt of the WSDOT's finding and supporting documentation as required by 36 CFR Part 800.11. If the SHPO concurs with the WSDOT's no adverse effect determination, the WSDOT shall document that finding, make it available to the consulting parties and for public review, and proceed with the undertaking as planned. If the SHPO objects to the WSDOT's finding, the SHPO will indicate the reasons for nonconcurrence and the WSDOT and the SHPO will consult further to resolve this matter, either by identifying project alternatives that may result in the undertaking having no adverse effect on historic properties or proceeding in accordance with stipulation 3.D.2. of this agreement.

2) **Finding of Adverse Effect** - If the WSDOT determines that the undertaking will have an adverse effect on historic properties, they will notify FHWA and FHWA will ensure the Section 106 process is completed in accordance with 36 **CFR 800.6.**

4. Historic Bridges

A. WSDOT shall use the bridge list developed by the Historic Bridge Inventory to determine the eligibility of bridges. All bridges considered not eligible for the National Register will not require further evaluation, unless the passage of time, changing perceptions of significance, or incomplete prior evaluations necessitate re-evaluation of their eligibility status.

B. WSDOT shall consult with SHPO to market appropriate bridges. "Category 2 bridges" is a classification used only in the 1980 Historic Bridge Inventory to represent bridges constructed prior to 1940 that were noteworthy but not National Register eligible. In the event the Category 2 bridges cannot be sold, WSDOT agrees to take large format (4X5 inch or larger) black and white archivally processed photographs of these bridges before they are demolished or rehabilitated, and provide a copy of these photographs to the SHPO.

C. WSDOT shall consult with the SHPO on the development of a book for the general public on Washington's historic bridges. Development of this book shall be considered adequate mitigation for future replacement of the Category 2 bridges built 1940 or earlier, which will not be subject to further review for National Register eligibility.

D. Bridge replacement projects that require a change in alignment, beyond previous construction disturbance, shall undergo a review as per 36 CFR Part 800.

E. Bridge replacements in historic districts shall also undergo individual review under 36 CFR Part 800, as they may be contributing elements of a historic district.

5. Monitoring

The Council and the SHPO may monitor activities carried out pursuant to this Programmatic Agreement, and the Council will review such activities if so requested. The FHWA and WSDOT shall cooperate with the Council and the SHPO in carrying out their monitoring and review responsibilities.

6. Terminate, Modify, and Amend

Any party to this Programmatic Agreement may terminate it for cause by providing thirty (30) days written notice to the other parties, provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other action that would avoid termination. In the event of termination, the FHWA shall conduct individual project review pursuant to 36 CFR Part 800.

All parties to this agreement agree to conduct a review of its effectiveness no earlier than six months and no later than 15 months after its initiation. A review may result in mutually agreed upon modifications to the stipulations listed above.

Execution and implementation of this Programmatic Agreement evidences that the Federal Highway Administration has afforded the Council an opportunity to comment on this Programmatic Agreement and that FHWA has taken into account the effects of the undertakings on historic properties.

_____	_____
Division Administrator Federal Highway Administration	State Historic Preservation Officer Washington State Office of Archaeology And Historic Preservation
_____	_____
Chair Advisory Council on Historic Preservation	Secretary of Transportation Washington State Dept. of Transportation

Effective 7/18/00

Washington State Department of Transportation

Discipline Report Checklist
Cultural Resources

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Introduction

SAT	INC	MIS	N/A	
❑	❑	❑		A. Identified CR survey and research methods.
❑	❑	❑		B. Identified information resources (reports, agency contacts, etc.)
❑	❑	❑		C. Provided project vicinity map(s) which include:
❑	❑	❑		1. Project alternatives and ROW lines.
❑	❑	❑		2. Significant geographic features and landmarks.
❑	❑	❑		3. Jurisdictional boundaries.
❑	❑	❑	❑	4. Identified historic properties (National Register – listed and eligible properties) that are located within the project's area of potential effects.

II. Affected Environment

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Provided a description of the affected historic properties which included information on the characteristics that qualify each property for inclusion in the National Register.

III. Impacts

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Identified the potential impacts from each project alternative on each historic property. The report considered construction and operational impacts from project development.
❑	❑	❑	❑	B. Identified the cumulative environmental effects of the proposed actions, in the context of other actions in the surrounding environs.

IV. Mitigation

SAT	INC	MIS	N/A	
❑	❑	❑	❑	A. Suggested possible mitigation measures for each adverse impact addressed in the previous section. A Memorandum of Agreement among consulting parties will be developed and executed to stipulate resolution of adverse effects.

V. Summary

The summary must include enough detail so that it can be included in the EIS with only minor modification. The summary must include:

SAT	INC	MIS	N/A	
❑	❑	❑		A. Summary of the analysis done and conclusions reached.
❑	❑	❑		B. The objectives of the project.
❑	❑	❑		C. Historic and cultural resources present in project area.
❑	❑	❑		D. Impacts of all alternatives, including the no-build alternative.
❑	❑	❑		E. Recommended mitigation.
❑	❑	❑		F. Comparison of alternatives based on impacts and cost-effectiveness of mitigation.

General Comments: _____

_____

_____

_____

February 1999

Section 106 Regulations Users Guide
National Register Evaluation Criteria

The following criteria are established by the Advisory Council on Historic Preservation. For current criteria see:

http://www.achp.gov/

National Register Criteria for Evaluating Properties

The criteria applied to evaluate properties (other than areas of the National Park System and National Historic Landmarks) for the National Register are listed below. These criteria are worded in a manner to provide for a wide diversity of resources. The following criteria shall be used in evaluating properties for nomination to the National Register, by the National Park Service (NPS) in reviewing nominations, and for evaluating National Register eligibility of properties.

Guidance in applying the criteria is further discussed in the "How To" publications, Standards & Guidelines sheets, and Keeper's opinions of the National Register. Such materials are available upon request from National Register of Historic Places Publications, National Park Service, P.O. Box 37127, Washington, D.C., 20013-7127 (phone: 202-343-5726).

Criteria for Evaluation

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

Criteria Considerations

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register. However, such properties will quality if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

(a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

(b) A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

(c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.

(d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

(e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

(f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

(g) A property achieving significance within the past 50 years if it is of exceptional importance. [This exception is described further in NPS's "How To" booklet No. 2, entitled "How to Evaluate and Nominate Potential National Register Properties That Have Achieved Significance Within the Last 50 Years," available from NPS.]

Section 106 Regulations Flow Chart
Procedures for Cultural Resources

Section 106 Regulations – Users' Guide

Initiate Section 106 Process
Establish undertaking
Identify appropriate SHPO/THPO
Plan to involve the public
Identify other consulting parties

► ***No undertaking/no potential to cause effects***

↓

Undertaking might affect historic properties

↓

Identify Historic Properties
Determine scope of efforts
Identify historic properties
Evaluate historic significance

► ***No historic properties affected***

Historic properties are affected

↓

Assess Adverse Effects
Apply criteria of adverse effect

► ***No historic properties adversely affected***

↓

Historic properties are adversely affected

↓

Resolve Adverse Effects
Continue Consultation

► ***Memorandum of Agreement***

↓

FAILURE TO AGREE

► **COUNCIL COMMENT**

↓

Key Elements of the Section 106 Process			
The Roles of Participants	**Involving the Public**	**Consultation**	**Documentation**

Source: Advisory Council on Historic Preservation (http://www.achp.gov)

WSDOT Historic Bridge Rehabilitation Guidelines

For projects involving rehabilitation of historic bridges, the following specific guidelines should be followed for structural upgrading, geometric modification, and materials repair and maintenance. Budgetary constraints, geographic location, and good judgment will determine which apply to a particular project.

Structural Upgrading

A. Identify the structural system and its historically significant features. Use nondestructive testing techniques.

B. Explore passive solutions that limit the live load by restricting vehicles. Examples include load posting, signaling, and channelization.

C. Respect the structural system and retain its visual characteristics if modifications are necessary.

   1. If possible, retain the load-carrying system in its original configuration.

   2. If possible, reduce the dead load by providing a lighter deck system.

   3. If the load-carrying system must be altered, retain the character-defining visual qualities of the original structural system. The visual impact to systems that are modified can be minimized by using structure continuity and king post-truss beam reinforcement; changing the configuration of isolated members or adding helping structures; adding supplemental members under the deck of the structure.

D. When more visually intrusive structural modifications are required, keep them as inconspicuous as possible, and try to preserve the primary view and impact only secondary views.

   1. Bridges that carry highway traffic are seen by roadway travelers from afar, in elevation, and while traveling on the bridge deck. Make modifications with this in mind.

   2. Where the primary view is from below the bridge (e.g., canal bridges no longer in vehicular service), make modifications accordingly.

E. Design modifications with the least possible loss of historic material. Do not obscure, damage, or destroy the historically significant features of the bridge.

F. Clearly differentiate structural modifications or helping structures from the historic bridge. The design should be compatible in terms of mass, materials, scale, and detail but should not dominate the historical portion.

G. Design and install traffic railings, or safety barriers, to avoid or minimize visual impacts to the character-defining features of the bridge.

H. Replace deteriorated structural elements in kind or with a material that duplicates the visual appearance of the original element.

Geometric Modifications

A. Determine realistic needs for geometric parameters in light of connecting highways, projected traffic volumes, accident history, and the nature of future traffic needs.

B. Explore passive (off-bridge) solutions.

1. Adjust alignment of the approaches, restrict the bridge to one-way traffic, or both.

   a. Create holding lanes for traffic at the approaches to a one-lane bridge, with appropriate provisions for safety.

   b. Leave the historic bridge in place for one lane of traffic and move another visually compatible historic bridge to an adjacent site to carry the second lane.

   c. Leave the historic bridge in place for one lane of traffic and construct a visually compatible new bridge on an adjacent site for the second lane.

2. Adjust the flow of approaching traffic by restricting vehicles, restricting speed, or installing signs and traffic signals.

C. Alter the geometric configuration of the bridge to remedy geometric deficiencies.

1. To increase the vertical clearance on through bridges, reduce the depth of the portal frames and sway frames, with minimum destruction of the historic materials used in the bridge's original construction.

2. To increase the vertical clearance on grade-separation structures, raise the superstructure or lower the roadway.

3. To increase the roadway width, some types of structures can be modified (e.g., multigirder, some concrete and stone bridges). Design modifications to be compatible with the appearance and scale of the original bridge.

   a. Provide sidewalks external to the bridge for pedestrian safety.

   b. Widen the bridge by cantilevering a new deck from either side of the existing structure, where structurally feasible and aesthetically and historically appropriate.

Materials Repair and Maintenance

A. Identify features that are important in defining the overall historic character of the bridge. Consult an architectural historian or similar professional with expertise in historic bridge preservation/ rehabilitation.

B. Repair historic materials, if possible. If replacement of a feature is necessary, replace in kind or with a compatible substitute material.

1. Concrete: Superstructure and substructure

   a. Damage caused by drainage and vegetation

      (1) Provide proper deck drainage systems that do not damage or promote deterioration of the superstructure or substructure.

      (2) Remove vegetation growing on bridge superstructure or substructure.

   b. Cleaning

      (1) Clean concrete only when necessary to halt deterioration or to remove heavy soiling.

      (2) Clean concrete with the least destructive method possible.

      (3) Use proposed cleaning method on test patches to determine long-range detrimental effect of cleaning.

   c. Crack Sealing

      (1) Remove deteriorated concrete by carefully hand raking cracks to avoid damaging sound areas.

      (2) Material used to seal cracks should match old concrete in composition, color, and texture.

   d. Repair of deteriorated sections

      (1) Replace extensively deteriorated or missing features in kind or with a compatible substitute material.

      (2) Avoid applying nonhistoric coatings, such as stucco, gunite, and sealants to concrete surfaces.

2. Metals

   a. Cleaning. Identify metallic composition prior to cleaning, then test in patches for least destructive cleaning method. Use the least destructive cleaning methods possible to remove paint buildup and corrosion. For example, if hand scraping and wire brushing prove ineffective, low pressure dry grit blasting may be used as long as it does not damage the structural integrity of the bridge.

   b. Repaint with colors appropriate to the history of the bridge.

   c. Replace deteriorated or missing decorative elements in kind or with compatible substitutes.

3. Wood

a. Repair historic wood features by patching or reinforcing, using recognized preservation techniques.

b. Replace irreparable historic wood features in kind. If replacement in kind is not possible, use substitute materials that are compatible in texture and form, and that convey the same visual appearance as the original.

Washington State Historic Highway Bridges

The following bridges are included in the WSDOT Bridge Inventory and are listed in or eligible for listing in or have been nominated to the National Register (NR). HAER indicates having a Historic American Engineering Record report and/or large format photos completed. No privately owned historic bridges are listed here.

No.	Name	Date Built	Owner	County	Status
129/2	Grande Ronde River Bridge	1941	WSDOT	Asotin	NR
12/903	Indian Timothy Memorial Bridge	1923	WSDOT	Asotin	NR/HAER
225/1	Benton City-Kiona Bridge	1957	WSDOT	Benton	NR Nominated
82/280S	Columbia River Bridge at Umatilla	1955	WSDOT	Benton	NR Nominated
395/40	Pioneer Memorial Bridge	1954	WSDOT	Benton	NR Nominated
	Penstock Bridge	ca. 1909	Local	Chelan	NR
285/20W	Wenatchee Avenue SB Bridge	1954	WSDOT	Chelan	NR Nominated
285/20E	Wenatchee Avenue NB Bridge	1933	WSDOT	Chelan	NR Eligible
	Wenatchee-Columbia River Bridge	1906-1908	Local	Chelan	NR
306	West Monitor Bridge	1907	County	Chelan	NR
285/10	Columbia River Bridge at Wenatchee	1950	WSDOT	Chelan-Douglas	NR
30000 BR 1	Elwha River Bridge	1913/1966	County	Clallam	NR
5/1E	Vancouver/Portland (Columbia River) Interstate Bridge	1916	WSDOT	Clark	NR
5/1W	Vancouver/Portland (Columbia River) Interstate Bridge	1959	WSDOT	Clark	NR Eligible
503/26	Lewis R. Yale Bridge	1932/1957	WSDOT	Clark	NR/HAER
261/125	Snake River/Lyons Ferry Bridge	1927	WSDOT	Columbia-Franklin	NR/HAER
503/112	Jim Creek Bridge	1945	WSDOT	Cowlitz	NR
433/1	Longview (Lewis & Clark) Bridge	1929	WSDOT	Cowlitz	NR/HAER
3535001	Modrow Bridge	1958	County	Cowlitz	NR Nominated
26.5ENE	Chief Joseph Dam Bridge	1958	County	Douglas	NR Nominated
17/401	Columbia River Bridge at Bridgeport	1952	WSDOT	Douglas-Okanogan	NR/HAER
2	Curlew Bridge	1908/1970	County	Ferry	NR
224	Barstow Bridge	1946 (purchased)	Local	Ferry-Stevens	NR
395/545	Columbia River Bridge at Kettle Falls	1941	WSDOT	Ferry-Stevens	NR/HAER
101/115	Chehalis River Bridge	1955	WSDOT	Grays Harbor	NR Nominated
101/125W	Hoquiam River Bridge	1928/1948	WSDOT	Grays Harbor	NR/HAER
101/266	Duckabush River Bridge	1934	WSDOT	Jefferson	NR
116/5	Portage Canal Bridge	1951	WSDOT	Jefferson	NR Nominated
	12th Avenue South Bridge Over Dearborn Street	1911-1912	Local	King	NR
	14th Avenue South Bridge	1931	County	King	NR
99/540 NB & SB	Alaskan Way Viaduct	1952	WSDOT	King	NR Eligible
	Arboretum Sewer Trestle	1910	Local	King	NR
99/560	Aurora Avenue (George Washington Memorial) Bridge	1931	WSDOT	King	NR/HAER

No.	Name	Date Built	Owner	County	Status
	Ballard Bridge	1917	Local	King	NR
509A	Baring Bridge	1899/1930	County	King	NR Eligible
99/541	Battery Street Tunnel	1954	WSDOT	King	NR Eligible
15	Cowen Park Bridge	1936	Local	King	NR
99/530E	Duwamish River Bridge	1956	WSDOT	King	NR Eligible
2605A	Foss River Bridge	1951	County	King	NR Nominated
	Fremont Bridge	1917	Local	King	NR
3032	Green River Gorge Bridge	1914/1991	County	King	NR Eligible
5/570	Lake Washington Ship Canal Bridge	1962	WSDOT	King	NR Eligible
999W	Miller River Bridge	1922	County	King	NR Eligible
513/12	Montlake Bridge	1924	Local	King	NR/HAER
90/24	Mount Baker Ridge Tunnel	1940	WSDOT	King	NR/HAER
2550A	Mount Si Bridge	1955	Local	King	NR Nominated
27	North 102nd Street Pedestrian Bridge	1960	Local	King	NR Eligible
3015	Patton Bridge	1950	Local	King	NR
1008E	Raging River Bridge	1915	County	King	NR Eligible
58	Ravenna Park Bridge	1913-1914	Local	King	NR
3139	Saltwater State Park Bridge	1934	County	King	NR Eligible
13	Schmitz Park Bridge	1935-1936	Local	King	NR
1023A	Stossel Bridge	1951	County	King	NR Nominated
	University Bridge	1915-1919	Local	King	NR
	Yesler Way Bridge over 4th Avenue	1909-1921	Local	King	NR eligible
305/10	Agate Pass Bridge	1950	WSDOT	Kitsap	NR
303/12	Port Washington Narrows Bridge	1958	WSDOT	Kitsap	NR Nominated
90/110	Lake Keechelus Snowshed Bridge	1951	WSDOT	Kittitas	NR/HAER
110	B-Z Corner Bridge	1957	County	Klickitat	NR Nominated
197/1	Columbia River Bridge at The Dalles	1954	WSDOT	Klickitat	NR Eligible
142/9	Klickitat River Bridge	1954	WSDOT	Klickitat	NR Nominated
25/6	Spokane River Bridge at Fort Spokane	1941	WSDOT	Lincoln-Stevens	NR/HAER
231/101	Spokane River Bridge at Long Lake Dam	1949	WSDOT	Lincoln-Stevens	NR/HAER
3/3	Goldsborough Creek Bridge	1923	WSDOT	Mason	NR
101/403	North Hamma Hamma River Bridge	1924	WSDOT	Mason	NR/HAER
101/404	South Hamma Hamma River Bridge	1924	WSDOT	Mason	NR/HAER
155/101	Grand Coulee Bridge	1935	WSDOT	Okanogan	NR/HAER
509/5	City Waterway Bridge	1911	WSDOT	Pierce	NR/HAER
E-7	East 34th Street Bridge, Pacific to A Street	1937	Local	Pierce	NR
165/10	Fairfax (Carbon River) Bridge	1921	WSDOT	Pierce	NR/HAER
162/6	McMillin (Puyallup River) Bridge	1934	WSDOT	Pierce	NR/HAER
N2	North 21st Street Bridge	1910-1911	Local	Pierce	NR/HAER
N3	North 23rd Street Bridge	1909-1910	Local	Pierce	NR
302/105	Purdy Creek Bridge	1936	WSDOT	Pierce	NR/HAER
16/110	Tacoma Narrows Bridge	1950	WSDOT	Pierce	NR

No.	Name	Date Built	Owner	County	Status
					Eligible/HAER
1130	Winnifred Street Bridge	1941	Local	Pierce	NR
20/259	Baker River Bridge	1916-1917	WSDOT	Skagit	NR/HAER
40090	Dalles Bridge	1952	County	Skagit	NR Nominated
20/204	Deception Pass Bridge	1935	WSDOT	Skagit-Island	NR/HAER
40039	Rainbow Bridge	1957	County	Skagit	NR Nominated
207	Conrad Lundy Jr. Bridge	1960	County	Skamania	NR Nominated
537	Red Bridge	1954	County	Snohomish	NR Nominated
529/10W	Snohomish River Bridge	1954	WSDOT	Snohomish	NR Nominated
529/20E	Steamboat Slough Bridge	1954	WSDOT	Snohomish	NR Nominated
02	Greene Street Bridge over Spokane R.	1955	Local	Spokane	NR Nominated
16	Maple Street Bridge	1958	Local	Spokane	NR Nominated
2404	Marshall Bridge	1949	Local	Spokane	NR
371001001	Monroe Street Bridge	1909-1911	Local	Spokane	NR/HAER
	Sunset Boulevard/Latah Creek Bridge	1911-1914	Local	Spokane	NR
25/130	Columbia River Bridge at Northport	1946-1949	WSDOT	Stevens	NR
5/322	Capitol Boulevard Bridge	1936/1991	Local	Thurston	NR
5/316	Custer Way Undercrossing	1956	WSDOT	Thurston	NR Nominated
	Lower Custer Way Crossing Bridge	1915	Local	Thurston	NR
10	Grays River Covered Bridge	1905/1989	County	Wahkiakum	NR/HAER
760136001	Waitsburg Bridge	1925	Local	Walla Walla	NR
20/323	Gorge Creek Bridge	1955	WSDOT	Whatcom	NR Nominated
140	Middle Fork Nooksack River Bridge	1915	County	Whatcom	NR
396	Donald-Wapato Bridge	1948	Local	Yakima	NR
485	Toppenish-Zillah Bridge	1947	Local	Yakima	NR

The following Category II (County and state) bridges are of Local historic or engineering significance but are not eligible for or listed in the National Register. This list is current as of June 2002.

No.	Name	Date Built	Owner	County
219	Hooper Bridge	1911/1995	County	Adams
Lind2	Lind Coulee-Nielsen St.	1912	Local	Adams
198	Batum-Rocky Coulee Bridge	1914	County	Adams
142	North Lund Bridge	1914	County	Adams
201	Rock Creek Bridge	1914	County	Adams
195	Lauer North Bridge	1914	County	Adams
23	Kiesner Bridge	1915	County	Adams
160	Hatton Two Bridge	1915/1959	County	Adams
186	Schragg Bridge	1917	County	Adams
180	Kisler Bridge	1918	County	Adams
184	Kagele Bridge	1920	County	Adams
Asotin2	Asotin County Memorial Bridge	1920	Local	Asotin
12/915	Snake River/Clarkston Bridge	1939	WSDOT	Asotin
12/408	Prosser Bridge	1931	WSDOT	Benton
603	Plain Bridge (currently closed to traffic)	1909/1927	County	Chelan
408	Peshastin Creek Bridge (Sanders)	1920	County	Chelan
503	Old Griffith Bridge	1921	County	Chelan
406A	Dryden	1927	County	Chelan
Chelan1	Chelan Bridge	1927	Local	Chelan
401	West Cashmere	1929	County	Chelan
305	Monitor Bridge	1930	County	Chelan
2/226N	Wenatchee River Bridge	1929	WSDOT	Chelan
97/359	Knapps Hill Tunnel	1936/1968	WSDOT	Chelan
2/108	Tunnel	1937	WSDOT	Chelan
207/4	Wenatchee River Bridge	1940	WSDOT	Chelan
101/334	Elwha River Bridge	1926/1959	WSDOT	Clallam
11200 Br.1	Quillayute Road Bridge	1929/1962	County	Clallam
101/308	Calawah River Bridge	1938	WSDOT	Clallam
21	LaCenter Bridge	1923	County	Clark
26	Betts Bridge	1935/1949	County	Clark
503/6	Salmon Creek Bridge	1923	WSDOT	Clark
5/36E	East Fork Lewis River Bridge	1936	WSDOT	Clark
5/40W	Lewis River Bridge	1940	WSDOT	Clark
018620001	Beulah Drive Separation (Buland Bridge)	1900	County	Cowlitz

No.	Name	Date Built	Owner	County
56930001	Toutle River Bridge	1935	County	Cowlitz
	Hedlund/Boyd Bridge	1940	County	Ferry
11	Sherman Creek Bridge	1940	County	Ferry
12/802	Patasha Creek Bridge	1920	WSDOT	Garfield
126/102	Owsley Bridge	1940/1949	WSDOT	Garfield
209	6 North East/Ruff Bridge	1914	County	Grant
168	Grandview Bridge	1920/1960	County	Grant
255	East Weber Coulee Bridge	1938	County	Grant
254	West Weber Coulee Bridge	1938	County	Grant
12/12N	Wishkah River Bridge	1925/1945	WSDOT	Grays Harbor
9641/1.7	Sickman Ford Bridge	1929/1999	County	Grays Harbor
4599/0.2	Panhandle Bridge	1930/1985	County	Grays Harbor
12/176	Black River Bridge	1932	WSDOT	Grays Harbor
Aberdeen5	Sixth Street Bridge	1937	Local	Grays Harbor
9710/6.4	Satsop River Bridge	1938	County	Grays Harbor
101/217	Hoh River Bridge	1931	WSDOT	Jefferson
101/256	Big Quilicene River Bridge	1936	WSDOT	Jefferson
3130	Alv T. Bridge	1914/1970	County	King
404B	Novelty Bridge	1920/2000	County	King
1726A	Meadowbrook Bridge	1921/1971	County	King
1834A	Tolt Bridge	1922/1968	County	King
3188	Newaukum Creek Bridge	1927	County	King
3215	Duwamish 99	1928	County	King
1071A	Kenmore Bridge	1938/1970	County	King
509/103	Younglove Creek Bridge	1929/1996	WSDOT	King
202/60	Snoqualmie River Bridge	1931	WSDOT	King
169/8	Green River (Dan Ey) Bridge	1932	WSDOT	King
99/574	North 63rd Street Overcrossing	1932	WSDOT	King
2/116	South Fork Skykomish River Bridge	1938	WSDOT	King
99/530	1st Avenue South Bridge (Duwamish River)	1956/1998	WSDOT	King
513/14	Pedestrian U.S. Undercrossing	1900	WSDOT	King
303/4	Manette Bridge	1930/1949	WSDOT	Kitsap
90/132S	Yakima River Bridge	1917/1930	WSDOT	Kittitas
906/103	Hyak Creek Bridge	1928	WSDOT	Kittitas
10/142	Teanaway River Bridge	1930	WSDOT	Kittitas
97341	Thorp Highway Bridge	1936	County	Kittitas

No.	Name	Date Built	Owner	County
3112	Railroad Street Bridge	1937/1991	County	Kittitas
14/222	Horsethief Canyon Bridge	1931	WSDOT	Klickitat
14/212	Klickitat River Bridge	1933	WSDOT	Klickitat
14/215	tunnel	1933	WSDOT	Klickitat
14/216	Lyle Tunnel No. 7	1933	WSDOT	Klickitat
109	Winegartner Bridge	1940/1957	County	Klickitat
141/5	White Salmon River Bridge	1940	WSDOT	Klickitat
54	Walter Annonen Bridge	1910/1961	County	Lewis
108	Jones Bridge	1917/1974	County	Lewis
109	Mineral Creek Bridge	1920/1962	County	Lewis
36	Coughlin Bridge	1922/1966	County	Lewis
87	Mays Bridge	1922	County	Lewis
90	Teitzel Bridge	1922/1941	County	Lewis
508/28	Tilton River Bridge	1923/1940	WSDOT	Lewis
1	Garnet Bridge	1924/1964	County	Lewis
6/115	South Fork Chehalis River Bridge	1925	WSDOT	Lewis
97	Gish Bridge	1926/1996	County	Lewis
20	Newaukum River Bridge	1926	County	Lewis
98	Guerrier Bridge	1927	County	Lewis
99	Hendrickson Bridge	1927	County	Lewis
507/8	Skookumchuck River Bridge	1928	WSDOT	Lewis
6/105	Chehalis River Bridge	1931	WSDOT	Lewis
117	Lake Creek Bridge	1936	County	Lewis
6/123	Chehalis River Riverside Bridge	1939	WSDOT	Lewis
143 27221	Reith Bridge	1911/1983	County	Lincoln
48331	Crystal Springs Bridge	1916	County	Lincoln
14010336	Kennedy Creek Bridge	1917	County	Mason
101/418	Skokomish River Bridge	1932	WSDOT	Mason
155/111	Okanogan River Bridge	1923	WSDOT	Okanogan
20/624	Methow River Bridge	1929/1950	WSDOT	Okanogan
20/651	Bonaparte Creek Bridge	1933	WSDOT	Okanogan
153/20	Methow River Bridge	1935	WSDOT	Okanogan
947001	Fern Creek Bridge	1916	County	Pacific
48441	Lebam Bridge	1917	County	Pacific
6/12	Forks Creek Bridge	1918/1939	WSDOT	Pacific
6/8	Willapa River Bridge	1930	WSDOT	Pacific
101/3	Fort Columbia Tunnel	1932	WSDOT	Pacific
3705	Ione Bridge (approaches rebuilt 1967)	1932/1967	County	Pend Oreille

No.	Name	Date Built	Owner	County
31/42	Slate Creek Bridge	1933	WSDOT	Pend Oreille
18164-A	Ohop Creek Bridge	1919	County	Pierce
18164-B	Ohop Creek Overflow Bridge	1919	County	Pierce
167/20E	Puyallup River Bridge	1925/1951	WSDOT	Pierce
2424-A	Stuck River Bridge	1927	County	Pierce
509/101	F.B. Hoit No. 3/Dash Point Bridge	1929	WSDOT	Pierce
18204-A	Puyallup River Bridge	1931	County	Pierce
123/106	tunnel	1935	WSDOT	Pierce
162	NP Railway Overcrossing	1936	WSDOT	Pierce
5/345E	Nisqually River Bridge	1937/1948	WSDOT	Pierce
24164-A	Mashell River Bridge	1937	County	Pierce
14203-A	Squally Creek Bridge	1937	County	Pierce
123/104	Deer Creek Bridge	1938	WSDOT	Pierce
19204-D	Peterson Road Bridge	1939	County	Pierce
509/2	Hylebos Waterway Bridge	1939/2000	WSDOT	Pierce
9/210	South Fork Nookachamps Creek Bridge	1920	WSDOT	Skagit
11/4	Samish River Bridge	1920	WSDOT	Skagit
40111	BN Overpass	1925	County	Skagit
40152-40153	Guemes Island Ferry Dock Bridge	1925/1996	County	Skagit
5/709	2nd Street Undercrossing	1929/1954	WSDOT	Skagit
40070	Marblemount Bridge	1930	County	Skagit
40099	Government Bridge	1930	County	Skagit
40156	Carpenter Creek Bridge	1934	County	Skagit
40114	Samish River Bridge	1934	County	Skagit
14/128	Tunnel No. 1	1937	WSDOT	Skamania
14/129	Tunnel No. 2	1937	WSDOT	Skamania
14/130	Tunnel No. 3	1937	WSDOT	Skamania
14/133	Tunnel No. 4	1937	WSDOT	Skamania
14/134	Tunnel No. 5	1937	WSDOT	Skamania
old 103	Thomlee Bridge	1913	County	Snohomish
42	Jim Creek Bridge	1914	County	Snohomish
5	Pilchuck River Bridge	1914/1996	County	Snohomish
247	Portage Creek Bridge	1922/1972	County	Snohomish
91	South Slough Bridge	1922	County	Snohomish
414	Sauk River Bridge	1930/1980	County	Snohomish
44	Machias—OK Bridge*	1931	County	Snohomish
102	Granite Falls Bridge	1931	County	Snohomish
529/10E	Snohomish River Bridge	1927	WSDOT	Snohomish
529/20W	Steamboat Slough Bridge	1927/1954	WSDOT	Snohomish
2/35	Skykomish River Bridge	1932	WSDOT	Snohomish

No.	Name	Date Built	Owner	County
2/40	South Fork Skykomish River Bridge	1933	WSDOT	Snohomish
5/670W	Stillaguamish River Bridge	1933	WSDOT	Snohomish
2/48	Barclay Creek Bridge	1934	WSDOT	Snohomish
2/115A	South Fork Skykomish River Bridge	1939	WSDOT	Snohomish
2/26	Sultan River Bridge	1940	WSDOT	Snohomish
2/30	Wallace River Bridge	1940	WSDOT	Snohomish
3407	Hatch Road Bridge	1919/1964	County	Spokane
3404	Argonne Road Bridge	1920/1973	County	Spokane
3806	North Road Overcrossing	1935	County	Spokane
3612	Francis Avenue Bridge	1939	County	Spokane
290/4	West Trent (Spokane River) Bridge	1917	WSDOT	Spokane
254	Arden Bridge	1917	County	Stevens
224	Barstow Bridge	1947/1986	County	Stevens
D-1 34019	Durgin Road Tunnel	1912	County	Thurston
15	Salmon Creek Bridge	n.d.	WSDOT	Wahkiakum
4/110	Grays River Bridge	1938	WSDOT	Wahkiakum
4/120	Skamokawa Creek Bridge	1939	WSDOT	Wahkiakum
7	Mid-Valley Creek (Peterson Road) Bridge	1950	County	Wahkiakum
3959	Dell Sharp Bridge	1914	County	Walla Walla
6910	Whiskey Creek (Substation) Bridge	1916	County	Walla Walla
6616	Evans Bridge	1920	County	Walla Walla
9319	Lowden Bridge	1920	County	Walla Walla
9337	Johnson (Touchet River) Bridge	1929	County	Walla Walla
1707	Reese Station Bridge	1935	County	Walla Walla
12/619	Walla Walla River Bridge	1917/1933	WSDOT	Walla Walla
12/624	Touchet River Bridge	1919/1937	WSDOT	Walla Walla
12/630	Woodward Creek Bridge	1919/1937	WSDOT	Walla Walla
12/631	Woodward Creek Bridge	1919/1937	WSDOT	Walla Walla
12/660	Dry Creek Bridge	1920/1969	WSDOT	Walla Walla
148	South Fork of the Van Zandt Bridge	1927/1974	County	Whatcom
1	Little Squalicum Bridge	1933/1955	County	Whatcom
252	Nooksack River Bridge	1934/1955	County	Whatcom
504/503	Gooseberry Point/Lummi Island Ferry Bridge	1950/1987	County	Whatcom
542/30	North Fork of the Nooksack River Bridge	1931	WSDOT	Whatcom
126000077	Seltice Bridge	1912	County	Whitman
2-17	Staley No. 3 Bridge	1912	County	Whitman
2-21	Edmondson Bridge	1914	County	Whitman
1-26	Kenova Bridge	1916	County	Whitman

No.	Name	Date Built	Owner	County
1-108	McLead Bridge	1916/1969	County	Whitman
3-36	White Elephant Bridge	1917	County	Whitman
436	Old Naches Bridge	1918	County	Yakima
801	Old Naches Bridge	1918	County	Yakima
398	Parker Heights Bridge	1919	County	Yakima
401	Zillah Heights Bridge*	1920/1965	County	Yakima
460	Old Naches Road Bridge	1922	County	Yakima
786	Powerhouse (Naches River) Bridge	1922	County	Yakima
448	Englewood Bridge	1930	County	Yakima
163	Country Club Bridge	1938	County	Yakima
410/220	Little Naches River Bridge	1928	WSDOT	Yakima
82/114N	Yakima River Bridge	1932	WSDOT	Yakima
12/317	Tieton River No. 1 Bridge	1933	WSDOT	Yakima
12/316	Tieton River No. 2 Bridge	1933	WSDOT	Yakima
12/308	Rimrock Tunnel	1936	WSDOT	Yakima

Examples of Historic Bridge Rehabilitation Projects

Grays River Covered Bridge (built 1905), Wahkiakum County, WA

Bridge Type: Timber Howe through truss span with steel tension rods, tin roof, and cedar siding

Rehabilitation Cost: $343,705 Estimated Cost of New Bridge: about the same as rehabilitation

Project Summary: Retained the existing center pier, replaced the truss (upper and lower chords) with glue laminated members, salvaged existing tension rods, bearing plates, other hardware, and materials from the existing cover of the bridge to be reused in the reconstruction.

Second Street Bridge (built 1886), Allegan, MI

Bridge Type: Double-intersection Pratt through truss (Whipple-Murray truss)

Rehabilitation Cost: $500,000 Estimated Cost of New Bridge: $1.5 million

Project Summary: Disassembled truss and replaced deteriorated members with new ones matching the originals; used bolts rather than rivets, matching the original appearance; changed to carry one-way traffic; received exemption from AASHTO standards for historical considerations.

Smithfield Street Bridge (built 1883), Pittsburgh, PA

Bridge Type: Steel lenticular truss

Rehabilitation Cost: $16 million Estimated Cost of New Bridge: $30 million

Project Summary: Replaced deteriorated bridge deck and railings; retrofitted structural eyebars to eliminate fatigue cracking; repaired masonry and mortar on piers and abutments; installed a new lighting scheme to illuminate the bridge and to serve as a city landmark and gateway.

Cornish/Windsor Covered Bridge (built 1966), Windsor, VT, and Cornish City, NH

Bridge Type: "Town Lattice" covered timber

Rehabilitation Cost: $4.3 million Estimated Cost of New Bridge: $5.5 million

Project Summary: Replaced overstressed structural members with new prefabricated glue-laminated timbers (solid timbers of the original size are not commercially available); preserved the bridge's structural system, appearance, and setting.

West Fifth Street Bridge (built 1925), Ashtabula, OH

Bridge Type:	Single-leaf Brown (Mystic-type) bascule
Rehabilitation Cost:	$3 million Estimated Cost of New Bridge: $6 million
Project Summary:	Disassembled the moving span; replaced truss span stringers and floorbeams; replaced deteriorated lower chord connections; replaced bridge deck; repaired concrete and steel railing; constructed new fenders, abutment, and operator's house; installed new electrical and mechanical systems; rebalanced the structure by increasing the weight of the counterweight.
Source:	Jester, Thomas C. "Preserving Historic Bridges," *CRM Supplement*, volume 15, number 2, 1992. Washington, D.C.: U.S. Department of the Interior, National Park Service.

Other examples of historic bridge rehabilitation projects may be found in *The Society of Industrial Archaeology Newsletter*, volume 18, number 1, 1989. Washington, D.C.: National Museum of History.

Sample Memorandum of Agreement on Projects Affecting Historic Bridges

WHEREAS, the Federal Highway Administration (FHWA) has determined that the _____ Project will have an effect upon a historic property (eligible for/listed in) the National Register of Historic Places; and

WHEREAS, the FHWA has requested the comments of the Advisory Council on Historic Preservation (Council) pursuant to the National Historic Preservation Act of 1966, as amended, and its implementing regulations;

NOW THEREFORE, the FHWA the Washington State Historic Preservation Officer (SHPO), and the Council agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on the historic property.

Stipulations
_____ Bridge

FHWA will ensure that the following measures are carried out:

1. The _____ Bridge will be documented prior to its removal (in the case of demolition as a proposed alternative) so that there will be a permanent record of its present appearance and history. The level of documentation shall be determined appropriate (as per agreement) in consultation between the SHPO and the Washington Department of Transportation (WSDOT). Copies of the documentation will be provided to the SHPO.

2. In consultation with the SHPO, the _____ Bridge shall be marketed as follows:

    a. WSDOT will prepare an information package containing structure data, photographs, location map, information on its historic significance, estimated cost for relocation and requirements regarding relocation, rehabilitation, and maintenance. The package shall also include the relevant section of *The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. Respondents expressing an interest in acquiring the bridge shall be required to submit a relocation and reuse plan and specifics regarding the new site location.

    b. A grant to defray the costs of disassembly and relocation, equal to the estimated cost of demolition of the bridge shall be offered to any recipient who will agree to abide by preservation covenants.

c. The _____ Bridge will be advertised and a schedule for receiving and reviewing offers will be developed in consultation with the SHPO. All offers shall be reviewed in consultation with the SHPO.

d. The _____ Bridge will be offered for relocation with preference to potential recipients who agree to abide by preservation covenants (as developed in consultation with the SHPO).

3. If applicable, an Agreement to Execute Preservation Covenants shall be signed by the grantee at the same time that the bridge bill of sale or transfer is executed. (Such agreement will be recorded in the office of the Clerk and Recorder of the county in which the bridge is currently located. The preservation covenant will be executed according to the conditions of the Agreement to Execute Preservation Covenants). WSDOT or the present owner shall abide by an Interim Maintenance Plan to ensure that the _____ Bridge is maintained in satisfactory condition prior to transfer.

4. If the _____ Bridge is relocated, the SHPO shall reevaluate the property in its new location and make a recommendation to the Secretary of Interior concerning its continued eligibility to the National Register of Historic Places.

5. If there is no acceptable offer that will conform to the requirements of relocation, rehabilitation, and maintenance, the FHWA with the approval of the SHPO may permit transfer of all or part of the property without preservation covenants.

6. If no new owner can be found to relocate the bridge, it shall remain the property of WSDOT and may be disposed of or demolished as deemed appropriate.

7. If a dispute arises regarding implementation of this Agreement, the signatory parties will consult with the objecting party to resolve the dispute. If any consulting party determines that the dispute cannot be resolved, the FHWA shall request further comments of the Council pursuant to its regulations.

8. Failure to carry out the terms of this Agreement requires that the FHWA again request the Council's comments. If the FHWA cannot carry out the terms of this Agreement, it will not take or sanction any action to make an irreversible commitment that would result in an adverse effect with respect to the eligible property covered by the Agreement or that would foreclose the Council's considerations of modifications or alternatives that could avoid or mitigate the adverse effect on the property, until the commenting process has been complete.

9. If any of the signatories to this Agreement determine that the terms of the Agreement cannot be met or believe a change is necessary, that party will immediately request the consulting parties to consider an amendment or addendum which will be executed in the same manner as the original Agreement.

   Within 90 Days after carrying out the terms of the Agreement, the FHWA shall report to all signatories on the actions taken.

Execution of this Memorandum of Agreement evidences that the FHWA has afforded the Council a reasonable opportunity to comment of the _____ Project and its effects on historic properties and that the FHWA has taken into account the effect of its undertaking on Historic properties.

Signatories

_____

Federal Highway Administration Date

_____

Washington State Historic Preservation Officer Date

Concur:

_____

Advisory Council on Historic Preservation Date

_____

Washington State Department of Transportation Date

Construction Procedures for Discovery of Archaeological and Historical Objects

Following are General Special Provisions to be added to contract specifications as indicated. These are current as of March 6, 2000. More recent updates may be available via WSDOT's web site:

http://www.wsdot.wa.gov

Click on Site Index, then "P", then Project Development Branch, then View Amendments/General Special Provisions, then select a version of Division 1.

Or by direct link:

http://www.wsdot.wa.gov/eesc/CAE/pse/PLANTBCN.HTM

http://www.wsdot.wa.gov/eesc/design/projectdev/gsppage1.htm

GENERAL SPECIAL PROVISIONS DIVISION 1

0716.GR1 – Protection and Restoration of Property

07161.GR1 – Archaeological and Historical Objects (March 13, 1995)

Use in projects when reconnaissance studies indicate that the probability of finding cultural remains within the project limits are low. (Fill in blank to indicate specific areas of concern.)

It is national and state policy to preserve, for public use, historical and prehistorical objects such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint. The Contractor shall particularly watch for cultural remains such as bone, fire cracked rock, shell or other artifacts during [fill in details].

Archaeological or historical objects, which may be encountered by the Contractor, shall not be further disturbed. The Contractor shall immediately notify the Engineer of any such finds.

The Engineer will contact the State Historical Preservation Officer (SHPO) who will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made. If the archaeologist determines that the material is to be salvaged, the Engineer may require the Contractor to stop work in the vicinity of the discovery until the salvage is accomplished.

Loss of time suffered by the Contractor due to resulting delays will be adjusted in accordance with Section 1-08.8.

07162.GR1 – Archaeological and Historical Objects (March 13, 1995)

Use in projects when reconnaissance studies indicate no specific areas of concern.

It is national and state policy to preserve, for public use, historical and prehistorical objects such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint.

Archaeological or historical objects, which may be encountered by the Contractor, shall not be further disturbed. The Contractor shall immediately notify the Engineer of any such finds.

The Engineer will contact the State Historical Preservation Officer (SHPO) who will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made. If the archaeologist determines that the material is to be salvaged, the Engineer may require the Contractor to stop work in the vicinity of the discovery until the salvage is accomplished.

Loss of time suffered by the Contractor due to resulting delays will be adjusted in accordance with Section 1-08.8.

07163.GR1 – Archaeological and Paleontological Salvage (May 28, 1996)

Use in projects when reconnaissance studies indicate requirement for monitoring the project area during clearing, grubbing or excavation operations. Requires a pay item.

It is national and state policy to preserve, for public use, historical and prehistorical objects such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from an historical or scientific standpoint.

The project area potentially contains cultural resources. At the discretion of the Contracting Agency, clearing and grubbing operations will be monitored, and archaeological testing conducted, by the Contracting Agency's archaeologist consultant.

The Contractor shall notify the Engineer, in writing, at least ten days prior to the date the Contractor intends to begin clearing and grubbing operations.

The Contractor may be required to conduct clearing and grubbing operations in a manner that will reserve portions of the work area for testing and exploratory operations. Contract time lost, in the opinion of the Engineer, due to these operations will be adjusted in accordance with Section 1-08.8.

Added costs for modification of intended construction methods or for inefficiencies introduced by the use of a different sequence of work to reserve portions of the work area shall be incidental to other items of work.

Added work necessary to uncover, fence, dewater, or otherwise protect or assist in salvage as ordered by the Engineer shall be paid by force account as provided in Section 1-09.6.

To provide a common basis for all bidders, the Contracting Agency has entered an amount for the item "Archaeological and Paleontological Salvage" in the Proposal to become a part of the total bid by the Contractor.

Archaeological Resources Protection Act Permit Process on Federal Lands (Non-Tribal)

The Archaeological Resources Protection Act (ARPA) requires a permit for excavation or removal of archaeological resources from federal or Indian lands (43 CFR 7.6-7.11). Procedures for obtaining ARPA permits for work on federal lands include:

1. During the annual review, the Regions will identify potential projects crossing federal lands which may need ARPA permits.

2. When a Task Assignment Document (TAD) using the ESO On-Call Agreements is approved for the project, the Archaeological Consultant will complete an application for an ARPA permit and send it to the Region involved.

3. The Region will send the application to the federal agency having jurisdiction. Each agency will have its own internal process in granting permits, thus turnaround time for each application could be different.

4. Agencies will respond to the Region (not to the archaeological consultant) via a letter giving approval.

5. The Region will advise the archaeological consultant to proceed with the work.

6. The archaeological consultant will do surveys or reconnaissance, and, when the potential exists that a resource may be present, cultural resource testing. When testing indicates there is a resource present that the project will impact, data recovery may be recommended. A second ARPA permit may be required for data recovery, and the above process is repeated.

Archaeological Resources Protection Act Permit Process on Tribal Lands

ARPA permit process when Indian lands are involved in a WSDOT project.

1. During the annual archaeological review, the Regions will identify Indian lands needing ARPA permits.

2. When a project TAD is approved, the Archaeological Consultant will complete an application for an ARPA permit and send it to the Region involved.

3. The Region will determine which type of Tribal land is involved; Reservation Lands, Allotment Lands on the reservation, or Allotment Lands off the reservation. The Regions will then apply for the permit as follows:

    a. Tribal Lands on the reservation:

        1) The Region will contact the U.S. Bureau of Indian Affairs (BIA) in Portland to see if the process could be shortened and not involve the Tribes.

        2) The Region will send an application to the Tribe, requesting a letter of approval. The Tribe should return the application to the Region.

        3) The Region will send Tribe-approved application to the BIA in Portland, requesting approval.

        4) The BIA will respond to the Region via a letter of approval.

        5) Region will advise the Archaeological Consultant to proceed with the work.

        6) The Archaeological Consultant will do surveys or reconnaissance and, when the potential exists that a resource may be present, cultural resource testing. When testing indicates there is a resource present that the project will impact, data recovery may be recommended. A second ARPA permit may be required for data recovery, and the above process is repeated.

    b. Allotment Lands On the Reservation

        1) The Region will request the allottees' names from the BIA in Portland and/or the BIA office on the Tribal reservation. Contact the allottees, requesting written approval or disapproval of the archaeological project. Fifty-one percent of the allottees on each allotment involved in the project must approve of the archaeological project in order for the permit to be acquired. (Contact with the allottees should be done by the Region

Right-Of-Way Office as part of the normal right-of-way negotiation procedure. The Archaeological Consultant can assist in that effort as requested by the Region.)

2) After allottee approval is obtained, the Region will send an application to the Tribe requesting their approval since they also must agree to give the permit. (When the Tribe approves, they could add conditions.) The Tribe is requested to return the application to the Region.

3) Region will send the Tribe-approved application to BIA in Portland for approval.

4) The BIA will respond to the Region via letter of approval.

5) The Region will advise the Archaeological Consultant to proceed with the work.

6) The Archaeological Consultant will do surveys or reconnaissance, and, when the potential exists that a resource may be present, cultural resource testing. When testing indicates there is a resource present that the project will impact, data recovery may be recommended. A second ARPA permit may be required for data recovery, and the above process is repeated.

c. Allotment Lands Off the Reservation

1) The Region will request the allottees' names from the BIA in Portland and/or the BIA office on the Tribal reservation. Contact the allottees requesting written approval or disapproval of the archaeological project. Fifty-one percent of the allottees on each allotment involved in the project must approve of the archaeological project in order for the permit to be acquired. (Contact with the allottees should be done by the Region right of way as part of the normal right of way negotiation procedure. The Archaeological Consultant can assist in that effort as requested by the Region.)

2) The Region will send approved application to the BIA in Portland for approval.

3) The BIA will respond to the Region via letter of approval.

4) The Region will advise the Archaeological Consultant to proceed with the work.

5) The Archaeological Consultant will do surveys or reconnaissance, and, when the potential exists that a resource may be present, cultural resource testing. When testing indicates there is a resource present that the project will impact, then data recovery may be recommended. A second ARPA permit may be required for data recovery, and the above process is repeated.

457 Social, Economic, and Relocation

457.01 Introduction
457.02 Applicable Statutes and Regulations
457.03 Policy Guidance
457.04 MOUs, MOAs, and Interagency Agreements
457.05 Technical Guidance
457.06 Permits
457.07 Non-Road Project Requirements
457.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

457.01 Introduction

This section discusses considerations related to potential social, economic and environmental justice impacts of a transportation project, including the following categories:

- ***Social*** – Impacts on community cohesiveness, neighborhood patterns, recreation or community facilities.
- ***Economic*** – Impacts to the local economy and long-term impacts, which may lead to significant economic loss of business and employment.
- ***Housing*** – Impacts on established housing areas.
- ***Relocation*** – Impacts that would require relocation of housing or businesses. For related information on environmental justice issues, see **Section 458**.

(1) Summary of Requirements

Under NEPA implementing regulations, social and economic impacts of transportation projects must be assessed and documented. Relocation policy is provided in the Uniform Relocation Assistance and Real Property Acquisition Act.

SEPA does not specifically require analysis of these issues in environmental documents, but it is assumed that these issues will be taken into account under the general umbrella of state policy.

(2) Abbreviations and Acronyms

ADA	Americans with Disabilities Act
CIA	Community impact assessment
USDOJ	United States Department of Justice

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(3) Glossary

Joint Development – Participating jointly with a local jurisdiction or private party in an element of the project or impact mitigation.

457.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act / State Environmental Policy Act

The National Environmental Policy Act (NEPA), USC 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as social and economic impacts are given due weight in project decision-making.

Under the State Environmental Policy Act (SEPA) implementing rules (RCW 43.21C; Chapter 197-11 WAC)), it is assumed that "the general welfare, social, economic, and other requirements and essential considerations of state policy will be taken into account in weighing and balancing alternatives and in making final decisions." "The term 'socioeconomic' is not used in the statute or in these rules because the term does not have a uniform meaning and has caused a great deal of uncertainty." As a result, SEPA environmental impact statements are not required to analyze socioeconomic impacts.

Federal implementing regulations are in 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ).

State implementing regulations are in Chapter 197-11 WAC and Chapter 468-12 WAC (WSDOT).

For details on NEPA/SEPA procedures, see **Section 410** through **Section 412**.

(2) Uniform Relocation Assistance and Real Property Acquisition Act

This 1970 statute, amended in 1987, establishes a uniform policy for the fair and equitable treatment of individuals and businesses displaced as a direct result of programs or projects undertaken by a federal agency or with federal financial assistance.

The primary purpose of this Act is to ensure that such persons shall not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement.

The Act is available online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice, then The Facts, then Legislation and Guidance.

Or by direct link:

http://www.fhwa.dot.gov/realestate/act.htm

The Federal government and those receiving assistance from the Federal government must take reasonable steps to ensure that Limited English Proficiency (LEP) persons have meaningful access to the programs, services, and information those agencies provide. For further information as to how this pertains to WSDOT, please refer to the Limited English Proficiency (LEP) website at:

http://www.lep.gov/recip.html

The LEP Executive Order and U.S. Dept. of Justice final policy guidance can be accessed from the website. USDOT's proposed guidance can be accessed at

http://www.usdoj.gov/crt/cor/lep/dotlep.htm.

All indications are that, once finalized, the USDOT guidance will mirror that of the U.S. Dept. of Justice.

Along with minority and low-income, disabled individuals and elderly should be identified in the Action area. Disabled individuals are protected under Section 504 of the Rehabilitation Act of 1973 and American for Disabilities Act (ADA. The elderly are protected by the Age Discrimination Act of 1975.

457.03 Policy Guidance

Policy guidance on consideration of social and economic issues is contained in various FHWA documents, such as: 23 USC 109(h); FHWA's Technical Advisory T6640.8; USDOT Order 5610.2 and FHWA Order 6640.23 addressing Environmental Justice; FHWA's Community Impact Assessment Guidebook; et al. Social and economic considerations are also emphasized through WSDOT's Managing Project Delivery.

Local comprehensive plans may contain policies addressing social issues and/or economic development. These are all good resources to utilize during preparation of NEPA or 4(f) studies. See also **Sections 455.03, 456.03** and **458.03**.

Relocation policy is addressed in the Uniform Relocation Assistance and Real Property Acquisition Act.

457.04 MOUs, MOAs, and Interagency Agreements

None identified

457.05 Technical Guidance

Public communication and involvement help to identify the needs, viewpoints, and opinions of stakeholders in transportation projects and is one of the key elements of the FHWA and WSDOT project development process.

WSDOT guidance can be found in the Managing Project Delivery section of the Design Manual (Division 1, Chapter 140) located at

www.wsdot.wa.gov/fasc/engineeringpublications/manuals/designmanual.pdf

FHWA guidance on public involvement is available online at FHWA's home page:

http://www.fhwa.dot.gov

More information can also be found in the Environmental Justice section, **Section 458.**

(1) WSDOT Discipline Reports

WSDOT has prepared three Discipline Report checklists, social, economic and relocation to assist in preparing the social, economic and relocation impacts sections of environmental documents. These studies should be performed in coordination with local agencies.

See also the environmental justice step by step guide, **Exhibit 458-1.** Flowchart, **Exhibit 458-2** and Discipline Report checklist, **Exhibit 458-3**, that include additional guidance.

The EJ checklist should be completed when an environmental justice population has been identified.

(a) Social Elements

This Discipline Report covers such things as community cohesion, recreation, regional and community population characteristics and growth, public services,

pedestrian, transit and bicycle facilities, safety, and environmental justice (see guide and checklists, **Exhibit 457-1**, **Exhibit 458-1** and **Exhibit 458-2**).

The "affected environment" covered by this Discipline Report includes community cohesion (neighborhood population characteristics and linkages with churches, schools and other community facilities); parks and recreation activities and facilities; population characteristics and growth (see **Section 451.05**); government, religious and social facilities and services; pedestrian, transit and bicycle facilities (see also **Section 460.05**); and environmental justice (**Section 458**).

(b) Economic Elements

This Discipline Report covers such things as the area's general economic climate, established business districts, and businesses related to transportation facilities (see checklist, **Exhibit 457-2**).

The "affected environment" covered by this Discipline Report includes overall economic climate, farm and business activity, employment, property values, and local economy.

(c) Relocation

This Discipline Report covers the potential for transportation projects to result in relocation of residences or businesses (see checklist, **Exhibit 457-3**).

The "affected environment" covered by this Discipline Report includes population characteristics (such as ethnicity and race, disabled, elderly, family, income level, owner/tenant status); businesses (numbers and types of businesses and farms), employment, availability of replacement sites; and long term stability of the area.

This is meant to be completed in combination with the Environmental Justice analysis when an Environmental Justice population has been identified. See **Section 458**.

(2) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A,

Guidance for Preparing and Processing Environmental and Section 4(f) Documents (October 30, 1987), gives guidance on preparing sections on social, economic, and relocation impacts, and joint development.

This guidance, summarized below, is available online at FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6680.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(a) Social Impacts

The draft EIS should discuss the following for each alternative:

(a) changes in the neighborhoods or community cohesion for various social groups as a result of the proposed action;
(b) changes in travel patterns and accessibility (e.g., vehicular, commuter, transit, bicycle, or pedestrian);

(c) impacts on school districts, recreation areas, churches, businesses, and police and fire protection services (including both direct impacts to these entities and indirect impacts of displacing households and businesses);

d) impacts of alternatives on highway and traffic safety and on overall public safety;

(e) social groups especially benefited or harmed by the proposed project, particularly disproportionate impacts to elderly, disabled, non-drivers, transit-dependent, minority, ethnic and low-income groups.

(b) Relocation Impacts

Following is a summary of information regarding households and businesses that should be discussed for each alternative when a proposed project will result in displacements:

(a) Estimated number and characteristics of households to be displaced. (such as minority, low-income, elderly, disabled.)

(b) Comparison of available comparable housing within reasonable distance with the housing needs of these households.

(c) Affected neighborhoods, public facilities, non-profit organizations, unique businesses and families, special relocation considerations and the measures proposed to resolve these relocation concerns.

(d) Measures to be taken if available alternate housing is inadequate.

(e) Estimate of the numbers, descriptions, types of occupancy (owner/tenant), and sizes (number of employees) of businesses and farms to be displaced.

(f) Description of business or farm products and services, particular requirements, and specific availability of replacement sites or buildings.

(g) Coordination with local governments, organizations, groups, and individuals regarding residential and business relocation impacts, including any measures or coordination needed to reduce general and/or specific impacts. The report should include a statement that (1) the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and (2) relocation resources are available to all relocatees without discrimination.

(c) Economic Impacts

Where there are foreseeable economic impacts, the draft EIS should discuss the following for each alternative:

(a) The economic impacts on the regional and/or local economy such as development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales.

(b) Impacts on the economic vitality of existing highway-related businesses (e.g., gasoline stations and motels) and the overall local economy.

(c) Impacts of the proposed action on established business districts, and any opportunities to minimize or reduce such impacts by the public and/or private sectors.

(d) Joint Development

Where appropriate, the draft EIS should identify and discuss joint development measures, undertaken by WSDOT in cooperation with a local jurisdiction or private party, that will preserve or enhance an affected community's social, economic, environmental, and visual values.

This discussion may be presented separately or combined with the land use and/or social impacts presentations. The benefits to be derived, those who will benefit

(e.g., communities and/or social groups), and the entities responsible for maintaining the measures should be identified.

(3) Other FHWA Resources

The following FHWA publications on community impacts may be useful in analyzing social and economic impacts.

National Community Impact Assessment Research Design Team – Recommendations for Development of the Strategic Plan. Prepared for FHWA by the Center for Urban Transportation Research, University of South Florida (April 1999).

Community Impact Mitigation Handbook. Publication No. FHWA-PD-98-024 (May 1998).

Community Culture and the Environment. A Guide to Understanding a Sense of Place. 2002, U.S. EPA (EPA 842-B-01-003).

Community Impact Assessment: A Quick Reference for Transportation. Publication No. FHWA-PD-96-036 (September 1996). See description in **Section 458.05**.

These documents may in the future be available online at FHWA's web site.

Meanwhile, a comprehensive bibliography for environmental justice and community impact assessment can be found at:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice, then Resources.

Or by direct link:

http://www.fhwa.dot.gov/environment/ejustice/lib/ejbib.pdf

The index of resources is at:

http://www.fhwa.dot.gov/environment/ejustice/lib/index.htm

457.06 Permits

None.

457.07 Non-Road Project Requirements

Ferry, rail, aviation, and non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road projects.

457.08 Exhibits

Exhibit 457-1 – Discipline Report Checklist, Social Elements.

Exhibit 457-2 – Discipline Report Checklist, Economic Elements.

Exhibit 457-3 – Discipline Report Checklist, Relocation.

Washington State Department of Transportation

Discipline Report Checklist
Social Elements

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)
Answers are required for questions that have no N/A box.

I. Studies and Coordination

(Refer to 42 USC 2000d-d4, Title VI of the Civil Rights Act of 1964, CEQ 1508.8(b).)

SAT	INC	MIS	N/A	
☐	☐	☐		A. Describe studies performed and coordination with local agencies. Identify agencies and programs administered.

II. Public Involvement/Interaction

SAT	INC	MIS	N/A	
☐	☐	☐		A. Description of public involvement/interaction plan
☐	☐	☐		1. Include any tribal contact and determine if government-to-government consultation is needed.
☐	☐	☐		2. Include any targeted outreach to minority, disabled and low-income populations, as applicable.
☐	☐	☐		3. Include any specific efforts to address limited English proficiency, if applicable.

III. Affected Environment

Report should include a description of each Section 4(f) resource:

SAT	INC	MIS	N/A	
☐	☐	☐		A. Community Cohesion. Describe neighborhood population characteristics (e.g., minority, elderly, disabled, transit-dependent, large family, income level, (owner/tenant status). Access and linkages with community facilities (churches, schools, community centers, etc.). (If a low-income and/or minority population is identified, see Environmental Justice, Section 458.)
☐	☐	☐		B. Recreation. Describe and show maps of the type and location of parks, recreation areas, recreation trails, and natural landmarks. Include information on:
☐	☐	☐	☐	1. Available activities and facilities.
☐	☐	☐	☐	2. Use and number of users per activity.

SAT	INC	MIS	N/A	
☐	☐	☐	☐	3. Unique qualities.
☐	☐	☐	☐	4. Statement of national, state, or local significance as determined by official with jurisdiction.
☐	☐	☐	☐	5. Access.
☐	☐	☐	☐	6. Ownership.
☐	☐	☐	☐	7. Section 4(f) and/or 6(f) applicability.
				C. Regional and Community Growth. Consider:
☐	☐	☐		1. Local and regional population - breakdown by towns and communities.
☐	☐	☐		2. Population projected changes
☐	☐	☐		a. Ethnic/racial composition.
☐	☐	☐		b. Age/family composition.
☐	☐	☐		c. Income levels/major employment.
☐	☐	☐		d. Limited English composition
☐	☐	☐		e. Disabled composition
☐	☐	☐		f. Status of community, if in transition.
				D. Services. Discuss:
☐	☐	☐		1. Educational facilities and attendance boundaries
☐	☐	☐		2. Religious institutions.
☐	☐	☐		3. Social institutions (community centers, fraternal organizations, children's homes, etc.).
☐	☐	☐		4. Medical services (hospitals, nursing homes, medical and dental clinics, etc.).
☐	☐	☐		5. Fire and police protection.
☐	☐	☐		6. Public services and utilities (energy, telephone, cable, water, sewer, solid waste, storm water, and others as appropriate).
☐	☐	☐		7. Cemeteries.
☐	☐	☐	☐	8. Government institutions and national defense installations.
☐	☐	☐	☐	9. Other governmental services. Particularly social service/aid programs and locations as relates to proposed action.
☐	☐	☐	☐	E. Pedestrian, Bicyclist, and Transit Facilities.
☐	☐	☐	☐	1. Describe location and type of existing facilities, including discussion of local plans.
☐	☐	☐	☐	2. State whether local and land use/recreation plans include bike/pedestrian/transit facilities. Include paratransit where appropriate.
☐	☐	☐	☐	3. Consider travel times (if available), capacity, circulation, and congestion on other facilities in the region.

SAT	INC	MIS	N/A	
☐	☐	☐	☐	4. Discuss whether new facilities are proposed, include sufficient information to explain the basis for providing them (e.g., proposed bicycle facility is a link in the local plan, a new bus stop is needed, or sidewalks will reduce project access impact).
☐	☐	☐	☐	5. Safety.
☐	☐	☐	☐	6. Discuss whether the project has potential to connect existing bike/pedestrian/transit facilities.
				F. Environmental Justice.
☐	☐	☐		1. Document the presence of low income or minority communities.
				(If low income and/or minority population is identified, refer to Section 458.)

IV. Impacts

SAT	INC	MIS	N/A	
				A. Community Cohesion. Consider project effects on the community such as:
☐	☐	☐		1. Impacts on community life.
☐	☐	☐		2. Effects on persons and groups.
☐	☐	☐		3. Changes in social relationships/patterns.
☐	☐	☐		4. Isolation - community divided or set apart by project.
☐	☐	☐		5. Redistribution, influx or loss of population.
☐	☐	☐		6. Cutting off streets.
☐	☐	☐		7. Separating residences from community facilities.
☐	☐	☐		8. Separating adjoining residential areas.
☐	☐	☐		9. Isolating areas.
☐	☐	☐		10. Increasing automobile dependency.
☐	☐	☐		11. Impact to and availability of affordable and accessible housing supply within the study area.
				B. Recreation. Consider direct and indirect (growth induced, etc.) impacts on:
☐	☐	☐	☐	1. Facilities/capacity.
☐	☐	☐	☐	2. Access.
☐	☐	☐	☐	3. Aesthetics.
☐	☐	☐	☐	4. Air quality.
☐	☐	☐	☐	5. Noise.
☐	☐	☐	☐	6. Water.
☐	☐	☐	☐	7. Land use in the vicinity.

SAT	INC	MIS	N/A	
				C. Cultural Resources
☐	☐	☐	☐	1. Describe any impacts to tribal area i.e.: usual and customary (reference Cultural Resources discipline report.)
☐	☐	☐	☐	D. Recreational and Community Growth. Consider:
☐	☐	☐		1. Population changes caused by the proposed project (CEQ 1508.8(b)). Include estimates on the effects such changes will have on the resource base in the study area. (Where a project induces significant growth, discuss the impacts of such growth under the appropriate headings in this outline. See also E.)
☐	☐	☐		2. Effect on characteristics of population in the study area.
☐	☐	☐		a. Ethnic/racial composition.
☐	☐	☐		b. Age/family composition.
☐	☐	☐		c. Income levels/major employment.
☐	☐	☐		3. Effect on population growth patterns.
☐	☐	☐		E. Services. Consider the following impacts on each of the services listed in 2.d., above.
☐	☐	☐		1. Changes in service travel times.
☐	☐	☐		2. Circuitry of access.
☐	☐	☐		3. Changes in service area.
☐	☐	☐		4. Potential new or additional public facilities and services needed.
				F. Pedestrian, Transit and Bicyclist Facilities. Consider:
☐	☐	☐	☐	1. Use projections/capacity - design year data.
☐	☐	☐	☐	2. Safety/travel time.
☐	☐	☐	☐	3. Circulation changes.
☐	☐	☐	☐	4. How changes in accessibility will affect facility users.
☐	☐	☐	☐	5. Describe provisions included in the project for a reasonable alternative route, or demonstrate that such a route exists.

V. Mitigation

Consider:

SAT	INC	MIS	N/A	
				A. Community Cohesion. Describe:
☐	☐	☐		1. Mitigation measures and commitments.
☐	☐	☐		2. Mitigation measures considered or available but not included, with reasons why.

SAT	INC	MIS	N/A	
				B. Recreation. Describe:
☐	☐	☐	☐	1. Mitigation measures and commitments, including 6(f) if applicable.
☐	☐	☐	☐	2. Mitigation measures considered or available but not included, with reasons why.
☐	☐	☐	☐	C. Regional and Community Growth. Mitigation is normally not applicable. (See "Land Use.")
				D. Services. Describe:
☐	☐	☐	☐	1. Mitigation measures and commitments.
☐	☐	☐	☐	2. Mitigation measures considered or available but not included, with reasons why.
☐	☐	☐	☐	E. Pedestrian, Transit and Bicyclist Facilities. Discuss any proposed measure to avoid or reduce adverse impacts on the facility and its users.
☐	☐	☐		F. Describe efforts to mitigate impacts on any potentially impacted low income and/or minority communities in the environmental process. (This can be done in separate EJ report)

VI. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification. The summary should include:

SAT	INC	MIS	N/A	
☐	☐	☐		A. The objectives of the project.
☐	☐	☐		B. Current land use patterns. 1. Include any impact on usual and accustomed areas used by tribes.
☐	☐	☐		C. Impacts of all alternatives including the no-build alternative.
☐	☐	☐		D. Recommended mitigation.
☐	☐	☐		E. Comparison of alternatives based on impacts and cost effectiveness of mitigation.
☐	☐	☐		G. Describe public involvement /interaction plan, types of public involvement, timing. .

General Comments: _____

_____

_____

_____

Washington State Department of Transportation

Discipline Report Checklist
Economic Elements

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)
Answers are required for questions that have no N/A box.

I. Studies and Coordination

(Refer to National Cooperative Highway Research Report-122, *Summary and Evaluation of Economic Consequences of Highway Improvements*.)

SAT	INC	MIS	N/A		
☐	☐	☐		A.	Field interviews with employers in impacted area. Include small, large, minority owned and any unique businesses 1. Discuss what kind of adverse impact any relocations could have on employees as well as local economy. I.e.: where do employees live? How do they get there?
☐	☐	☐		B.	Residents.
☐	☐	☐		C.	County and city government officials.
☐	☐	☐		D.	Local business and economic leaders.
☐	☐	☐		E.	Studies of existing conditions.
☐	☐	☐		F.	New industrial and commercial development in various planning or construction phases.
☐	☐	☐	☐	G.	Market feasibility studies.
☐	☐	☐		H.	Real estate transactions.
☐	☐	☐		I.	Property assessment valuations.
☐	☐	☐		J.	County tax rolls.

II. Affected Environment

SAT	INC	MIS	N/A		
☐	☐	☐		A.	Describe general economic climate of the area.
☐	☐	☐		B.	Include established business districts and transportation facility related business.

III. Impacts

SAT	INC	MIS	N/A	
				A. Describe effects on overall business activity of:
☐	☐	☐	☐	1. Loss of productive business or farm property through induced development.
☐	☐	☐		2. Increases or decreases in travel time for shipment of goods.
☐	☐	☐		3. Changes in business and shopping patterns as a result of changes in accessibility; e.g., effects on highway related businesses.
☐	☐	☐		4. Loss of business due to construction of alternative on new alignment including any businesses important to low-income and/or minority populations.
				B. Describe increase, decrease, or change in location in permanent jobs after completion, due to:
☐	☐	☐	☐	1. Basic industry or commercial location and relocation.
☐	☐	☐	☐	2. Bypass diversions.
☐	☐	☐	☐	3. Barrier effects.
☐	☐	☐	☐	4. Induced growth or development.
☐	☐	☐	☐	5. Facility relocation.
				C. Describe effects on property value trends and the local economy of:
☐	☐	☐	☐	1. Traffic volumes.
☐	☐	☐	☐	2. Competing enterprises and centers.
☐	☐	☐	☐	3. Visibility.
☐	☐	☐	☐	4. Physical access to facility or property.
☐	☐	☐	☐	5. Altered commercial sales potential.
☐	☐	☐	☐	6. Reduced revenue from loss of taxable property to highway right of way.
☐	☐	☐	☐	7. Changed revenue from in-migration or out-migration of high tax-producing land users.
				D. Describe these effects on the region:
☐	☐	☐	☐	1. Effects on bypassed communities and/or businesses.
☐	☐	☐	☐	2. Effects on areas in proximity to the facility.
☐	☐	☐	☐	3. Effects on areas near interchanges or transit stops.

IV. Mitigation

SAT	INC	MIS	N/A	
☐	☐	☐	☐	A. Mitigation measures and commitments; e.g., access control, commitments to minority/low income affected community.
☐	☐	☐	☐	B. Mitigation measures considered or available but not included, with reasons why.

V. Construction Activity Impacts

(All impacts associated with construction of the project are to be addressed in a "Construction Activity Impacts" section of the EIS. Provide the following information, as appropriate, for inclusion in that section.)

SAT	INC	MIS	N/A	
				A. Under **Impacts**, consider temporary construction effects, such as:
☐	☐	☐	☐	1. Construction expenditures.
☐	☐	☐	☐	2. Temporary construction revisions to business or farm access.
☐	☐	☐	☐	3. Temporary jobs created during construction.
☐	☐	☐	☐	4. Impact of construction expenditures on sales tax revenues (consider multiplier effect).
☐	☐	☐	☐	B. Under **Mitigation**):
☐	☐	☐	☐	1. Mitigation measures and commitments; e.g., access provisions, public information program for construction activities.
☐	☐	☐	☐	2. Mitigation measures considered or available but not included, with reasons why.

VI. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modifications.

SAT	INC	MIS	N/A	
☐	☐	☐		A. The objectives of the project.
☐	☐	☐		1. Current economic activity and patterns.
☐	☐	☐		2. Impacts of all alternatives including the no build.
☐	☐	☐		3. Recommended mitigation.
☐	☐	☐		B. Alignment with any local comprehensive and/or neighborhood plans.
☐	☐	☐		B. Comparison of alternatives based on impacts and cost effectiveness of mitigation.

General Comments: _____

_____

_____

_____

_____

_____

Washington State Department of Transportation

Discipline Report Checklist
Relocation

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)
Answers are required for questions that have no N/A box.

I. Studies and Coordination

(Refer to Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970 as amended in 1987.)
Consider:

SAT	INC	MIS	N/A		
☐	☐	☐		A.	Census data.
☐	☐	☐	☐	B.	Social/economic reports.
☐	☐	☐	☐	C.	Contact with community leaders and local officials.
☐	☐	☐		D.	Field surveys.

II. Affected Environment

Discuss (if necessary):

SAT	INC	MIS	N/A		
☐	☐	☐	☐	A.	Characteristics of the affected area, such as minority and ethnic, disabled, elderly, family size, income level, owner/tenant status, and long-term stability of the area (e.g., is the area in transition?)
☐	☐	☐	☐	B.	Numbers, descriptions, types of occupancy, and sizes (number of employees) of business and farms within the area. Describe business or farm products or services, particular requirements, specific availability of replacement sites/buildings.

III. Impacts

SAT	INC	MIS	N/A		
				A.	Residential impacts. Include an estimate of the number of households to be displaced and any anticipated relocation problems to the extent such information is available. Describe:
☐	☐	☐	☐	1.	Dwelling types(s); i.e., single-family, multi-family, Section 8 or other subsidized housing, etc.

SAT	INC	MIS	N/A	
☐	☐	☐	☐	2. Occupancy type (owner/tenant).
☐	☐	☐	☐	3. Resident characteristics.
☐	☐	☐	☐	a. Elderly.
☐	☐	☐	☐	b. Disabled.
☐	☐	☐	☐	c. Minorities (racial, ethnic, or religious groups).
☐	☐	☐	☐	d. Income level (low, middle, high).
☐	☐	☐	☐	e. Large or small families.
☐	☐	☐	☐	f. Length of occupancy.
☐	☐	☐	☐	g. Transit dependency.
☐	☐	☐	☐	h. Limited English speaking
☐	☐	☐	☐	B. Summarize how many minority and/or low-income households are impacted.
☐	☐	☐	☐	C. Business, farm, and nonprofit organization impacts.
☐	☐	☐	☐	1. Estimate of the number, types, and sizes of businesses, farms, and nonprofit organizations to be displaced. How many of these are minority owned or operated?
☐	☐	☐	☐	2. The approximate number of employees for each business, farm, and nonprofit organization.

IV. Mitigation

Discuss relocation assistance. (Preparers should consult regional Real Estate Services personnel as early as possible for assistance in preparing relocation information.)

SAT	INC	MIS	N/A	
				A. Residential.
☐	☐	☐	☐	1. Describe available housing in the area and the ability to provide suitable relocation housing for residents being displaced, including moving existing structures to a new location.
☐	☐	☐	☐	2. Describe any special advisory or other services that will be necessary for special relocation problems.
☐	☐	☐	☐	3. Include a statement of commitment to last resort housing when sufficient comparable replacement housing may not be available.
				B. Business, farm, and nonprofit organizations.
☐	☐	☐	☐	1. Discuss probable availability of replacement facilities for business and nonprofit organizations, including moving existing structures to a new location.
☐	☐	☐	☐	2. Discuss potential relocation of farm operations.

SAT	INC	MIS	N/A		
☐	☐	☐	☐	C.	Include a statement that the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and that relocation resources are available to all residential and business relocatees without discrimination.
☐	☐	☐	☐	D.	Describe specific measures or coordination discussed with local governments, organizations, etc., to reduce general or specific impacts. Special financial and incentive programs or opportunities (beyond those provided by the Uniform Relocation Assistance Act) available throughout other agencies or organizations for residential and business relocatees may be identified.
☐	☐	☐	☐	E.	Describe any additional mitigation measures and commitments.

V. Construction Activity Impacts

All impacts associated with construction of the project are to be addressed in a "Construction Activity Impacts" section of the EIS. Provide the following information, as appropriate, for inclusion in that section.

SAT	INC	MIS	N/A			
☐	☐	☐	☐	A.	**Impacts**	Normally not applicable.
☐	☐	☐	☐	B.	**Mitigation**	Normally not applicable.

V. Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the EIS with only minor modification.
The summary should include.

SAT	INC	MIS	N/A		
☐	☐	☐		A.	Objectives of the project.
☐	☐	☐		B.	Current housing availability and vacancy rates.
☐	☐	☐		C.	Impacts of all alternatives including the no-build.
☐	☐	☐		D.	Recommend mitigation and reference to the Uniform Relocation Act.
☐	☐	☐		E.	Comparison of alternatives based on impacts and cost effectiveness of mitigation. Total relocations/displacements including number or percentage of minority/low-income households/businesses impacted. Separate into households impacted and businesses impacted.

General Comments: _____

_____.

458.01 Introduction
458.02 Applicable Statutes and Regulations
458.03 Policy Guidance
458.04 MOUs, MOAs, and Interagency Agreements
458.05 Technical Guidance
458.06 Permits
458.07 Non-Road Project Requirements
458.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

458.01 Introduction

This section summarizes environmental justice requirements for WSDOT projects. See related information in **Section 457**.

Transportation projects affect the environment and the quality of our lives. Low-income and minority populations should receive an equitable distribution of the transportation benefits without suffering disproportionately high and adverse impacts.

On February 11, 1994, President Clinton signed Executive Order 12898 requiring federal agencies to administer and implement programs, policies, and activities that affect human health or the environment to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

Incorporation of environmental justice principles throughout the transportation planning and decision making processes is an implementation of the principles of NEPA, Title VI of the Civil Rights Act, the Uniform Relocation Act, TEA-21 and other DOT statutes, regulations and guidance that affect social, economic, environmental, public health and public involvement.

As described in **Section 410** through **Section 412**, the NEPA process includes identifying social and economic effects that are interrelated with natural or physical environmental effects, considering alternatives, coordinating with agencies, involving the public, and utilizing a systematic interdisciplinary approach.

Addressing the issues, coupled with full implementation of the Federal Aid Highway Act 23 USC 109(h) (e.g., community cohesion, availability of public facilities and services, adverse employment effects), will help to prevent discrimination and disproportionately high and adverse impacts.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) Summary of Requirements

Environmental justice is one of the factors considered when developing an environmental impact analysis. It needs to be addressed as any other environmental concern using identification, avoidance, minimization and finally mitigation. To correctly identify potential inequities, the environmental justice analysis may require more detailed studies of communities/populations affected by a transportation project in combination with effective community outreach.

This process is intended to ensure that projects are developed in a manner, which avoids disproportionately high and adverse effects on minority and low - income populations.

FHWA's *Community Impact Assessment,* and WSDOT's 1998 Environmental Justice Guidelines as well as other documents referenced in this section provide requirements for completing this type of study.

WSDOT annually gathers information related to Environmental Impact Statements (EISs) that have been reviewed for Title VI and EJ compliance and finalized for publication. The information is reported to FHWA as part of WSDOT's Annual Title VI Update and Accomplishment Report. The WSDOT Environmental Services Office reports the information to WSDOT's Title VI Coordinator for its incorporation in the report. Further information on Title VI/EJ reporting can be obtained from OEO (360) 705-7098.

(2) Abbreviations and Acronyms

EJ	Environmental Justice
CIA	Community Impact Assessment
Title VI	Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1984.

(3) Glossary

Adverse Impacts – Determined by those individuals potentially impacted by the Action through demographic analysis and early public involvement. Adverse impacts, (as defined by USDOT) and as applied to environmental justice, "may include, but are not limited to: air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and service; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organization; increased traffic congestion; isolation, exclusion or separation of minority or low-income individuals from the broader community; and the denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities." Individuals potentially affected by the project should be identified through demographic analysis and targeted for early public involvement.

Community Impact Assessment (CIA) – A process to evaluate the effects of a transportation action on a community and its quality of life. The assessment process should include all items of importance to people, such as mobility, safety, employment effects, relocation, isolation and other community issues.

Disproportionately High and Adverse Impact – The adverse impact is disproportionately high if it is predominately borne by a minority and/or low-income population, or if the adverse impact that could be suffered by the minority or low-income community is more severe or greater in magnitude than the adverse impact that could be suffered by the non-minority or non-low-income community. Cultural differences need to be factored into this analysis.

Environmental Enhancement – Going beyond mitigation to use all practical measures to harmoniously fit any proposed highway project into the adjacent communities and natural environment it traverses (1990 FHWA Environmental Policy Statement).

Environmental Justice – Refers to the process of identifying and addressing, as appropriate, disproportionately high and adverse health and/or environmental effects on minority and/or low-income populations.

Low-income – A person whose median household income is at or below the Department of Health and Human Services poverty guidelines for that size of household.

Low-Income Population – Any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed DOT program, policy, or activity.

Minority – A person who is:

- Black (a person having origins in any of the black racial groups of Africa).
- Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or the Spanish culture or origin, regardless of race).
- Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands).
- American Indian or Alaskan Native (a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition).

Minority Population - Any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

458.02 Applicable Statutes and Regulations

Statutes and regulations cited in this section can be accessed online from the FHWA/FTA environmental justice web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice.

Or by direct link:

http://www.fhwa.dot.gov/environment/ej2.htm

Also see 457.02 in the Environmental Procedures Manual.

(1) National Environmental Policy Act / State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that considerations such as environmental justice are given due weight in project decision-making.

The State Environmental Policy Act (SEPA), RCW 43.21C mandates a similar procedure for state and local actions, but has no specific requirement for environmental justice.

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ).

State implementing regulations are in Chapter 197-11 WAC and Chapter 468-12 WAC (WSDOT). For details on NEPA/SEPA procedures, see **Section 410** through **Section 412.**

(2) Civil Rights Acts

The FHWA views environmental justice as an extension of Title VI of the Civil Rights Act of 1964 and the Civil Rights Restoration Act of 1984. These nondiscrimination laws require that "federal-aid recipients, sub-recipients, and contractors prevent discrimination and ensure nondiscrimination in all of their programs and activities, whether these programs and activities are federally funded or not." The factors for discrimination include race, color, national origin, sex, disability and age.

"The effort to prevent discrimination must address, but not be limited to a program's impacts, access, benefits, participation, treatment, services, contract opportunities, training opportunities, investigations of complaints, allocations of funds, right-of-way, research, planning and design."

WSDOT's Office of Equal Opportunity (OEO) is required to report annually to FHWA on Title VI compliance.

The Environmental Services Office is responsible for monitoring compliance with Title VI requirements in all aspects of the environmental process, as well as coordinating the gathering of environmental information for the OEO annual report. Other responsibilities are outlined in the WSDOT Title VI Plan (November 2001).

Lack of compliance with Title VI could potentially affect WSDOT's ability to receive federal transportation funding.

(3) Federal Aid Highway Act (Act) of 1970

Implementing regulations of this Act, 23 USC 109(h), established a further basis for equitable treatment of communities being affected by transportation projects. It requires consideration of the anticipated effects of proposed transportation projects upon residences, businesses, farms, accessibility of public facilities, tax base, and other community resources.

(4) Presidential Executive Order 12898 – Environmental Justice

The Presidential Executive Order on *Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations* (February 11, 1994) was intended "to promote nondiscrimination in federal programs substantially affecting human health and the environment, and to provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment."

It requires that each federal agency shall, to the greatest extent allowed by law, administer and implement its programs, policies, and activities that affect human health or the environment so as to identify and avoid "disproportionately high and adverse" effects on minority and low-income populations.

The order directs federal agencies to:

- Analyze the environmental effects, including human health, economic, and social effects, of federal actions, including the effects on minority and low-income communities, when required by NEPA.
- Provide opportunities for community input during the NEPA process, including potential effects and mitigation measures.
- Ensure that the public, including minority and low-income communities, have adequate access to public information relating to human health or environmental

planning, regulations, and enforcement. Since 1994, federal agencies have added the following goal:

- Protect minority and low-income populations who principally rely on fish and/or wildlife for subsistence from human health risk associated with the consumption of pollutant-bearing fish or wildlife.

The Executive Order is available online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice, then The Facts, then Legislation and Guidelines.

Or by direct link:

http://www.epa.gov/docs/oejpubs/execordr.txt.html

(5) Governor's Executive Order 93-07

The Governor's Executive Order on *Affirming Commitment to Diversity and Equity in the Service Delivery and in the Communities of the State* (1993) directs "all executive agencies and institutions of higher education to initiate actions to integrate the principles of diversity into all facets of workplace community and in the delivery of services to the people of Washington."

(6) Tribal Government

Tribal considerations are also addressed under both Section 4(f) 49 U.S.C. 303 and Section 106 of National Historic Preservation Act 16 U.S.C. 470f. For further assistance contact (36) 705-7025 or

http://www.fhwa.dot.gov/environment/archaeology/tribalissues.htm

458.03 Policy Guidance

(1) FHWA

FHWA's longstanding policy has been to actively ensure nondiscrimination under Title VI of the 1964 Civil Rights Act in federally funded activities. Federal guidance on environmental justice can be found in numerous documents, including U.S. Department of Transportation *Order 5610.2 on Environmental Justice* (February 3, 1997), and FHWA *Order 6640.23 on FHWA Actions to Address Environmental Justice in Minority Populations & Low-Income Populations* (December 2, 1998). These and other documents are available online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, Environment, then Environmental Justice, then The Facts, then Legislation and Guidelines. Also click on Environmental Guidebook, then Title VI and Environmental Justice.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch16.htm

http://www.fhwa.dot.gov/environment/ej2.htm

(2) WSDOT

WSDOT's Environmental Services Office (ESO) and Office of Equal Opportunity (OEO) work closely together on the implementation of Title VI and the Presidential Executive Order 12898 on Environmental Justice. Both offices exchange technical

knowledge on environmental and civil rights legislation and implementation to assure compliance within WSDOT's operation.

In 1998, the Office of Equal Opportunity developed WSDOT's *Environmental Justice Guidelines*, which can be accessed at:

http://www.wsdot.wa.gov/environment/eao/regcomp/docs/EnviroJusticeGuidelines_061998.pdf.

(3) Tribal Government

WSDOT's Secretary of Transportation, Doug MacDonald, signed an Executive Order on February 19, 2003, directing WSDOT employees "to enter Tribal Consultation with tribes who have ancestral homelands within the state boundaries, including those having reservations located outside of the state, on all decisions that may affect tribal rights and interests."

As "appropriate issues are identified, WSDOT will begin the consultation process." Environmental justice could be one of the issues identified during the environmental process.

(4) Local Government

Local comprehensive plans may contain elements addressing social goals and may include an element on environmental justice. These plans should be reviewed during WSDOT's environmental review process.

458.04 MOUs, MOAs, and Interagency Agreements

None identified.

458.05 Technical Guidance

WSDOT participates in many areas that overlap social and environmental justice. Some of these are context sensitive solutions/design, community impact assessment and managing project delivery. General information on these can be found in the Design office, Highways and Local Programs and Environmental Services Office.

Assistance with, and review of discipline reports on social, economic and environmental justice is done by both the WSDOT Office of Environmental Services and the WSDOT regional environmental offices.

Implementation and complaint resolution associated with Title VI or EO 12898 should be addressed through the WSDOT Office of Equal Opportunity. See the WSDOT Title VI plan.

http://www.wsdot.wa.gov/oeo/pdffiles/titlevi.pdf

or

http://www.wsdot.wa.gov/oeo/pdffiles/App1.pdf

Also, see Exhibit 758.1 for detailed technical guidance on the preparation of EJ analyses.

(1) FHWA/FTA Toolkit

The FHWA and Federal Transit Administration (FTA) have developed a toolkit of educational and training materials that will help transportation practitioners address environmental justice issues. These materials are designed for state DOTs, MPOs, local agencies, consultants, and interested community groups.

A web site containing facts, questions and answers, case studies, effective practices, and other environmental justice links and tools can be accessed from FHWA's home page:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice.

Or by direct link:

http://www.fhwa.dot.gov/environment/ej2.htm

In addition, the local FHWA division office has issued guidance for their staff on environmental justice. Contact (360) 753-9889 for a copy of Environmental Justice: What You Should Know.

(2) FHWA Community Impact Assessment

FHWA's Community Impact Assessment, FHWA Publication No. FHWA-PD-96-036, covers topics related to environmental justice. The assessment includes guidelines on health risks and cumulative impacts.

FHWA is placing additional emphasis on earlier and continuing public involvement in the form of community impact assessment.

The publication Community Impact Assessment may be available in the future online at the FHWA's web site. The abstract currently can be found at:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Justice, then Resources.

Or by direct link:

http://www.fhwa.dot.gov/environment/cia.htm

(3) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (October 30, 1987), gives guidance on preparing discipline reports on social, economic, and relocation impacts. It should be noted that this Technical Advisory (TA) was developed prior to the Environmental Justice orders. Applicable Environmental Justice guidelines are to be used in conjunction with this Technical Advisory.

This guidance, summarized in **Section 457.05**, is available online at FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(4) CEQ Guidance

Another useful reference is a document published by the Council on Environmental Quality (CEQ), *Environmental Justice – Guidance under the National Environmental Policy Act.* It should be noted that guidance for doing EJ analyses in this CEQ document differs in methodology from that of FHWA and WSDOT and should not be used. This is given as a reference.

The document is available on the CEQ web site:

http://ceq.eh.doe.gov/

Click on NEPAnet on the White House home page, then CEQ Guidance, then name of document.

Or by direct link:

http://ceq.eh.doe.gov/nepa/regs/ej/justice.pdf

(5) WSDOT Discipline Reports

There is increasing emphasis being placed on environmental justice throughout the country. The Social, Economic and Relocation discipline reports should provide enough information to determine if there are possible impacts on an environmental justice population in the Action area, with conclusions explained in an EJ section or summary.

The checklist in **Exhibit 458-3** is a guide to issues potentially applicable to environmental justice. Also, WSDOT's Discipline Report checklists on Social Elements (**Exhibit 457-1**) Economic (**Exhibit 457-2**) and Relocation (**Exhibit 457-3**) will assist in preparing the environmental justice analysis.

For detailed guidance, see the Environmental Justice Step by Step Guide, **Exhibit 458.1** and accompanying flowchart **Exhibit 458-2**.

(6) WSDOT Step by Step Guidance

Geographic Information System (GIS) information should be used to create a set of maps to use during public outreach and to serve as a reference for decision support. Maps provide a common language for decision makers and the public to use while discussing the effects of changes that may be made as a result of the proposed project. The maps should be scaled views of the project area that show where the potential impacts are located relative to minority or low-income residents. For WSDOT staff, the Environmental Workbench can provide some assistance in this process. See **Exhibit 458-1** for additional guidance.

(7) Permits

None.

458.07 Non-Road Project Requirements

Ferry, rail, aviation, and non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road projects.

Exhibits

Exhibit 458-1 – ENVIRONMENTAL JUSTICE GUIDANCE - Conducting An Environmental Justice Analysis Step-by-Step Overview

Exhibit 458-2 – Step-by-Step Environmental Justice Analysis Flowchart

Exhibit 458-3 – WSDOT Environmental Justice Checklist

ENVIRONMENTAL JUSTICE GUIDANCE - Conducting An Environmental Justice Analysis Step-by-Step Overview

PURPOSE AND REQUIREMENTS

WSDOT's guide, *Conducting an Environmental Justice Analysis Step-by-Step* (*Step-by-Step*), provides direction on how to analyze transportation planning and project development effects on minority and low-income communities. The detailed Step-by-Step may be available in the 2004 Environmental Procedures Manual update, and will contain delineated procedures on conducting an analysis.

This condensed guide was developed in the interim in accordance with the Presidential Executive Order 12898 of 1994, National Environmental Policy Act, (NEPA) and Intermodal Surface Transportation Efficiency Act (ISTEA) as applicable throughout all stages of project development and construction. . This guide acts as a general frame for Environmental Justice Analysis.

WSDOT intends this guidance to:

- Develop a consistent approach to conduct an environmental justice analysis.
- Ensure transportation planning and project development are done in a manner that does not have the effect of excluding persons from participation in or receiving program benefits.
- Promote the exchange of lessons learned.

Step-by-Step is a general process to refine Environmental Justice (EJ) analysis throughout project development from planning and environmental documentation, through the planning, environmental, project development, construction, and maintenance process.

ENVIRONMENTAL JUSTICE ANALYSIS OVERVIEW

The EJ analysis process is composed of four basic steps:

1. Conduct a demographic analysis of the Study Area.
2. Develop a Public Interaction/Involvement Plan (PIP).
3. Determine impact(s), appropriate mitigation, and benefit(s) with regard to EJ populations via public interaction with the potentially affected communities.
4. Document EJ analysis process.

STEP 1 -- DEMOGRAPHICS

Prior to the project kick off meeting, but after the project is defined, conduct a demographic analysis of the project area, map the results, and develop a PIP based on this analysis. The analysis must contain the environmental justice (EJ) populations, and should include other data elements relevant to the PIP – e.g., age, disability, Section 8 housing.

An EJ community includes individual minority populations, i.e., Asians, Blacks, Hispanic, Native Americans and Pacific Islanders; and/or low-income populations as defined by Presidential Executive Order 12898.

STEP 2 – PIP DEVELOPMENT

The PIP will be developed and modified to meet specific public and project needs as the project(s) proceed through the planning, environmental, project development, construction, and maintenance process.

The project team, assisted by *Step-by-Step*, needs to decide how and where public interaction will occur in addition to circulating the usual reports for review and comment – as required or appropriate for project scoping, constraint identification, alternative development; and impact, mitigation, and benefit identification.

The PIP should:

1. Set public interaction goals and objectives.
2. Identify people and organizations to be reached based on demographics and relevant information.
3. Develop a strategy based on the goals/objectives and characteristics of the target audiences.
4. Assure strategies and techniques to aid decision-making.
5. Document the public interaction process and its results.

STEP 3 – IMPACT/MITIGATION/BENEFITS

Alternatives are developed and potential impacts, mitigation, and benefits are identified and mapped prior to producing a draft document. Map the affected geographic areas, and a refine the demographic analysis to determine if EJ communities are affected.

Disproportionately High and Adverse Effect on Minority and Low-Income Populations means an adverse effect that:

1. Is predominately borne by a minority population and/or a low-income population; or
2. Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or nonlow- income population. Disproportionately high and adverse effects on minority populations or low-income populations will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effects are not "practicable." To determine the practicability of a mitigation measure or an alternative, take into account the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects.

The analysis also needs to ensure that any potential for disproportionately high and adverse effects on populations protected by Title VI ("protected populations") will only be carried out if:

1. A substantial need for the program, policy or activity exists, based on the overall public interest; and
2. Alternatives that would have less adverse effects on protected populations have either:
   a. Adverse social, economic, environmental, or human health impacts that are more severe; or
   b. Would involve increased costs of an extraordinary magnitude.

A PIP is implemented within these affected EJ communities to obtain feedback on the alternatives, impacts, mitigation and benefits.

STEP 4 – DOCUMENT PROCESS

The EJ analysis process is documented as follows:

- Summarize EJ requirements,
- Describe the study area and its demographics using narrative and maps,
- Summarize public interaction strategy;
- Describe and map impacts, mitigation and benefits and those populations affected;
- Describe specific interactions with the affected communities and results; and
- Make an EJ determination(s).

- Summarize practicability determination if disproportionately high and adverse effects on minority populations or low-income populations cannot be avoided, minimized or mitigated.

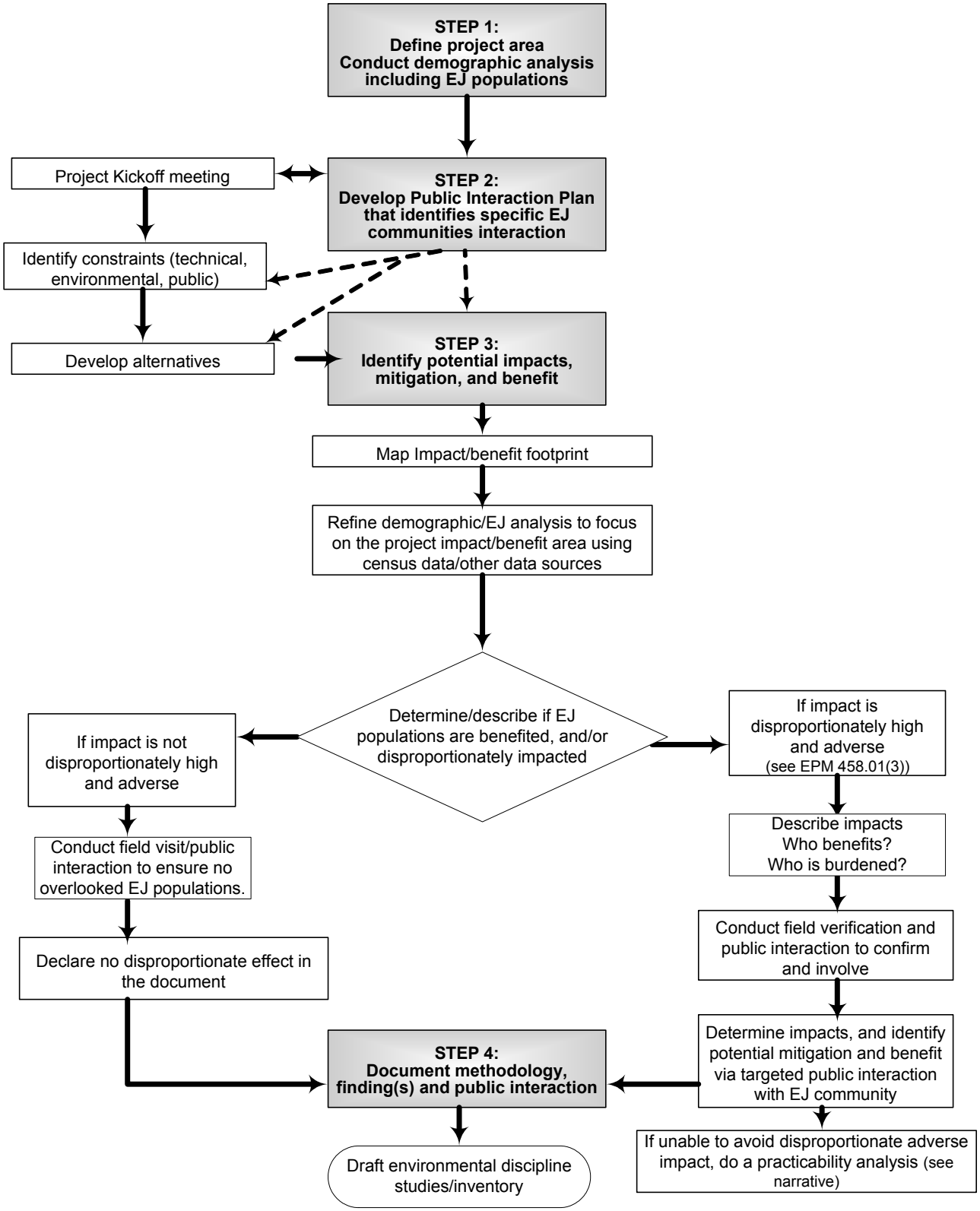
Draft the environmental discipline studies/inventories, and produce a draft environmental/planning document. The EJ determination is done concurrently with preparation of other environmental documents.

CONTACTS FOR MORE INFORMATION

WSDOT Environmental Justice Coordinator
HQ Environmental Services Office
(360) 705-7483

WSDOT Title VI Coordinator
HQ Office of Equal Opportunity
(360) 705-7098

Step-by-Step Environmental Justice Analysis Flowchart



Washington State Department of Transportation

Environmental Justice Checklist

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)
Answers are required for questions that have no N/A box.

I. Studies and Coordination

(Refer to Discipline Report on Social Elements (Exhibit 457-1), Economic Elements (**Exhibit 457-2**), and Relocation (Exhibit 457-3). Also (Refer to 42 USC 2000d-d4, Title VI of the Civil Rights Act of 1964.

II. Introduction

To be completed as a sub-set of the Socio-Economic Analysis if demographic analysis has identified low income and/or minority residents in the project area. These are specific to an EJ analysis, but are to be used in conjunction with the overall Social-Economic-Relocation analysis. It is helpful to include maps highlighting the location of alternatives overlay with any minority and/or low-income populations that may reside within the primary study area.

SAT	INC	MIS	N/A	
☐	☐	☐		A. A definition of populations, which are the subject of EJ analysis: Percentage of Low-income and minority populations present within impacted census blocks, block groups, or tracts.
☐	☐	☐		B. Statement of two-pronged approach-enhanced public involvement facilitation (describing outreach to EJ populations), and analysis of impact/avoidance of disproportionate impact.

III. Affected Populations

SAT	INC	MIS	N/A	Definition of area of potential impact
☐	☐	☐		A. Documentation of data sources and methods for determination. Census data alone is generally not adequate. Data from public involvement, local comprehensive plans and "windshield surveys" are some examples of where supplemental data can be obtained.
☐	☐	☐		B. Document the presence of low income or minority populations. (Identification, description, and location of EJ population.)

IV. Enhanced Public Involvement

SAT	INC	MIS	N/A	
☐	☐	☐		A. Describe special efforts to address literacy, language, transportation, schedule, childcare, etc.
☐	☐	☐		B. Description of targeted outreach efforts to involve low income/minority population. Describe methods used to overcome potential barriers.
☐	☐	☐		C. Documentation of strategy and results (attendance, responses, etc.)

V. Assessment of Impacts

SAT	INC	MIS	N/A	
☐	☐	☐		A. Definitions of adverse and disproportionate impacts (as per USDOT order.).
☐	☐	☐		B. Analysis of impacts of each alternative, including No-Build, on EJ population. (Types of impacts as listed in Social-Economic-Relocation checklists)
☐	☐	☐		C. Documentation of community perception of impacts, positive and negative and severity.
☐	☐	☐		D. Description of any disproportionately high and adverse impacts on low income or minority population.
☐	☐	☐		E. Description of any offsetting benefits should be described.
☐	☐	☐		F. Conclusion of impacts on EJ population. Are adverse impacts appreciably more severe or greater in magnitude than the adverse impacts that will be suffered by the non-minority/low-income population?

VI. Avoidance, Minimization, Mitigation and Enhancement

SAT	INC	MIS	N/A	
☐	☐	☐		A. Discussion of any alternatives that avoid such impacts as they pertain to the EJ population. Include discussion of practicability.
☐	☐	☐		B. Description of efforts to avoid, minimize, mitigate, enhance, or offset project impacts as they pertain to the EJ population.
☐	☐	☐		C. Description of social, economic, and environmental effects of mitigation measures as they pertain to the EJ population.
☐	☐	☐		D. Mitigation commitments
☐	☐	☐		E. Documentation of community perception of suitability of mitigation proposed.

VII Summary

Summarize the analysis done and conclusions reached. The summary should include enough detail so that it can be included in the final environmental document with only minor modification.

The summary should include:

SAT	INC	MIS	N/A	
☐	☐	☐		A. The objectives of the project.
☐	☐	☐		B. Environmental Justice populations and issues involved.
☐	☐	☐		C. Impacts of all alternatives including the no-build alternative.
☐	☐	☐		D. Recommended mitigation.
☐	☐	☐		E. Comparison of alternatives based on impacts and reasonableness of mitigation.
☐	☐	☐		F. Summarize practicability determination if disproportionately high and adverse effects on minority populations or low-income populations cannot be avoided, minimized or mitigated. (See Step by Step 458.1)

459.01 Introduction
459.02 Applicable Statutes and Regulations
459.03 Policy Guidance
459.04 MOUs, MOAs, and Ias
459.05 Technical Guidance
459.06 Permits
459.07 Non-Road Project Requirements
459.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

459.01 Introduction

Visual perception is an important component of environmental quality that can be affected by transportation projects. The location, design, and/or maintenance of highway, ferry, rail and aviation facilities may adversely affect visual features of the landscape, and concern over adverse visual impacts can be a major source of project opposition. This section focuses on highway projects, but the same or similar requirements apply to other transportation modes (see **Section 459.07**). For related information on historic and cultural resources, see **Section 456.**

Because of the public nature and visual importance of transportation projects, both negative and positive visual impacts must be adequately assessed and considered during project development.

In discussing and reviewing the visual impacts of a highway project, two views must be considered: the view from the road and the view toward the road. Americans have repeatedly ranked pleasure driving on scenic roads as one of their favorite pastimes. Researchers have also shown that the view from the road is the basis for much of what people know about the everyday environment and for their mental image of the landscape.

The view toward the road has only more recently been systematically considered, but is equally important. Projects must be carefully planned to ensure that pleasing vistas for travelers are not developed at the expense of views from surrounding areas.

(1) Summary of Requirements

During project development, visual impacts, including aesthetics, light, and glare, should be considered by evaluating the view from the road as well as the view toward the road. Requirements are summarized in WSDOT's visual quality Discipline Report. The visual element of environmental studies has two components:

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

Visual Element Study **–** A graphic and written description and assessment of the view from the road, used for Environmental Assessments (EA's) that is based on federal criteria or any project that may have a visual impact.

Visual Impact Assessment and Analysis **–** A graphic and narrative analysis that identifies the visual impacts of the project on the view from the road and the view toward the road. It identifies significant adverse impacts and mitigation through design or other design elements using Federal Highway Administration (FHWA) criteria. These are used for Environmental Impact Statements (EIS).

Both these reports should be coordinated through the region Landscape Architect or the HQ Roadside & Site Development Unit for regions without a Landscape Architect.

(2) Acronyms and Abbreviations

None.

(3) Glossary

Scenic Byway **–** Public road having special scenic, historic, recreational, cultural, archeological, and/or natural qualities that have been recognized as such through legislation or some other official declaration for its scenic, historic, recreational, cultural, archeological, or natural qualities.

Community Enhancement Areas **–** Features such as community gateways, roadside parks, viewpoints, agricultural uses, and historic markers.

Corridor **–** Road and highway right-of-way and the adjacent area that is visible from and extending along the highway. The distance the corridor extends from the highway could vary with different intrinsic qualities.

Corridor Management Plan **–** Written document that specifies the actions, procedures, controls, operational practices, and administrative strategies to maintain the scenic, historic, recreational, cultural, archeological, and natural qualities of the scenic byway.

Intrinsic quality **–** Scenic, historic, recreational, cultural, archeological, or natural features that are considered representative, unique, irreplaceable, or distinctly characteristic of an area

Visual Element **–** A particular feature of the visual quality.

Visual Function **–** Element of a transportation project that is designed and experienced primarily from a visual perspective; includes positive guidance and navigation, distraction screening, corridor continuity, roadway and adjacent property buffering, and scenic view preservation.

Visual Quality **–** Character of the landscape, which generally gives visual value to a setting.

459.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to aesthetics and visual quality are given due weight in project decision-making. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions.

NEPA Section 101(b)(2) states that it is the "continuous responsibility" of the federal government to "use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings." Under CEQ

implementing regulations, environmental analysis is to consider impacts on urban quality, historic and cultural resources, and the design of the built environment" (Section 1502.6). Agencies shall "identify methods and procedures . . . to insure that presently unquantified environmental amenities and values may be given appropriate consideration" (Section 1507.2).

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on NEPA/SEPA procedures, see Section 410 through Section 412.

(2) Federal

The Federal statutes on visual quality are codified under several programs, described below. For general information on highway-related legislation, see FHWA's web site:

http://www.fhwa.dot.gov/legsregs/legislat.html

(a) Transportation Equity Act for the 21st Century (TEA-21)

TEA-21 (1998) authorizes the Federal surface transportation programs for highways, highway safety, and transit for the six-year period from 1998 to 2003. Eligible activities include: acquisition of scenic easements and scenic or historic sites, scenic or historic highway programs, landscaping and other scenic beautification, historic preservation, preservation of abandoned railway corridors (including the conversion and use for pedestrian or bicycle trails), control and removal of outdoor advertising.

Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA) authorizes Federal surface transportation programs beginning September 30, 2003.

For details, see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Transportation Enhancements.

Or by direct link:

http://www.fhwa.dot.gov/environment/te.htm

ISTEA mandated creation of a Scenic Byways Program (23 U.S.C. 101(g) 133 (e). FHWA has set criteria for designating scenic byways, based upon their scenic, historic, recreational, cultural, archeological, and/or natural intrinsic qualities. For details, see:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Scenic Byways.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch14.htm

(b) Highway Beautification Act

The Highway Beautification Act of 1965 (23 CFR-750) was enacted to provide effective control of outdoor advertising and junkyards, protect public investment,

promote the safety and recreational value of public travel and preserve natural beauty, and provide landscapes and roadside development reasonably necessary to accommodate the traveling public. Implementing procedures are set forth in 23 CFR 750, 751, and 752.

(c) Historic Preservation Act

Implementing regulations for Section 106 of the Historic Preservation Act of 1966 (see **Section 456.02**), adopted in 1976, define criteria of adverse effect (Section 800.8) to include the "introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting."

(d) DOT Act, Section 4(f)

This act declares a national policy to make a special effort to preserve the natural beauty of the countryside and public park and recreation sites, wildlife and waterfowl refuges, and historic sites." (See **Section 455** for details on Section 4(f).)

(e) Wild and Scenic Rivers Act

This act, as amended, directs that "each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included, without, insofar as it is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeologic, and scientific features." (See **Section 453** for information on wild and scenic rivers in Washington.)

(3) State

(a) Highway Beautification Act

Washington's Highway Beautification Act (RCW 47.40.010) adopted in 1961, declared improvement and beautification of any state highway right-of-way to be a "proper highway purpose." The act specifically mentions the following improvements: "planting and cultivating of any shrubs, trees, hedges or other domestic or native ornamental growth; the improvement of roadside facilities and view points; and the correction of unsightly conditions."

(b) Open Space Land Preservation

In RCW 84.34, the legislature declared that "it is in the best interest of the state to maintain, preserve, conserve and otherwise continue in existence adequate open space lands for the production of food, fiber and forest crops, and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens." Open space was defined as including any land area that would preserve visual quality along highway, road, and street corridors or scenic vistas. One of the criteria to be used in determining open space classification for current use or conservation futures is whether granting this classification would preserve visual quality along highway, road, and street corridors or scenic vistas (RCW 84.34.037).

459.03 Policy Guidance

(1) Transportation Commission

The Transportation Commission's Policy Catalog contains a specific policy on visual quality. Policy 6.3.6 is to "protect and enhance the visual quality of Washington's transportation corridors and facilities" and "identify outstanding vistas visible from transportation corridors, then protect, restore, and enhance them."

The policy and action strategies are available from WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(2) Other WSDOT Guidance

Further policy and standards guidance related to aesthetics and visual quality is available in two WSDOT manuals: the *Roadside Manual* (M 25-30), particularly Section 500, Visual Functions; and the *Roadside Classification Plan* (M 25-31), which provides a framework for roadside management. Both manuals are available online at:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library and find titles of manuals.

Or by direct link:

http://www.wsdot.wa.gov/fasc/engineeringpublications/Manuals/RoadsideManual.pdf

459.04 MOUs, MOAs, and IAs

None.

459.05 Technical Assistance

(1) WSDOT Discipline Report Checklist

WSDOT's checklist for preparing Visual Quality Discipline Reports is in **Exhibit 459-1**. The checklist identifies the criteria to be used and guidelines for describing the affected environment and impacts from the perspective of the views from the road and the view of the road under different alternatives. The report includes mitigation measures and a discussion of impacts during construction. **Exhibit 459-1** includes a rating scale for assessing visual quality and a matrix for comparing existing and future views under different alternatives. For the most current version of the checklist, see:

http://www.wsdot.wa.gov/

Click on Site Index, then R, then Roadside and Site Development, then Visual Impact Assessment for Highway Projects Discipline Report Environmental Checklist.

Or by direct link:

http://www.wsdot.wa.gov/eesc/design/roadside/default.htm

(2) *WSDOT Environmental GIS Workbench*

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Current data sets relevant to visual quality include roadside landscape classifications and the Columbia River Gorge National Scenic Area. WSDOT users can access these and other data sets at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(3) *FHWA Technical Advisory*

FHWA Technical Advisory T6640.8A (October 1987) gives brief guidelines for preparing environmental documents, including sections on visual impacts. When there is a potential for visual impacts, the draft EIS should identify the impacts to the existing visual resource, the relationship of the impacts to potential viewers of and from the project, as well as measures to avoid, minimize, or reduce the adverse impacts. The draft EIS should explain the consideration given to design quality, art, and architecture in project planning. These values may be particularly important for facilities located in visually sensitive urban or rural settings. When a proposed project will include features associated with design quality, art or architecture, the draft EIS should be circulated to officially designated State and local arts councils and, as appropriate, other organizations with an interest in design, art, and architecture. The final EIS should identify any proposed mitigation for the preferred alternative.

The Technical Advisory is online via FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(4) *FHWA Visual Impact Assessment Guidance*

FHWA has developed a methodology for assessing the visual impacts of road projects for NEPA and Section 4(f) evaluations. An FHWA field guide, *Visual Impact Assessment for Highways* (DOT FHWA-HI-88-054), developed with assistance from WSDOT and other state transportation agencies, gives detailed guidance on scoping, performing, and documenting the visual impact assessment. It also includes background on legal requirements, a scoping questionnaire for visual assessments, and guidance on graphic techniques for displaying the visual effects of highways. Available in print form.

Visual Impact Assessment for Highways (DOT FHWA-HI-88-054), reprinted September 1990.

Or available online at:

http://www.wsdot.wa.gov/eesc/design/roadside/pdf/fhwavia.pdf

Another document, *Environmental Impact Statement: Visual Impact Assessment*, describes how the EIS should review the findings of the visual assessment; describe the landscape and visual character of the affected environment; and describe the environmental consequences, including visually sensitive locations for each alternative, the visual character of the proposed project, visual effects, and mitigation.

An FHWA memorandum (August 18, 1986) provides additional guidance on aesthetics and visual quality. The latter two documents are available in the Environmental Guidebook on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Aesthetics.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch1.htm

(5) Other FHWA Guidance

FHWA's supplementary guidance and procedures for EIS processing, in an Appendix to FHPM 7-7-2 (1981) states that the visual impact assessment should include an assessment of the temporary and permanent visual impacts of the proposed action. "Where relevant, the EIS should document the consideration given to design quality, art and architecture in the project planning. These values may be important for facilities located in sensitive urban settings."

DOT Notice 5610.1C, Attachment 2, Guidance on Format and Content of Environmental Documents, includes the following statement: "This notice supplements a Secretarial decision of 7-31-77, as recommended by the DOT Task Force on Design, Art and Architecture in Transportation, that, where relevant, the Department will require consideration of design quality to be reflected in environmental impact statements (EISs). This notice is to provide further impetus to a constructive blending of esthetics and function… Design quality considerations are relevant and are to be documented in EISs where such facilities as … major urban highways are in sensitive locations (such as parks or historic districts), or where public use areas are involved. These examples are not all-inclusive."

In addition, many other documents related to visual quality are available in the Environmental Guidebook on FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Aesthetics, Corridor Preservation, Scenic Byways, or Transportation Enhancements.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

459.06 Permits

When required by federal, state, or local regulatory agencies.

459.07 Non-Road Project Requirements

Ferry, rail, aviation, and non-motorized transport systems are generally subject to the same policies, procedures, and permits that apply to road projects.

Environmental documentation for ferry projects must address aesthetics and visual issues as part of the SSDP, including specific details about height of structures, use, and potential impacts.

459.08 Exhibits

Exhibit 459-1 – Visual Quality Discipline Report Checklist.

Washington State Department of Transportation

Discipline Report Checklist
Visual Quality

Project Name: _____ Job Number: _____

Contact Name: _____

Date Received: _____ Date Reviewed: _____ Reviewer: _____

(SAT = Satisfactory; INC = Incomplete; MIS = Missing; N/A = Not Applicable)

Answers are required for questions which have no N/A box.

I. Study Methodology

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Methodology identified, documented, and professionally recognized.
❒	❒	❒	❒	B.	Methodology is repeatable.
❒	❒	❒	❒	C.	Methodology prevents bias.
❒	❒	❒	❒	D.	Methodology is understandable with minimal training.

II. Criteria Used

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Vividness- the memorability of landscape components.
❒	❒	❒	❒	B.	Intactness- the integration of natural and human components.
❒	❒	❒	❒	C.	Unity- the compositional harmony of the viewshed.
❒	❒	❒	❒	D.	Viewer position noted (inferior, normal, superior).
❒	❒	❒	❒	E.	Viewer groups identified.
❒	❒	❒	❒	F.	Viewer exposure identified.
❒	❒	❒	❒	G.	Viewer sensitivity identified.
❒	❒	❒	❒	H.	Frequency of viewer exposure identified.
❒	❒	❒	❒	I.	Duration of view identified.
❒	❒	❒	❒	J.	Numbers of viewers identified.

III. Affected Environment

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Landscape units identified within project limits.
❒	❒	❒	❒	B.	Visual impacts discussed for each alternative.

IV. Views

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Representative viewpoints established in each landscape unit.
❒	❒	❒	❒	B.	Views toward the project analyzed.
❒	❒	❒	❒	C.	Views from the project analyzed.
❒	❒	❒	❒	D.	Existing views analyzed
❒	❒	❒	❒	E.	Proposed views analyzed.
❒	❒	❒	❒	F.	Light and glare effects analyzed.
❒	❒	❒	❒	G.	Quantitative analysis performed on all viewpoints.
❒	❒	❒	❒	H.	Quantitative visual analysis matrix included in report.
					Distance zones discussed:
❒	❒	❒	❒	I.	Foreground
❒	❒	❒	❒	J.	Middle ground
❒	❒	❒	❒	K.	Background
					View elements discussed:
❒	❒	❒	❒	L.	Landform
❒	❒	❒	❒	M.	Water
❒	❒	❒	❒	N.	Vegetation
❒	❒	❒	❒	O.	Human-made development

V. Narrative

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Does the narrative correspond to the qualitative analysis?
❒	❒	❒	❒	B.	Narrative discusses impacts.
❒	❒	❒	❒	C.	Narrative discusses mitigation.
❒	❒	❒	❒	D.	Construction activity impacts discussed.

VI. Mitigation

SAT	INC	MIS	N/A		
❒	❒	❒	❒	A.	Mitigation for impacts discussed.
❒	❒	❒	❒	B.	Solutions presented are achievable.
❒	❒	❒	❒	C.	Solutions presented are solid and binding.

Visual Quality Assessment

Visual Quality Criteria Rating Scale

	Vividness ***Landform*** ***Waterform*** ***Vegetative*** ***Human-made***		**Intactness** ***Human Environment***
7	Very High	7	None
6	High	6	Little
5	Moderately High	5	Some
4	Average	4	Average
3	Moderately Low	3	Moderately High
2	Low	2	High
1	Very Low	1	Very High

	Unity		**Intactness** ***Encroachment***
7	Very High	7	None
6	High	6	Few
5	Moderately High	5	Some
4	Average	4	Average
3	Moderately Low	3	Several
2	Low	2	Many
1	Very Low	1	Very Many

Visual Analysis Matrix														
				Existing						Proposed				
Viewpoint				1	2	3	4	5		1	2	3	4	5
View Orientation														
View Distance		Foreground												
		Middle ground												
		Background												
Viewer Position		Inferior												
		Level												
		Superior												
Vividness		Landform												
		Waterform												
		Vegetative												
		Human-made												
		Average												
Intactness		Development												
		Encroachment												
		Average												
Unity		Overall												
Total Visual Quality														

460.01 Introduction
460.02 Applicable Statutes and Regulations
460.03 Policy Guidance
460.04 MOUs, MOAs, and Ias
460.05 Technical Guidance
460.06 Permits
460.07 Non-Road Project Requirements
460.08 Exhibits

Key to Icons

Web site.*

Memorandum of understanding, memorandum of agreement, or interagency agreement.

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

460.01 Introduction

This section addresses potential impacts of WSDOT projects on transportation. As defined by SEPA, this element of the built environment includes the movement or circulation of people and goods, specifically transportation systems; vehicular traffic, traffic hazards, and parking; waterborne, rail, and air traffic. FHWA guidance highlights bicycle and pedestrian travel considerations.

Presumably WSDOT projects are designed to improve transportation systems, including multiple modes of travel, so transportation impacts are typically not significant. However, they need to be considered, and if necessary mitigated, especially construction impacts.

Highway projects can affect transportation in many ways, including conflicts between local traffic and added regional or sub-regional traffic at new or revised access points, increased SOV and HOV volumes, increased safety hazards for bicycles and pedestrians, and increased congestion or interrupted access during construction. This section primarily deals with the impacts of highway projects. Ferry, rail, and aviation projects could have similar impacts, such as traffic congestion and safety hazards, especially during construction.

(1) Summary of Requirements

SEPA requires consideration of project impacts on transportation as part of the built environment. FHWA policy and guidance includes accommodating bicycles and pedestrians. If parking will be impacted, local jurisdictions' off-street parking regulations may apply. Specific requirements apply to projects affecting ferry facilities, railroads, or airports. See **Section 457.05** and **Section 458.05** for guidance on related socio-economic or environmental justice impacts.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(2) Acronyms and Abbreviations

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

EPF	Essential Public Facility
HOV	High Occupancy Vehicle
RPZ	Runway Protection Zone
SOV	Single Occupancy Vehicle
USDOJ	U.S. Department of Justice

(3) Glossary

Essential Public Facility – Defined in the Growth Management Act (RCW 47.06.140), to include airports, and state and state or regional transportation facilities among other public facilities that are typically difficult to site. Improvements to facilities and services of statewide significance identified in the statewide multi-modal plan are considered essential state public facilities.

Transportation Facilities of Statewide Significance – Defined in RCW 81.104.015 to include the interstate highway system, interregional state principal arterials including ferry connections that serve statewide travel, intercity passenger rail services, intercity high-speed ground transportation, major passenger intermodal terminals excluding all airport facilities and services, the freight railroad system, the Columbia/Snake navigable river system, marine port facilities and services that are related solely to marine activities affecting international and interstate trade, and high-capacity transportation systems serving regions.

Vehicular – Refers to public, private vehicles; single and high occupancy vehicles, freight, bicycles, and pedestrians.

460.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision-making. The only transportation impact required to be analyzed under NEPA is impacts on bicycle and pedestrian traffic (23 CFR 652).

The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions. The SEPA guidelines list transportation as an element of the built environment, including: transportation systems, movement or circulation of people and goods; vehicular traffic, traffic hazards, and parking; waterborne, rail, and air traffic.

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on NEPA/SEPA procedures, see **Section 410** through **Section 412**.

(2) Americans with Disabilities Act

The Americans with Disabilities Act (ADA), Public Law 336-101, enacted July 26, 1990, prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation. It also mandates the establishment of TDD/telephone relay services.

Public transportation services are not covered by regulations for Title II, subtitle A, which prohibits discrimination on the basis of disability in all services, programs, and activities provided to the public by state and local governments (Federal Register, July 26, 1991).

Regulations for Title III, CFR July 1, 1994, which prohibits discrimination on the basis of disability in places of public, includes standards for accessible design establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility (Appendix A to Part 36).

An amendment to Title II and II regulations suspends the requirements for detectable warnings at curb ramps, hazardous vehicle areas, and reflecting pools until July 26, 2001 (Federal Register, November 23, 1998).

The text of the statute and implementing regulations are accessible via the U.S. Department of Justice (USDOJ) web site:

http://www.usdoj.gov/

Click on Alphabetical List of Components, then Civil Rights Division, then Special Topics, then ADA Home Page, then ADA Regulations and Technical Assistance, then ADA legal documents.

Or by direct link:

http://www.usdoj.gov/crt/ada/publicat.htm

(3) FHWA Regulations

FHWA regulations covering federally-aided projects (23 CFR 652) include the following policy on accommodation of bicycles and pedestrians: "The safe accommodation of pedestrians and bicyclists should be given full consideration during the development and construction of federal-aid highway projects. The special needs of the elderly and the handicapped shall be considered in all federal-aid projects that include pedestrian facilities. Where current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort shall be made to minimize the detrimental effects on all highway users who share the facility. On highways without full control of access where a bridge deck is being replaced or rehabilitated, and where bicycles are permitted to operate at each end, the bridge shall be reconstructed so that bicycles can be safely accommodated when it can be done at a reasonable cost. Consultation with local groups of organized bicyclists is to be encouraged in the development of bicycle projects."

See 23 CFR 652.13 for planning considerations and 23 CFR 652.15 for design and construction criteria. The rules are online via FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then Federal-Aid Policy Guide, then 23 CFR, then 652, then 652.11 and 652.13.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0652.htm

(4) FAA Regulations

FAA Regulations Part 77 (January 1975) include guidance relevant to design of road projects affecting navigable airspace. **Exhibit 460-1** illustrates FAA notice requirements related to highways. See also WSDOT's *Design Manual* (M-22-01), Figure 240-2.

(5) State Statutes

(a) Vehicular Traffic

Essential Public Facilities – Under the Growth Management Act (GMA) (RCW 47.06), a thorough public review is required prior to siting Essential Public Facilities (EPFs), such as state or regional transportation facilities. No local comprehensive plan or development regulation may preclude the siting of essential public facilities, but they can impose conditions on the project.

Facilities of Statewide Significance – RCW 81.104.105 requires WSDOT to plan for improvements to transportation facilities and services of statewide significance in the statewide multimodal plan, in cooperation with regional transportation planning organizations, counties, cities, transit agencies, public ports, private railroad operators, and private transportation providers.

City Streets as Part of State Highways – RCW 47.24 identifies design and environmental considerations for city streets that cross or are considered part of a state highway.

Design standards – WAC 468-18-040 regulates design standards for rearranged county roads, frontage roads, access roads, intersections, ramps and crossings, including realignments as part of a road project.

(b) Bicycle/Pedestrian Traffic

RCW 47.30 requires WSDOT and local agencies to spend transportation funding on paths and trails.

(c) Aviation

General Aviation Airport Siting – Incompatible Uses – RCW 36-71A-510 identifies adjacent land uses that are incompatible with general aviation airports.

(d) Rail

DNR Easements – RCW 47.12.026 grants WSDOT authority to obtain an easement at no charge for waters in DNR jurisdiction that are required to relocate the operating tracks of any railroad that will be displaced by the acquisition of such railroad property for state highway purposes.

(6) Local Regulations

If the project provides parking, the local jurisdiction's zoning, road standards, off-street parking regulations, and essential public facilities (EPF) standards will apply. If a parking facility is being removed or replaced as a result of the road project, the local regulations also must be considered. Early coordination with local jurisdictions on any parking area that will need to be replaced or reconstructed is recommended.

460.03 Policy Guidance

(1) Washington Transportation Commission

The Transportation Commission's Policy Catalog (Section 4.3) contains specific policies aimed at providing mobility choices. Policy principles include "promoting modal connections to provide seamless travel and reducing congestion." Service objectives include:

- Improve mobility within congested highway corridors.

- Improve and develop urban transportation services, facilities, and programs…to respond to growth, and to meet local and regional economic development, congestion, energy, and clean air objectives.

Several other Transportation Commission policies on urban mobility, non-motorized travel, intermodalism, and transportation may be relevant to transportation impacts.

The policies and action strategies are available via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Transportation Commission, then Reports and Plans, then Policy Catalog.

Or by direct link:

http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf

(2) Federal Policies – Bicycles and Pedestrians

The following policy statement was drafted by USDOT in response to Section 1202(b) of the Transportation Equity Act for the 21st Century (TEA-21):

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:
   - Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right-of-way or within the same transportation corridor.
   - The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding 20 per cent of the cost of the larger transportation project.
   - Where sparsity of population and other factors indicate an absence of need.
2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day.

A USDOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure

460.04 MOUs, MOAs, and IAs

None identified.

460.05 Technical Guidance

(1) WSDOT Guidance

WSDOT has no Discipline Report checklist for analyzing transportation impacts; however, bicycle and pedestrian facility impacts are covered in the Social Element Discipline Report (see checklist, **Exhibit 457-1**), and traffic impacts are included in the Economic Element Discipline Report (see checklist, **Exhibit 457-2**). General guidance for various types of transportation impacts is provided in this section.

Useful information may be obtained from WSDOT's Environmental GIS Workbench, a GIS interface for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. The program works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. Available data sets relevant to vehicle traffic include state highways by

WSDOT region, public park and ride lots, rest areas, ferry routes, railroads, and abandoned railroads. WSDOT users can access these data sets at:

w:\Data\GIS\GISOSC\GEODATA\maps\500K\DOT_EAO\

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/environment/eao/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

(2) Vehicular Traffic

The SEPA process requires analysis of vehicular impacts in the following general areas: intersection/access point, volumes of exiting and entering vehicular traffic from surface streets, transit components/lanes, bicycle and pedestrian accommodations, access for disabled people, and traffic control devices.

Project managers are advised to review the impacts of the proposed project on adjacent surface streets to make sure the system can adequately and safely collect and distribute any new traffic loads resulting from new or revised access. Potential impacts on the following should be identified and documented, along with mitigation for significant impacts:

- Any new congestion points; congestion points that would be eliminated or reduced.
- Traffic detours or diversions.
- Safety hazard (accident frequency related to trip volume).
- Transit routes.
- Ramp metering and queuing impacts (interstate highways).
- Surface street conditions that would affect traffic entering or exiting traffic (interstate highways).

WSDOTs Design Manual (M22-01) is the primary reference for safety and vehicular traffic issues. See particularly sections on sight distance, roadside safety, traffic barriers, impact attenuation systems, construction work zone traffic control strategies, and safety rest areas.

The documents listed below provide additional guidance for early design and identification of potential adverse environmental impacts.

WSDOT Roadside Manual (M25-30).

WSDOT Roadside Classification Plan (M25-31).

WSDOT HOV Direct Access Design Guide (Draft) (M22-98).

A Guide for Transportation Landscape and Environmental Design, American Association of State Highway and Transportation Officials, 1991.

Procedure for Analysis and Design of Weaving Sections – A User's Guide. Jack E. Leisch, 1985.

In the future, the emission of greenhouse gases (such as carbon dioxide) that leads to global climate change may be considered a secondary impact from the construction of transportation infrastructure. Transportation projects that include alternative modes of transportation, such as mass transit and bicycle/pedestrian facilities, could have a positive impact in reducing greenhouse gas emissions.

Although emissions of carbon dioxide from the combustion of vehicle fuels is currently unregulated, check with WSDOT's air quality unit for any additional regulations, policy changes, or environmental stewardship opportunities. For additional information see the WSDOT web site at:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy.

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

Also, see the USEPA web site for information on global warming at:

http://www.epa.gov/globalwarming/

Click on Emissions, then National.

Or by direct link:

http://www.epa.gov/globalwarming/emissions/national/index.html

(3) Parking

Parking issues may include impacts to public or private parking adjacent to the highway right-of-way, and interim impacts such as construction parking, staging, and access. Local jurisdictions, especially those under GMA mandates, take the issue of parking seriously. They should be consulted early in project development to identify possible impacts, particularly if significant parking would be eliminated by a highway project and there is not adequate space for replacement parking. Parking impacts affecting local businesses and/or low-income or minority populations should be addressed as socioeconomic and environmental justice impacts (see **Section 457.05** and **458**).

(4) Bicycles and Pedestrians

(a) FHWA

FHWA Technical Advisory T6640.8A (October 1987) gives the following guidelines for preparing environmental documents, specifically considerations relating to pedestrians and bicyclists.

Where pedestrian or bicycle facilities or indications of use are identified, the draft EIS should discuss the current and anticipated use of the facilities, potential impacts, and proposed measures, if any, to avoid or reduce adverse impacts to the facility(ies) and its users.

Where new facilities are proposed as a part of a highway project, the EIS should include sufficient information to explain the basis for providing the facilities (e.g., proposed bicycle facility is a link in the local plan or sidewalks will reduce project access impact to the community). The final EIS should identify the facilities to be included in the preferred alternative. Where the preferred alternative would sever an existing major route for non-motorized transportation traffic, the proposed project needs to provide a reasonably alternative route or demonstrate that such a route exists (23 USC 109(n)). To the fullest extent possible, this needs to be described in the final EIS. This guidance is online via FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(b) WSDOT Design Manual

See the *Design Manual* (M 22-1) for guidance, particularly Chapter 1020, Bicycle Facilities, and Chapter 1025, Pedestrian Facilities. Other sections include information applicable to bicycle and pedestrian facilities, including shoulders on urban roads.

(5) Access for Persons with Disabilities

See the Access Board's web site at:

http://www.access-board.gov/

USDOJ's ADA Technical Assistance Program provides up-to-date information about the ADA and how to comply with its requirements. Technical assistance materials are accessible via the USDOJ web site:

http://www.usdoj.gov/

Click on Alphabetical List of Components, then Civil Rights Division, then Special Topics, then ADA Home Page, then Technical Assistance Program or ADA Regulations and Technical Assistance Materials.

Or by direct link:

http://www.usdoj.gov/crt/ada/adahom1.htm

(6) Waterborne, Rail, and Air Traffic

Road projects typically have little impact on waterborne (ferries/shipping), rail, or air transportation. Potential impacts to be considered include disruption of local or regional access, dust, noise, and water quality, particularly during construction. The following special provisions apply.

Ferries – When a highway project is adjacent to or may impact a ferry facility, the Coast Guard, and potentially the US Army Corps of Engineers may require review under several different permits. See **Section 431.06** for water-related permits.

Airports – Any proposed highway construction or alteration in the vicinity of a public or military airport will require early coordination with WSDOT's Aviation Planning Division. Potential issues range from FAA height requirements, runway protection zones (RPZs), general clear zone requirements, and approved landscape/vegetation near the designated clear zones and access.

Railroads – WSDOT's *Design Manual* (Chapter 930) includes several standards applicable when a highway project crosses a railroad at grade or at a different elevation.

460.06 Permits

Depending on the location of the road project and how it may impact local traffic or parking the following local permits may be required:

- Grading permit
- Detour and haul road agreements

There are no direct permits related to impacts upon waterborne, rail, or air traffic. However, it is advisable to contact the appropriate agencies (Washington State Ferry Division, Federal Railroad Administration, or the FAA) for any potential conflicts that need to be addressed during the environmental analysis.

460.07 Non-Road Project Requirements

Non-road projects are generally subject to the same policies, procedures, or permits that apply to road projects. The mostly likely transportation impact of non-road projects is changes in the traffic flow and circulation around existing operational facilities. Early environmental screening should identify any parking or traffic conflicts, both short-term (during construction) and long-term (ongoing operations).

The State Transportation Commission's Policy 4.3.6 regarding ferry system parking states: "Parking policies and facilities directly affect the traffic mix and service levels on each Washington State Ferries (WSF) route, and thereby impact the need for future vessel acquisitions. Policies and facilities also influence local and regional traffic volumes, traffic patterns, and land use development."

460.08 Exhibits

Exhibit 460-1 – FAA Notice Requirement Related to Highways.

FAA Notice
Requirement Related to Highways

The following FAA Notice requirements are excerpts from; Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace, published January 1975.

SUBPART B — Notice of Construction or Alteration

§77.13(a)(2) – A notice is required for any proposed construction or alteration that would be of greater height than an imaginary surface extending outward and upward at one of the following slopes –

(i) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway more than 3,200 feet in actual length.

(ii) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport with its longest runway no more than 3,200 feet in actual length.

(iii) 25 to 1 for a horizontal distance of 5,000 feet from the nearest landing and takeoff area of each heliport, available for public use and listed in the Airport Directory of the current Airman's Information Manual or in either the Alaska or Pacific Airman's Guide and Chart Supplement; is under construction and is the subject of a notice or proposal on file with the FAA and except for military heliports, it is clearly indicated that that heliport will be available for public use, or operated by a Federal Military agency.

§77.13(a)(3) – Notice is required for any proposed construction or alteration of any highway, railroad, or other traverse way for mobile objects if a greater height than the standards of 77.13(a)(1) or (2) after their height has been adjusted upward by on of the following:

-17 feet for an Interstate highway that is part of the National System of Military and Interstate Highways,

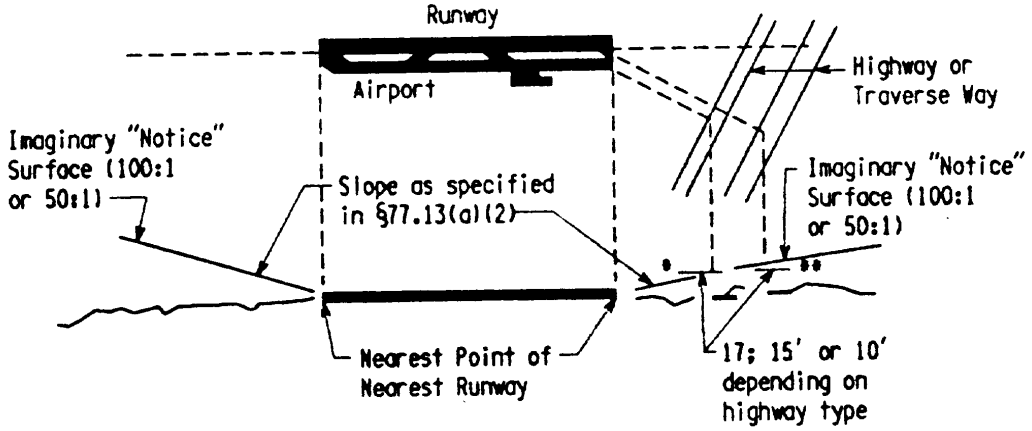
-15 feet for any other public roadway,

-10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road,

-23 feet for a railroad.

For a waterway or any other traverse way, an amount equal to the height of the highest mobile object that would normally use it.

FAA NOTICE REQUIREMENT RELATED TO HIGHWAYS



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Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

470.01 Introduction

Transportation projects may impact public services and utilities by increasing demand beyond the capability of service providers or by disrupting service. Construction impacts may include requiring relocation or adjustment of utility lines or facilities or interfering with police, fire, and emergency services.

Public services in a project area may include fire, police, schools, parks and recreational facilities, and maintenance services. Utilities may include municipal agencies, special utility districts, and private companies that provide services such as electricity, natural gas, water, wastewater or stormwater collection, and telecommunications.

This section reviews environmental considerations related to these public services. See related discussions on socioeconomic impacts (**Section 457**) and transportation (**Section 460**).

(1) Summary of Requirements

Under FHWA's NEPA implementing regulations, impacts on public services are considered as a socio-economic indicator (see **Section 457**). Under SEPA regulations, public services and utilities are included in the analysis of impacts to the built environment.

WSDOT's Discipline Report checklist on Social Elements (see **Exhibit 457-1**) includes impacts on public services. WSDOT's *Utilities Manual* (M 22-87) and FHWA Technical Advisory may also offer some guidance.

In preparing preliminary engineering plans and final PS&Es, the regional project manager or utility staff negotiates agreements with utilities whose facilities will require relocation or adjustment as a result of a transportation project.

(2) Acronyms and Abbreviations

None.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(3) Glossary

Public service – SEPA lists fire, police, schools, parks or other recreational facilities, maintenance, communications, water/stormwater, sewer/ solid waste, and other governmental services or utilities as elements of the built environment to be considered during the environmental review process.

Relocation – The adjustment of utility facilities required by a highway project. Includes removing and installing facilities, acquiring necessary property rights in the new location, moving or rearranging existing facilities, or changing the type of facility, including any necessary safety and protective measures. Also means constructing a replacement facility, functionally equal to the existing facility, where necessary for continuous operation of the utility service, project economy, or for staging highway construction.

Utility – Privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, cable television, electric power, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, and other similar commodities, including any fire or police signal systems, street lighting systems, and traffic control system interties, which directly or indirectly serve the public. (WSDOT *Utilities Manual* (M 22-87), Chapter 2.)

470.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, and implementing regulations require that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision-making; public services and utilities are not specifically mentioned.

The State Environmental Policy Act (SEPA) and its implementing regulations (WAC 197-11) mandate a similar procedure for state and local actions, and public services and utilities are listed among the elements of the built environment to be considered. Specifically, the discussion of significant impacts is to include the "cost of and effects on public services, such as utilities, roads, fire and police protection, that may result from the project" (WAC 197-11-44(6).

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on NEPA/SEPA procedures, see **Section 410** through **Section 412**.

(2) CFR Title 23 – Reimbursement for Utility Relocation

Title 23 of the Code of Federal Regulations implements and carries out the provisions of federal law relating to the administration of federal aid for highways. Part 645 of 23 CFR prescribes the policies, procedures, and reimbursement provisions for the adjustment and relocation of utility facilities on federally aided projects. The text of 23 CFR 645 can be found online at:

http://www.access.gpo.gov/nara/cfr/

Click on New Code of Federal Regulations Browse Feature, then search for Title 23 (April 1, 1999), Parts 1-999, and 645 Utilities.

Or by direct link:

http://www.access.gpo.gov/nara/cfr/waisidx_01/23cfr645_01.html

(3) ***RCW 47.44 – Franchises on State Highways***

Under this law, WSDOT may grant franchises to use any state highway for the construction and maintenance of water, flume, gas, oil, or coal pipes; telephone, telegraph, and power lines and conduits; trams or railways; and any structures or facilities which are part of an urban public transportation system owned or operated by a municipal corporation, other state agency or department, and any other such facilities. RCW 47.44 is on line at:

http://www.leg.wa.gov/

Click on Legislative Information, then RCW, then Title 47, then 47.44.

Or by direct link:

http://search.leg.wa.gov/wslrcw/RCW 47 TITLE/RCW 47 . 44 CHAPTER/RCW 47 . 44 chapter.htm

(4) ***WAC 468.34 – Utility Franchises and Permits***

This section of the WAC relating to WSDOT establishes procedures related to granting utility permits and franchises on WSDOT rights-of-way.

http://www.leg.wa.gov/

Click on Legislative Information, then WAC, then Title 468, then 468.34.

Or by direct link:

http://search.leg.wa.gov/wslwac/WAC 468 TITLE/WAC 468 - 34 CHAPTER/WAC 468 - 34 Chapter.htm

470.03 Policy Guidance

WSDOT's Utilities Accommodation Policy (M 22-86) was established in cooperation with the utility industry. It follows AASHTO policy guidelines on accommodating utilities within highway and freeway rights of way, and is in compliance with state laws and regulations governing the accommodation of utility facilities and with federal aid policies and procedures. Its objective is to prescribe the means by which utility installations, when located in a manner not interfering with the free and safe flow of traffic, or otherwise impairing the highway of its visual quality, may be accommodated within state highway rights of way.

470.04 MOUs, MOAs, and IAs

A Memorandum of Understanding between WSDOT and the U.S. Forest Service (USFS), relating to highways over national forest lands. The MOU identifies procedures for WSDOT and USFS to follow in allowing utilities within a highway right of way that crosses the National Forest boundary.

✎ Memorandum of Understanding Relating to Coordination of Transportation Activities on National Forest Lands. See **Exhibit 455-1**. (M 22-50)

470.05 Technical Guidance

WSDOT has no discipline report checklist to guide analysis of utility and public service impacts; however, impacts on public services are covered in the Social Element Discipline Report (see checklist, **Exhibit 457-1**).

Under SEPA, "impacts to public services and utilities" refers to potential significant disruption or increased demand on services.

(1) *FHWA Technical Advisory*

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing and processing environmental and Section 4(f) documents. For social impacts, including potential impacts on public services, the draft EIS should discuss the impacts on services listed below for each alternative commensurate with the level of impacts and to the extent they are distinguishable. Discussion of impacts on services such as school districts, recreation areas, churches, businesses, police, and fire protection should include both direct impacts to these entities and the indirect impacts resulting from the displacement of households and businesses. (See Section 457.05.)

For details, see FHWA's home page:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(2) *Construction Impacts*

Transportation projects are mostly likely to impact public services and utilities during construction. Impacts might include, for example, delays in school bus service, police, fire, and emergency services; and relocation of utility facilities.

Safety and operation of the highway facility are primary considerations when dealing with utility use of WSDOT right of way. Financial impacts to the utilities or transportation projects are determined in general based on the utilities compensable real property interest.

(a) *WSDOT Utilities Manual*

WSDOT's *Utilities Manual* (M 22-87) describes general practices, policies, and procedures with respect to agreements, permits, and franchises between WSDOT and other entities, including those using WSDOT's right of way and those affected by WSDOT projects. Chapter 2 gives specific guidance for utility agreements.

The *Utilities Manual* includes detailed procedures and samples for preparing preliminary engineering agreements and construction agreements. The Utilities Manual is available online via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library, then Utilities Manual.

Or by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/UtilitiesManual.pdf

The manual also includes information on approval authority, utility property rights, authorization to proceed, extra work, administrative and supervisory responsibility, inspection and records, and checklists for utility contracts and regional review.

(b) *WSDOT Design Manual*

In Section 1410, Right-of-Way Considerations, WSDOT's *Design Manual* (M 22-01) describes the region's responsibility to ascertain ownership of all utilities and

arrange for necessary adjustment, including relocation of portions of the utility if necessary. Provisions for relocation or adjustment are included in the PS&E plans when such items are normal construction items and WSDOT is obligated for moving expenses, or when the utility requests that relocation be performed by the WSDOT and the Assistant Secretary for Highways has approved the request. Readjustment may require WSDOT to purchase substitute rights-of-way or easements for eventual transfer to the utility. Such right of way or easements must be shown on the ROW plans with the same engineering detail as for highway right-of-way. The Design Manual is available online via WSDOT's home page:

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library, then Design Manual, then select a version.

Or by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/library.htm

(3) WSDOT Environmental GIS Workbench

This GIS interface is for internal WSDOT use only. It has over 60 layers of environmental or natural resource management data. WSDOT works with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. The workbench currently includes no data directly related to utilities and public services. WSDOT users can access the workbench at:

w:\Data\GIS\GISOSC\GEODATA

For a list of current data sets, see WSDOT's environmental web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Information, then WSDOT GeoData Catalog.

Or by direct link:

http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

470.06 Permits

None.

470.07 Non-Road Project Requirements

Requirements for ferry, aviation, and rail projects are similar to those for highways.

470.08 Exhibits

None.

480 Secondary and Cumulative Impacts

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Key to Icons

Web site.*
Memorandum of Understanding.
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

480.01 Introduction

This section deals with some of the most challenging sections of an environmental document, namely consideration of:

- Indirect or secondary impacts
- Cumulative impacts
- Irreversible and irretrievable commitment of resources
- Relationship between local short-term uses of the environment and long-term productivity

Ongoing efforts to provide updated information and guidance for addressing secondary and cumulative effects could not be completed before printing this document. However, this section will be updated as WSDOT continues to work cooperatively with federal and state agencies to refine its scope and content. Until revisions are published, the guidance in this section should be considered by those using the EPM, recognizing that information included in this section is a work in progress.

The evaluation of cumulative effects should include the identification and analysis of cumulative impacts, as well as relationship of these effects with mitigation considerations for the project's impacts. These sections require thinking into the future and outside the immediate project area, and considering a range of possible impacts beyond the most obvious.

For example, if a proposed highway is to be built near a wetland, a direct impact would be filling the wetland; an indirect impact would be increased development because of improved access; and a cumulative impact would be the gradual loss of wetland in the watershed due to the highway and other development.

An irreversible commitment of resources would be productive farmland or forest replaced by a highway. An irretrievable *commitment* of resources would be the use for highway construction of fossil fuels and minerals which are non-renewable and ultimately limited in supply.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

A *local short-term use* of the environment would be improved traffic flow and access resulting from a new interchange, weighed against the long-term productivity of farmland, forest, estuary, wetland, or other ecosystems which would be lost.

In the past, secondary and cumulative impacts have seldom affected FHWA/WSDOT environmental and project location decisions because of limited guidance available to help direct the assessment of those impacts. The emphasis has historically been on direct impacts, and efforts to improve identification and analysis of impacts have centered on areas of the most visible and immediate concern.

In recent years, the potential for secondary and cumulative impacts – particularly to aquatic resources from a watershed perspective and to air resources – has been increasingly recognized. The importance of recognizing such impacts has become an important issue that has the potential to temper WSDOT decisions on project scope, location, and mitigation alternatives. Improved techniques are evolving that will help ensure appropriate identification and analysis both immediate and long-term cumulative impacts, and also to help direct associated mitigation actions related to the project(s).

Two important factors to consider in determining the potential for secondary and cumulative impacts are:

Potential for future development – In areas experiencing little growth, an individual highway project will likely contribute negligibly to cumulative impact because of the absence of other development activity. Conversely, in areas of moderate to rapid development, a highway improvement can add measurably to the aggregated change leading to long-term impacts.

Type of project – Capacity improvements, additional interchanges, and construction on a new location generally have greater potential for secondary effects than projects to upgrade existing facilities. New access into undeveloped locations can contribute to subsequent development activity.

For more information on analysis of energy impacts, see **Section 440.**

(1) Summary of Requirements

Both NEPA and SEPA require consideration of cumulative as well as direct and indirect impacts, irretrievable and irreversible commitment of resources, and the relationship between local short-term uses of the environment and long-term productivity. Cumulative impacts should be discussed in individual sections on each element of the environment, along with direct and indirect impacts. A summary of cumulative impacts may also be included in a separate section. Environmental documents should also include a separate discussion of the overall irretrievable and irrevocable commitment of resources, and the relationship between local short-term uses of the environment and long-term productivity.

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ). State implementing regulations are in WAC 197-11 and WAC 468-12 (WSDOT). For details on NEPA/SEPA procedures, see **Section 410** through **Section 412.**

(2) Acronyms and Abbreviations

None.

(3) Glossary

Effect – See "Impact."

Cumulative impact – Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative

impacts can result from individually minor but collectively significant actions taking place over a period of time.

Direct effect – Effect caused by the proposed action and occurring at the same time and place.

Indirect effect – Effect caused by the proposed action that is later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Impact – Synonymous with "Effect". Includes ecological impacts (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health impacts, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes the effect will be beneficial.

Irretrievable –Impossible to retrieve or recover.

Irreversible – Impossible to reverse.

Resource – Referred to in NEPA and SEPA implementing regulations as "natural or depletable" resources (CEQ 1502.16; WAC 197-11-440 (6)) and renewable or nonrenewable resources (WAC 197-11-444). FHWA Technical Advisory T6640.8A (October 30, 1987) refers to "natural, physical, human, and fiscal resources" in guidance on irreversible and irretrievable commitments of resources.

480.02 Applicable Statutes and Regulations

(1) National Environmental Policy Act/ State Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations, including direct, indirect, and cumulative impacts, are given due weight in project decision-making. The State Environmental Policy Act (SEPA), RCW 43.21C, mandates a similar procedure for state and local actions.

In addition to direct and observable effects, agencies are required to examine effects that may be indeterminate and not easily recognized; these are referred to as "secondary and cumulative impacts."

Under NEPA and SEPA, an EIS also is to include "the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity;" and "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." SEPA includes "significant irrevocable commitment of natural resources" in the definition of "significant impacts" (RCW 43.21C.030).

A good overview of NEPA requirements and FHWA guidance is available on FHWA's environmental home page:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then NEPA: Project Development Process, then Transportation Decisionmaking, then Secondary and Cumulative Impacts (under Environmental Impacts and Mitigation).

Or by direct link:

http://www.fhwa.dot.gov/environment/2nd_cml.htm

(2) NEPA Implementing Regulations

(a) CEQ Rules

The 1978 regulations of the Council on Environmental Quality (CEQ) implemented the action provisions of NEPA. These regulations broadly define the direct, indirect, and cumulative effects that must be evaluated. Generally, secondary effects are induced by the action. They include a variety of effects such as changes in land use, water quality, economic vitality, and population density. Cumulative impacts are less defined and may be undetectable when viewed in the context of direct and indirect impacts, but nonetheless can add to other disturbances and eventually lead to a measurable environmental change. They require that agencies examine indirect consequences that may occur in areas beyond the immediate influence of a proposed action and at some time in the future (40 CFR 1508).

(b) FHWA Rules

FHWA implements NEPA and the CEQ guidelines with its environmental regulations (23 CFR 771). These regulations interpret the CEQ guidelines on secondary and cumulative impacts in a unique way. These impacts are referenced when justification is required for the use of categorically excluded actions. Categorical Exclusions (CE) are actions which "do not induce indirect significant impacts to planned growth or land use…" or "do not otherwise, either individually or cumulatively, have any significant impacts.

(3) SEPA Implementing Regulations

The SEPA implementing regulations also specify that direct, indirect, and cumulative impacts must be considered in the EIS (WAC 197-11-70-92). For example, impacts include those resulting from growth caused by a proposal, as well as the likelihood that the present proposal will serve as a precedent for future actions. The range of impacts to be analyzed (direct, indirect, and cumulative) may be wider than the impacts for which mitigation measures are required of applicants (WAC 197-11-060 (4)).

480.03 Policy Guidance

FHWA policy on secondary and cumulative impacts is given in a memorandum and accompanying *Position Paper on Secondary and Cumulative Impact Assessment in the Highway Development Process* (August 20, 1992). Following are several excerpts:

"The Federal Highway Administration (FHWA) and the State highway agencies recognize the growing need to include indirect impact assessments in project environmental studies. The FHWA commitment to conduct comprehensive environmental and public interest decision-making requires the collection and presentation of all information relevant to a project, including its indirect consequences and contribution to area-wide change. Additionally, commenting agencies are now recommending that secondary and cumulative impact analyses be conducted on almost all new proposals for highway improvements. The agencies are becoming particularly vocal concerning the potential for such impacts on area-wide water, wetland, and air resources….

"The FHWA Environmental Policy Statement (EPS) issued in 1990 calls for assurances to minimize future social, economic and environmental impacts. Additionally, under the recent Intermodal Surface Transportation Efficiency Act, the FHWA must now work with the State

highway agencies as never before to preserve and enhance environmental resources while implementing transportation improvement programs. These commitments will require that equal weight be given to environmental issues during the project decision-making process that normally emphasizes engineering considerations.

"These mandates place new emphasis on the examination of secondary and cumulative impacts. That is, the FHWA and the State Highway Agency must produce systematic analyses of environmental, social and economic impacts of sponsored projects that include coverage of secondary and cumulative effects. Otherwise, the analyses most likely will be incomplete under the FHWA commitment to comprehensive environmental and public interest decision-making."

The policy document is available in the Environmental Guidebook, online at FHWA's web site:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Cumulative and Secondary Impacts.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch6.htm

480.04 MOUs, MOAs, and IAs

None identified.

480.05 Technical Guidance

WSDOT has no specific guidance on this topic. The best sources are FHWA and CEQ reference materials described below.

(1) FHWA Technical Advisory

FHWA Technical Advisory T6640.8A (October 1987) gives guidelines for preparing environmental and Section 4(f) documents. The advisory suggests the type of secondary impacts that should be discussed in several environ-mental topics (land use, farmland, socio-economic, and energy). These generally involve resources that can be sensitive to change induced by a transportation project, such as the social and economic structure of a community, floodplains, and areawide water quality. While it does not specifically address cumulative impacts, the advisory does includes guidance for preparing sections on the relationship between short-term uses and long-term productivity and on irreversible and irretrievable commitments of resources (see below). This document is available online on FHWA's web site:

http://www.fhwa.dot.gov/

Click on Legislation and Regulations, then FHWA Directives and Policy Memorandums, then FHWA Technical Advisories, then T6640.8A.

Or by direct link:

http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

(a) Relationship between Short-term Uses and Long-term Productivity

The EIS should discuss in general terms the relationship of local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity. The discussion might recognize that alternatives other than "no

action" would have similar impacts. The discussion should point out that transportation improvements are based on state and/or local comprehensive planning which considers the need for present and future traffic requirements within the context of present and future land use development. In such a situation, one might then conclude that the local short-term impacts and use of resources by the proposed action is consistent with the maintenance and enhancement of long-term productivity for the local area, state, or region.

(b) Irreversible and Irretrievable Commitments of Resources

The EIS should discuss in general terms the irreversible and irretrievable commitment of resources resulting from the proposed action. This general discussion might recognize that the alternatives would require a similar commitment of natural, physical, human, and fiscal resources. An example of such discussion is given online at the site given above.

(2) FHWA Guidance on Secondary and Cumulative Effects

More recent guidance is found in an FHWA memorandum and position paper, which provides guidance on methods to deal with evaluation of secondary or cumulative impacts (*Position Paper on Secondary and Cumulative Impact Assessment in the Highway Development Process*, August 20, 1992).

This paper offers background information and conceptual guidance, but does not prescribe specific techniques to be used during project analysis. For example, it suggests that an examination of secondary and cumulative consequences should focus on the functional relationships of resources with larger systems. If these relationships are understood, then conclusions on a project's likely secondary and cumulative impacts to the overall system should be possible. This informal guidance, which FHWA plans to replace or supplement soon, is available via FHWA's home page:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Cumulative and Secondary Impacts.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch6.htm

(3) CEQ Guidance on Cumulative Effects

A good resource for cumulative effects analysis is *CEQ Handbook: Considering Cumulative Effects under the National Environmental Protection Act* (January 1997). This handbook presents the results of research and consultations by CEQ concerning the consideration of cumulative effects. It introduces the complex issue of cumulative effects, outlines general principles, presents useful steps, and provides information on methods of cumulative effects analysis and data sources. The handbook includes the following 11-step process for analyzing cumulative impacts.

Scoping

Step 1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.

Step 2. Establish the geographic scope for the analysis.

Step 3. Establish the time frame for the analysis.

Step 4. Identify other actions affecting the resource.

Describing the Affected Environment

Step 5. Characterize the resources, ecosystems, and human communities identified during scoping in terms of their response to change and capacity to withstand stress.

Step 6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

Step 7. Develop a baseline condition for the resources, ecosystems, and human communities.

Determining Environmental Consequences

Step 8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

Step 9. Determine the magnitude and significance of cumulative effects.

Step 10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

Step 11. Monitor and evaluate the cumulative effects of the selected alternative and adapt management.

The handbook does not establish new requirements for such analyses. It should not be viewed as formal CEQ guidance on this matter, nor are its recommendations intended to be legally binding. The handbook is available via FHWA's home page:

http://www.fhwa.dot.gov/

Click on FHWA Programs, then Environment, then Environmental Guidebook, then Cumulative and Secondary Impacts.

Or by direct link:

http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch6.htm

Or:

http://www.fhwa.dot.gov/environment/guidebook/index.htm

480.06 Permits

None required.

480.07 Non-Road Project Requirements

Ferry, rail, aviation, and non-motorized transport systems are generally subject to the same policies and procedures that apply to road projects.

480.08 Exhibits

None.

500 Post-Design Phase Overview

500.01 Introduction
500.02 Applicable Requirements
500.03 Policy Guidance
500.04 Roles and Responsibilities
500.05 Exhibits

500.01 Introduction

The design phase of a project is completed with approval of Plans, Specifications, and Estimates (PS&Es). Once funding has been secured, the post-design phase begins. The public is notified that WSDOT is ready to accept bids for completion of the work, a contract is awarded, and construction begins. During construction, the contractor is primarily responsible for complying with the environmental commitments made during project development, with oversight by the WSDOT Project Engineer.

After the project is constructed, responsibility for the project shifts to the Maintenance Office, which is responsible for protecting the transportation infrastructure while following federal, state, and local laws and regulations related to water quality, endangered species protection, and other environmental concerns.

If a property is no longer needed for transportation purposes, its disposal is managed by the Real Estate Services Office, after first consider-ing its potential uses for wetland mitigation, scenic beauty, or as a high occupancy vehicle facility, and whether there are no hazardous materials constraints.

This section reviews the environmental requirements during construction and maintenance of the project, and considerations if a property is being considered for disposal.

500.02 Applicable Requirements

Many of the requirements discussed in detail in Part 400 apply to all transportation activities, including construction, maintenance, and surplus real property disposal activities.

Refer to **Section 420** through **Section 470** for statutes and regulations, interagency agreements, and agency policies applicable to each topic. Requirements specific to construction, maintenance, or surplus property disposal are summarized in **Section 510** through **Section 530**, with extensive reference to the applicable manuals: WSDOT *Construction Manual* (M 41-01), *Maintenance Manual* (M 51-01*), Maintenance Manual for Water Quality and Habitat Protection*, and *Right of Way Manual* (M 26-01).

500.03 Policy Guidance

The *Washington State Transportation Commission Policy Catalog* includes environmental policies which specifically refer to minimizing and/or mitigating impacts of construction, operation, and maintenance of transportation facilities on surface and ground water quality (6.3.2), fish and wildlife habitat (6.3.3), wetlands (6.3.4), and impacts of hazardous materials use (6.3.8). See **Section 420** through **Section 470** and **Section 510** through **Section 530** for details.

500.04 Roles and Responsibilities

(1) Olympia Service Center

(a) Highway Construction Management

The Olympia Service Center (OSC) Construction Office strives for consistent, cost-effective quality construction through direct support of WSDOT's Regional construction program. The Construction Office coordinates the development of policies and standards, provides training, guidance, oversight, technical expertise and advocacy; introduces innovation; and coordinates and shares information on construction issues. *[Ref: CM 1-1.4]*

The State Construction Engineer is responsible for all WSDOT contract construction projects, except those executed by the Director of Washington State Ferries. The State Construction Engineer is responsible for providing guidance and direction to Regional and OSC construction personnel. He/she establishes WSDOT policy relative to inspection and documentation and ensures uniform interpretation and enforcement of the Standard Specifications and contract provisions throughout the state. The State Construction Engineer is assisted by three principal assistants, as summarized below.

Construction Administration – The Construction Engineer, Administration sets requirements for contracting, policy, and responding to questions from the Regions on all issues pertaining to Division 1 of the Standard Specifications and Chapters 1 and 10 of the Construction Manual.

Roadways – The Construction Engineer, Roadways is responsible for all highway construction such as grading, drainage, surfacing, paving, signing, guard rails, illumination, traffic signals, landscaping, and rest areas.

Bridges – The Construction Engineer, Bridges is responsible for bridges and related structural construction, engineering and contract administration.

(b) Highway Maintenance Management

The Maintenance Office in the Olympia Service Center provides statewide support for field maintenance activities. The State Maintenance Engineer has oversight for the state's highway maintenance program. The office is organized to provide expertise and assistance to the Regions in the areas of maintenance accountability, application of technology and information, development of statewide maintenance training, emergency response, permitting and administration of the trucking industry, and management of environmental issues and they relate to maintenance activities in the field.

The Environmental Branch within the Maintenance Office includes personnel with expertise to provide services in the areas of:

- Hazardous waste handling, spill response, and facilities cleanup
- Water quality and habitat protection
- Roadside vegetation management
- Drinking water and sewer systems management (primarily for Safety Rest Areas)

(c) *Surplus Real Property Management*

The Real Estate Services Office is responsible for performing and coordinating all WSDOT real estate transactions. The office also provides real estate training and assistance to other state agencies and local governments, and issues guidelines for all state agencies engaged in real estate activities covered by the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. The office provides the following services:

- Title and preparation of files for eminent domain actions by the Attorney General's office
- Appraisal and appraisal review for acquisition and disposal
- Acquisition
- Project certification and local programs
- Relocation
- Property management and surplus property disposal

Relocation and property management are the functions most related to environmental issues. The relocation program provides advisory services and monetary benefit to families, businesses, and farms displaced by state projects. Replacement housing is assured to persons occupying residences displaced for state projects. (This and other socio-economic impacts are discussed in **Section 457**.)

Among the responsibilities of property management personnel are disposal of surplus property not required by WSDOT, and eliminating hazards and public nuisances originating on or caused by WSDOT-owned land or improvements. Environmental considerations related to surplus property disposal is described in **Section 530.**

(d) *Environmental Services Office*

Environmental Services Office (ESO) staff offer expertise in environmental issues as a resource to OSC and Regional personnel during project construction and maintenance, and when disposal of surplus property is being considered.

(2) *Regional Offices*

WSDOT's Regional Offices are responsible for supervising location, design, construction and maintenance of highway system within the Region. They make recommendations for surplus property disposal based on evaluation of other potential uses and hazardous materials risk.

(3) *Ferries, Rail, and Aviation*

(a) *Washington State Ferries*

Ferry facility construction and maintenance are the responsibility of the Director of WSF.

(b) *Rail*

Construction and maintenance of rail facilities and disposal of surplus property are the responsibility of Burlington Northern and other railway companies, as owners of the facilities.

(c) Aviation

Aviation facility construction and maintenance are the responsibility of the Director of WSDOT's Aviation Division.

(4) Federal Oversight Agencies

Federal funds for construction of highways, roads, streets and bridges and other transportation facilities are subject to federal laws, Executive Orders, regulations, and agreements.

FHWA approves all programs for federal high-way funds and, where Interstate funds are involved, approves individual project plans and specifications. May conduct final inspection to verify substantial compliance with approved Federal aid program.

500.05 Exhibits

None.

510.01 Overview of Construction Phase
510.02 Environmental Considerations during Construction
510.03 Earth
510.04 Air Quality
510.05 Water Quality
510.06 Wildlife, Fisheries, and Vegetation
510.07 Wetlands
510.08 Noise
510.09 Hazardous Materials
510.10 Land Use
510.11 Transportation/Traffic
510.12 Public Services & Utilities
510.13 Non-Road Requirements
510.14 Exhibits

Key to Icons

Web site.*

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

510.01 Overview of Construction Phase

Section 510 covers the construction phase of WSDOT projects. Construction begins after approval of project design and environmental documents, formalized as plans, specifications and estimates (PS&E). Construction includes contracting and construction management for highways and other transportation facilities and ends with final inspection and compliance with approved Federal aid program.

During project development, environmental issues will have been thoroughly considered and documented. Mitigation plans and permits will have been approved and requirements included in contract plans and special provisions.

During construction, WSDOT construction managers and contractors are responsible for ensuring that commitments made during project development are met. Additional approvals or permits may be needed during construction, if an environmental issue not foreseen during project development is encountered. This could occur, for example, if a previously unknown wetland, stream, or endangered/threatened species habitat is discovered; if a change in project design results in impacts to areas not covered by a permit; or if hazardous material or cultural artifact is discovered during excavation. In such cases, refer to **Section 420** through **Section 470** for permit or approval requirements.

This section mostly covers requirements for highway construction. Where requirements differ for ferry, rail, or aviation facilities, these are noted. Guidance for design-build projects will be provided on a case-by-case basis.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

(1) *Summary of Requirements*

Environmental requirements are included in PS&Es and contract documents; those not covered by *Standard Specifications* are described in the special provisions. **Section 510.02** reviews the environmental considerations that apply during the construction process. These include:

- Contractor and WSDOT responsibilities
- Mitigation measures and any other pre-commitments
- Monitoring for environmental compliance
- Final inspection

Section 510.03 through **Section 510.12** summarize any specific environmental requirements applying to different elements of the environment during construction. These requirements are spelled out in more detail in *WSDOT's Standard Specifications for Road, Bridge and Municipal Construction* and *Construction Manual* (M 41-01) as cited throughout this section. See also **Section 420** through **Section 470** of this EPM. Project engineers, field engineers, and inspectors are advised to review the relevant sections and reference documents in Part 400.

(2) *Correlation with WSDOT Construction Manual*

WSDOT's *Construction Manual* (M 41-01) covers all aspects of construction management, including environmental compliance, and has been referenced throughout in this section. However, it should be noted that this EPM represents WSDOT's most current information on federal, state, and local environmental requirements. The *Construction Manual* should be consulted for overall WSDOT construction procedures and requirements. For a specific project, the contract specifications take precedence.

(3) *Relationship with Federal, State, Local Agencies, and Tribes*

(a) *FHWA*

The federal government provides transportation funding to Washington State through the Fed-eral Highway Administration (FHWA). These funds are subject to applicable federal law, Executive Orders, regulations, and agreements.

FHWA provides oversight of WSDOT work on some projects, and has delegated that responsibility to WSDOT on others. In accordance with the Construction Monitoring Plan, which is part of the WSDOT/FHWA Stewardship agreement, the project type and size determine whether FHWA, the Construction Office, or Region will conduct the inspections and reviews necessary to verify adequate compliance with federal rules, regulations and procedures.

See **Section 510.02 (4)** for FHWA's role in final inspection and approval of highway projects.

(b) *Other Federal, State, and Local Agencies and Tribes*

Resource and regulatory agencies responsible for water quality, wildlife and fisheries, flood control, land development, forestry, and other environmental issues may need to be consulted during the construction process. WSDOT's policy is to comply with requirements of all agencies. The Project Engineer needs to monitor contractors to ensure that the conditions of all permits are followed and that all mitigation is implemented. Without "due diligence," WSDOT may be legally liable for damages if conditions are not met.

The Project Engineer also shall cooperate with local authorities to help ensure that the contractor complies with local laws, ordinances, and regulations.

When the contractor is required specifically by the contract to obtain approval from other agencies, the Project Engineer shall confirm that approval was received by obtaining a copy of the approval. The Project Engineer or inspector should accompany any representative of the regulatory agency who visits the project site. For specific responsible agencies, see **Section 510.03** through **Section 510.12**.

When a contract includes work on tribal lands, the contract should include a special provision alerting the contractor of special requirements.

[Ref: CM 1-1.7C, 1-2.2D #4, CM 1-2.2L]

(4) Acronyms and Abbreviations

Abbreviations and acronyms used in this section are listed below. Others are found in the general list in the appendix.

BMP	Best Management Practice
DSI	Detailed Site Investigation
EAP	Emergency Action Plan, appendix to SPCC Plan
ISA	Initial Site Assessment
NOI	Notice of Intent
PS&E	Plans, Specifications, and Estimates
SHPO	State Historic Preservation Officer
SPCC	Spill Prevention, Control, and Containment
SSP	Stormwater Site Plan
TESC	Temporary Erosion and Sedimentation Control
UST	Underground Storage Tank
WISHA	Washington Industrial Safety and Health Act

(5) Glossary

None.

510.02 Environmental Considerations during Construction

(1) Responsibility for Environmental Considerations

Under the terms of the contract, the contractor is responsible for complying with all federal, state, and local rules, regulations, and permit conditions related to environmental protection and worker health and safety.

The Project Engineer is responsible for the enforcement of the contract specifications and provisions and the completion of all work according to the plans.

[Ref: CM 1-2.2A]

(2) Pre-contract Preparation

(a) Environmental

During the pre-contract period, the Project Engineer should obtain copies of environmental documents (such as the EIS or Environmental Assessment if

applicable) and any special environmental studies related to the project from the Regional Environmental Coordinator. All key personnel should become familiar with the environmental factors considered during the design process.

If there is a project EIS, it will include a section on impacts expected during construction and mitigation measures. FHWA Technical Advisory T6640.8A (October 30, 1987) requires the EIS to include potential adverse impacts associated with construction and proposed mitigation. Construction may particularly impact earth (grading, obtaining borrow or disposing of waste), air quality, noise levels, water quality, traffic congestion, detours, safety, and/or visual quality.

The contract documents will include necessary provisions for environmental protection, including requirements that the contractor secure permits from and abide by regulations of appropriate federal, state and local agencies. Any changes in the contract work that may become necessary must be reviewed to ensure conformance with requirements and commitments established during the environmental review conducted during project design and development. *[Ref: CM 1-2.2J]*

(b) Health and Safety

The Project Engineer shall also obtain the relevant WISHA manuals and review them with field inspectors so they will understand the important requirements. The contract plans and contract provisions shall be reviewed to identify potentially dangerous aspects of the work. *[Ref: CM 1-2.2I]*

(3) Pre-construction Meetings

(a) Environmental Commitments

During pre-construction meetings and discussions with the contractor, the following environ-mental commitments should be discussed, and relevant files made available to the contractor:

- Environmental commitment files (if any).
- Reference to environmental requirements or permits in the *Standard Specifications* or contract provisions.
- Contractor's responsibility to obtain any local agency permits.

If rock crushers are involved in the project, the State Department of Ecology (Ecology) registration requirements should be discussed (WAC 173-400). In addition, a written record of this discussion should be sent to the regional office of Ecology so they are aware of the timing and location of the rock-crushing operation. *[Ref: CM 1-2.1C]*

(b) Safety and Health Considerations

During pre-construction meetings, safety considerations should also be discussed, including those related to environmental protection and worker safety, such as work with asbestos, lead, and other hazardous materials. *[Ref: CM 1-2.1C, 1-2.2I (3)]*

(c) Other Submittals

Discuss any other submittals that will be needed during the contract and who is responsible. Environmental submittals may include traffic control plans,

temporary water pollution/erosion control plans, and spill prevention plans *[Ref: CM 1-2.1C]*

(4) Construction Monitoring and Violations

(a) Construction Monitoring

An overall Construction Monitoring Plan (March 2003) has been developed as part of the WSDOT/FHWA Stewardship Plan. The Stewardship Plan has been updated and a new monitoring plan is being developed. Project-specific issues are discussed below in **Section 510.03** through **Section 510.12** and comparable sections in Part 400, **Section 420** through **Section 470**.

(b) Unforeseen Situations

Refer especially to **Section 510.05** (Water Quality), **Section 510.06** (Wildlife, Fisheries, and Vegetation), **Section 510.07** (Wetlands), **Section 510.09** (Hazardous Materials), and **510.10** (Land Use, Cultural Resources), and any other sections where unforeseen circumstances sometimes occur.

(c) Corrective Action for Apparent Violations

As the owner-contracting agency, WSDOT is responsible for enforcing provisions of the contract. However, provisions and regulations which are by law the responsibility of other agencies should be monitored by WSDOT with proper recognition to the responsible authorities of other agencies. Any violations noticed by WSDOT or the contractor will be brought to the attention of the Region environmental staff to document the situation and coordinate a resolution. WSDOT will also notify the responsible agency if necessary and utilize such sanctions as are consistent with contract terms in assisting the responsible agency in enforcing laws, rules, and regulations. *[Ref: CM 1-2.2I referring to safety and health, and CM 1-2.2J referring to environmental considerations]*

When WSDOT employees observe something that is questionable or appears not to be in compliance with state or local laws, ordinances, and regulations, it shall be brought to the Project Engineer's attention. The Project Engineer is responsible for bringing it to the contractors attention for proper action. Experts in the WSDOT's Regional Office or Headquarters Office or resource agencies should be consulted when dealing with complex issues such as environmental compliance, safety, or hazardous materials. [Ref: CM1-1.72]

(5) Final Inspection

Construction work on contracts financed in whole or in part with federal funds are subject to final inspection and final acceptance according to the criteria contained in the Construction Monitoring Plan (March 2003), which is part of the WSDOT/FHWA Stewardship Plan. Project type and size determine whether FHWA, the OSC Construction Office, or Regional Office will conduct the final inspection.

Final inspections will be performed on all federally aided projects any time after 90 percent completion but no later than 30 days after physical completion. Final acceptance reports will be completed on all interstate projects delegated to WSDOT and will be completed by the OSC Construction Office as soon as all project requirements have been met. *[Ref: CM 1-2.2D, See CM 1-2.5H for Completion Date]*

510.03 Earth

(1) Clearing and Grubbing

Before starting grading operations, it is necessary to prepare the work area by removing all trees, brush, buildings, and other obstructions that may interfere with construction of the roadway. From the standpoint of roadside appearance and control of erosion on the right of way, it is advantageous to preserve natural growth where possible. If it is not clearly shown in the contract plans, the Project Engineer should discuss with the landscape architect the preservation of natural growth that will not interfere with roadway and drainage construction before staring clearing operations. Areas to be omitted from clearing or extra areas to be cleared should be determined before starting work and an accurate record made during staking operations. For details, see the *Construction Manual*, Section 2-1.

(2) Excavation

(a) Mining Notification

The U.S. Department of Labor, Mine Safety and Health Administration must be notified at the beginning and end of all mining operations. This includes surface mining, such as normal pit site operations; all crusher operations; and all pits and quarries, including borrow pits. The Project Engineer is responsible for this notification for WSDOT furnished pits; the contractor is responsible for all pits and quarries not furnished by WSDOT.

The Bureau of Mines reports are in addition to reports required by the Washington Department of Natural Resources. *[Ref: CM 1-2.2D]*

(b) Roadway Excavation

Roadway excavation is specified in accordance with Section 2-03.1 of the Standard Specifications and includes all materials within the roadway prism, side borrow area, and side ditches. Borrow, unsuitable excavation, ditches and channels outside the roadway section, and structure excavation are separately designated. See the Construction Manual for detailed procedures including reestablishment of slopes in the event of landslide or erosion. *[Ref: CM 2-3.1C]*

(c) Structure Excavation

There are two classes of structure excavation. Class A is excavation necessary for construction of bridge footings, pile caps, seals, wing walls, and retaining walls. All other structure excavation is Class B. See Standard Specifications 2-09.3(2), 2-09.3(3), and 2-09.3(4).

All excavation four feet or more in depth shall be shored, or protected by cofferdams, or shall meet the open-pit requirements of Section 2-09.3(3)B of the Standard Specifications. Open pit excavation or "glory holes" are not allowed adjacent to running streams.

See the *Construction Manual,* Section 2-9 for details on cofferdams, pile driving, backfilling, and other excavation operations.

(d) Ditch and Channel Excavation

Areas where open ditches are to be constructed shall be cleared and grubbed the same as areas for roadway construction. *See Construction Manual*, Section 2-10.

(3) Borrow Pits

Sections 2-03.3(14K), 9-03.20, and 9-03.21 of the Standard Specifications provide for the use of select and common borrow for use in construction of embankments. The requirements of Section 2-03.3(13) of the Standard Specifications must be observed in the operation and cleanup of borrow pits. With the requirement for reclamation of all pits, a plan must be developed to meet the requirement of the specifications and special provisions and approved before the start of pit operations. See Section 3.3 of the Construction Manual for guidelines on site reclamation. *[Ref: CM 2-3.3]*

510.04 Air Quality

Construction activities may result in temporary impacts on air quality. See **Section 425** for background on air quality requirements that may apply to the project.

510.05 Water Quality

During construction, erosion control and prevention of erosion and spills of hazardous materials are most important to avoid impacts on water quality. Cooperation with other agencies is important to ensure compliance with environmental commitments made during project development. See **Section 431** for background on water quality requirements that may apply to the project.

(1) Applicable Statutes and Regulations

Please see **Section 431.02** for details.

(2) Policy Guidance

WSDOT policy is to "minimize the impact that construction, operation, and maintenance of transportation facilities has on the state's surface and ground water" (Washington Transportation Commission Policy 6.3.3). Please see **Section 431.03** for details.

(3) MOUs, MOAs, IAs

The Implementing Agreement between Ecology and WSDOT regarding compliance with state surface water quality standards is intended for use by WSDOT and WSDOT contractors. The agreement covers general conditions, concrete work, erosion control, hazardous spill prevention and control, spill reporting, and specific provisions for erosion control in new roadway and bridge construction projects. Please see below for stormwater management and erosion control, **Section 510.09** for hazardous spill prevention and reporting, and **Section 431.04** for background information and other references. The agreement is available on WSDOT's web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Regulatory Compliance, then Water Quality Implementing Agreement (under Documents).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

(4) Technical Guidance

Please see **Section 431.05** for background information.

(a) Stormwater and Erosion Control

The primary concern with stormwater runoff during construction is erosion prevention and sediment control. Deposition of sediment in water bodies degrades water quality and severely impacts aquatic habitat. Refer to WSDOT's

Construction Manual, Section 2-3.4 for guidance on temporary water pollution and erosion control. General contract requirements are in *Standard Specifications,* Section 1-07.15, and 8-01.

Refer also to the Erosion Control chapter of WSDOT's *Roadside Manual* (M 25-30) for more information. WSDOT's *Highway Runoff Manual* (M 31-16) provides guidance to fulfill the requirements for temporary erosion and sediment control, as well as permanent control measures to manage stormwater after construction is complete. Consult *the Highway Runoff Manual* for detailed information on the Stormwater Site Plan and Temporary Erosion and Sediment Control Plan requirements. For technical assistance with the development of these plans, contact the regional environmental staff, Hydraulics, or Water Quality Units. *[Ref: Roadside Manual 5/17/99, 440-9]*

Seasonal restrictions for erosion and sediment control practices apply to construction projects. The restrictions are identified in *the Highway Runoff Manual.* Contact the regional environ-mental coordinator, regional Water quality unit, Hydraulics, or the ESO Water Quality Program for further information on erosion and sedimentation control guidance. *[Ref: Roadside Manual p. 440-12]*

(b) Stormwater Effects on Endangered Species

See WSDOT Instructional Letter #4023.00 (March 15, 2000) regarding stormwater effects on fish species listed under the ESA. The Instructional Letter is an addendum to the *Highway Runoff Manual*. (See **Section 436.05 (3)(d)** and below in **Section 510.06**.)

(c) Herbicides

For information on application of aquatic herbicides for noxious or non-noxious weeds, see **Section 431.06** of the EPM. When any herbicide application is made in or on the waters of the state, it is considered an aquatic herbicide application and falls under jurisdiction of the Department of Ecology. Prior to the application the conditions established in the Water Quality Permit for aquatic noxious weed control (**Exhibit 431-11**) or the Administrative Order for non-noxious aquatic weed control (**Exhibit 431-12**) must be met.

(d) Integrated Streambank Protection

For information, on integrated streambank protection, see EPM **Section 520.05(4)**, and WSDOT's *Streambank Protection Guidelines* (Appendix 23 of WSDOT's *Water Quality and Habitat Protection Manual*).

(5) Permits and Approvals

(a) Stormwater Management and Erosion Control

The NPDES General Permit to Discharge Stormwater Associated with Construction Activity is administered by the Department of Ecology to regulate stormwater discharge on construction sites for each project that disturbs five acres or more. During project development, an NPDES Stormwater Construction Permit covering activity in the WSDOT right of way will have been obtained. It should be kept in close proximity to the project site, along with the Stormwater Site Plan (SSP) or Temporary Erosion and Sediment Control Plan (TESC Plan) that was prepared for the project. For any stormwater discharge resulting from construction

activity outside the WSDOT right of way, the contractor will be responsible for obtaining the necessary permits.

Development of and implementation of the SSP or TESC Plan identifying BMPs to prevent surface and ground water pollution is the most significant permit requirement. See WSDOT's *Highway Runoff Manual* (M 31-16), described in **Section 431.05**, for guidance on BMPs.

Information and application forms for the NPDES General Permit to Discharge Stormwater Associated with Construction can be obtained from the web site listed below. Application is made by completing a single sheet form called a Notice of Intent for Construction Activity (NOI). The permit requires a Stormwater Pollution Prevention Plan (SWPPP), which for WSDOT is the Stormwater Site Plan (SSP) and/or a Temporary Erosion Sediment Control Plan (TESC). (See WSDOT Stormwater Site Plan Checklist, **Exhibit 431-6**, and WSDOT Temporary Erosion and Sediment Control Plan Checklist, **Exhibit 431-7**.) The applicant must also verify that SEPA and public notice requirements have been met.

For information about the NPDES permit and to download an application form (Notice of Intent), see Ecology's web site:

http://www.ecy.wa.gov/

Click on Programs, then Water Quality, then Stormwater, then Construction Stormwater General Permit, then Construction Activities. Select Construction Application Form.

Or by direct link:

http://www.ecy.wa.gov/programs/wq/stormwater/sw_prmts.html

(b) Hydraulic Project Approval (HPA)

Construction in or near streams, rivers, or other water bodies, may require a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW), which would have been obtained during project development. Please see **Section 431.06** and **Section 436.06** for details.

As agreed between WSDOT and WDFW, for each project requiring an HPA, WDFW will issue the permit to WSDOT and not to its contractor. The HPA may cover other impacts from the project, including operations in contractor staging areas, material source sites, and waste disposal sites.

When an HPA has been obtained for the project, and the permit has not been incorporated into the contract documents, the Project Engineer shall provide copies of the permit to the contractor and ensure it is properly posted at the work site at all times work is in progress. The Project Engineer should ensure that both the intent and the specific provisions of the permit are rigidly enforced.

If the contractor's method of operations, weather conditions, design changes, or other factors affect waters of the State in ways not anticipated or represented in the HPA, the Project Engineer will work with the assigned representative of WDFW and the contractor to modify the existing permit or obtain a new or revised one as appropriate.

[Ref: CM1-2.2D]

(c) Corps of Engineers Section 404 Permit

Under the Clean Water Act, a Section 404 permit is required for discharging, dredging, or placing fill materials within waters of the United States, including wetlands. The permit is required to construct temporary sedimentation basins. If applicable, the permit will have been obtained during project development and should be included in the contract special provisions.

If the contractor's method of operations, weather conditions, design changes, or other factors affect waters of the United States in ways not anticipated or represented in the permit, the Project Engineer will work with the Region environmental staff the assigned representative of the COE, and the contractor to modify the existing permit or obtain a new or revised one as appropriate.

(6) Non-Road Requirements

Please see **Section 431.07** for background.

510.06 Wildlife, Fisheries, and Vegetation

Transportation activities affecting fish species listed as threatened or endangered under the Endangered Species Act (ESA) include:

- Release of construction-related chemicals, products and by-products
- Clearing, grubbing and filling
- Runoff from impervious surfaces
- Activities in areas having listed fish or potential for listed fish habitat
- Stormwater discharge into a river or stream with a low-flow designation.

See **Section 436** for background on requirements related to wildlife, fisheries, and vegetation that may apply to the project.

(1) Applicable Statutes and Regulations

Please see **Section 436.02** for details.

(2) Policy Guidance

WSDOT policy is to minimize impacts to natural habitats in design, construction, and maintenance activities (Washington Transportation Commission Policy 6.3.3). Please see **Section 436.03** for details.

(3) MOUs, MOAs, IAs

Please see **Section 436.04** for details.

(4) Technical Guidance

Please see **Section 436.05** for details. See WSDOT Instructional Letter 4023.00 (March 15, 2000) regarding stormwater effects on fish species listed under the ESA. The Instructional Letter is an addendum to the *Highway Runoff Manual*. (See **Section 436.05(3)(c)**.)

Timing restrictions may apply to projects in the vicinity of spawning, nesting, migrating, or wintering habitat of many species, whether or not they are listed as threatened or endangered. For species not protected under the ESA, priority habitat and species recommendations by WDFW may be applied to protect their habitat. In-water work and noise generating activities such as pile driving and blasting are of the greatest concern. Procedures listed in WSDOT's *Roadside Manual* (M 25-30) include:

- Clearly flag or place construction fencing around all habitat areas and features that are to be protected.
- Erosion control should be implemented and maintained during construction to minimize impacts to aquatic species.
- Emphasize sensitive areas during pre-construction meetings. Note the kinds of activities not allowed in sensitive areas (clearing, grading, stockpiling materials, staging vehicles and equipment).

(5) Permits and Approvals

For projects requiring a Hydraulic Project Approval (HPA), written approval must be obtained from WDFW before commencement of construction or other work. Please see **Section 436.06** for details.

(6) Non-Road Requirements

Please see **Section 436.07** for details.

510.07 Wetlands

See **Section 437** for background on wetland mitigation requirements that may apply to the project.

(1) Applicable Statutes and Regulations

Please refer to **Section 437.02** for background.

(2) Policy Guidance

WSDOT policy is to avoid, where practical, any activities that would adversely affect wetlands in designing, constructing, and maintaining the state transportation system (State Transportation Commission Policy 6.3.4). Appendix 1 of WSDOT's Protection of Wetlands Plan, Directive D-31-12 (**Exhibit 437-6**), specifies that Construction Action Plans should include mitigation implementation, disposal sites, drainage facility construction, and pile driving. See **Section 437.02(3)**.

(3) MOUs, MOAs, IAs

Please see **Section 437.04.**

(4) Technical Guidance

Coordination between WSDOT and Ecology is strongly encouraged to ensure compliance with wetland commitments. A pre-construction conference should be scheduled with Ecology for projects impacting wetlands (See **Section 437.04 (2).**)

(a) Wetland Mitigation

The final wetland mitigation plan prepared during project design will include a general grading plan and revegetation plan, planting plan, construction sequence and schedule, steps to minimize damage to buffers and wetlands and buffers, and methods for controlling invasive species. Contractor responsibilities should be included in contract plans and special provisions.

Within a month of completing construction and planting a wetland mitigation project, as-built plans should be sent to the lead agency, including an as-built topographical survey, plant species and quantities used, photographs of the site, and notes about any changes to the original approved plan. It should also list the con-tractor's responsibility concerning plant replacement, fertilization and

irrigation, protection from wildlife, and contingency plan requirements. See **Section 437.05(5)(b)**.

(b) Herbicides

For information on application of aquatic herbicides for noxious or non-noxious weeds, see **Section 431.06** of the EPM. When any herbicide application is made in or on the waters of the state, it is considered an aquatic herbicide application and falls under jurisdiction of the Department of Ecology. Prior to the application the conditions established in the Water Quality Permit for aquatic noxious weed control (**Exhibit 431-11**) or the Administrative Order for non-noxious aquatic weed control (**Exhibit 431-12**) must be met.

(5) Permits and Approvals

Please see **Section 437.06** for permits that may apply to the project.

(6) Non-Road Requirements

No special requirements were identified.

510.08 Noise

Construction noise is temporary but may adversely affect nearby residents. During project development, the design engineer should have considered ways to reduce or mitigate the adverse impacts of construction and incorporated any requirements into contract plans and special provisions. All reasonable methods should have been incorporated in the contract special provisions. See **Section 446** for background on noise requirements that may apply to the project.

In most cases, daytime noise from construction activities is exempt from local laws. For some projects, permits from local jurisdictions may be needed. For each project, the local jurisdiction will need to be contacted to determine the local regulation and if a permit is required. Some acoustical analysis may be needed before the local agency will grant the permit. This is done on a case-by-case basis.

These same regulations apply to maintenance activities in all but emergency situations. In the latter case, the police department and the local permitting agency should be contacted and apprised of the situation at the earliest possible opportunity.

For guidance on obtaining a local variance, see the WSDOT web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click Air/Acoustics/Energy, then Acoustics.

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

510.09 Hazardous Materials

All WSDOT construction contracts require contractors to provide Spill Control and Countermeasure (SPCC) Plans before beginning construction. Requirements of this plan are outlined in Section 1-07.15(1) of the Standard Specifications. If indicated, a hazardous materials investigation will likely have been done during project development. If hazardous materials are found in the right of way during construction, an investigation may be required. Contact the ESO Hazardous Materials Program and see **Section 447.05** for detailed guidance.

Protection of workers and the public is paramount. Identification and characterization of any waste discovered should be done only by properly trained personnel. The ESO has the resources to make a determination of the waste characteristics and to implement a cleanup plan, if required.

[Ref: CM 1-2.2I(4), worker safety; CM 1-22.J, environmental]

(1) Introduction

The most likely situations to be encountered during construction include the discovery of Underground Storage Tanks (USTs), buried barrels, and contaminated fill. However, almost any type of hazardous material may be present depending on the location and past land use activities at the site.

An important consideration is identification and recognition of situations that require the Project Engineer or the contractor to implement Emergency Action Plans (EAPs) if a spill occurs. (The EAP is included in the SPCC plan.) Examples of specific signs of suspect sites include:

- Rusted barrels and containers.
- Discolored earth, recognized by contrast of adjacent soil.
- Fill material containing material other than construction debris.
- Household trash covered by earth or other material that appears to be interspersed with industrial debris.
- Gasoline smells or other chemical odors that emanate when the earth is disturbed.
- Oily residue intermixed with earth.
- Sheen on ground water.
- Cinders or other combustion products; e.g., ash.
- Vent pipes, filler caps, and pump islands.
- Stressed/dead vegetation.

It is important to recognize that some hazardous materials may not be easily recognized because they are odorless or do not have a readily identified signature. This is particularly likely when dealing with fill materials that contain heavy metals and other odorless organic and inorganic compounds. Many of these problems should have been anticipated prior to acquiring the property, through completing an Initial Site Assessment (ISA) and Preliminary Site Investigation (PSI), as described in **Section 447.05 (4)** and and **(5).**

As in site assessments and investigations, record-keeping procedures are important to hazardous waste issues in construction. Potential liability claims and construction delay make it essential that records related to discovery, investigation, cleanup, and disposal be maintained and easily retrievable. Regions are responsible for their record-keeping procedures.

(2) Applicable Statutes and Regulations

Please see **Section 447.02** for details.

(3) Policy Guidance

WSDOT policy is to "reduce the potential adverse effects transportation, storage, application, and disposal of hazardous substances can have on surface and ground water, fish and wildlife populations and habitat, and air quality" (Washington Transportation Commission Policy 6.3.8). Please see **Section 447.03** for details.

(4) *MOUs, MOAs, IAs*

The Implementing Agreement between Ecology and WSDOT regarding compliance with state surface water quality standards (February 13, 1998) is intended for use by WSDOT and WSDOT contractors. The agreement covers general conditions, concrete work, erosion control, hazardous spill prevention and control, spill reporting, and specific provisions for erosion control in new roadway and bridge construction projects. Please see below for hazardous spill prevention and reporting, **Section 510.05** for stormwater management and erosion control, and **Section 447.04** for background information and other references. The agreement is available on WSDOT's web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Regulatory Compliance, then Documents, then Water Quality Implementing Agreement.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

Please see **Section 447.05** for other agreements that may be relevant to the construction phase of the project.

(5) *Technical Guidance*

(a) *Spill Prevention Plans*

For all WSDOT construction contracts and developer projects on WSDOT rights-of-way, a Spill Prevention, Control, and Countermeasures (SPCC) Plan must be completed and implemented in accordance with contract provisions.

WSDOT's Hazardous Materials Program has developed a number of documents and guidance materials to assist contractors in developing a Spill Prevention, Control, and Countermeasures (SPCC) Plan that will meet WSDOT contract requirements. These include an example site map illustrating the level of detail and the type of information expected in a SPCC Plan submitted to WSDOT, and an example of a completed SPCC plan. Guidance is also available for WSDOT staff who review SPCC plans. These documents are at WSDOT's web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Hazardous Materials, then Documents.

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm

Click on Tools and Templates, Tools and Templates Update, Example Site Map, or Model SPCC.

(b) *Other*

For technical guidance on discovery of specific hazardous materials such as leakage from underground storage tanks (LUSTs), asbestos, or lead, see **Section 447.05(7)**.

(6) *Permits and Approvals*

Please see **Section 447.06** for details.

(7) Non-Road Requirements

Please see **Section 447.07** for details.

510.10 Land Use

Land use issues include consistency with local growth management and other plans, shoreline regulations, farmlands, Section 4(f) and Section 6(f) requirements, and historic/cultural resources. These issues will have been analyzed and documented during project development and any relevant requirements included in contract special provisions. This section highlights potential issues that could arise during construction and references background information in **Section 450.**

(1) Land Use Plans, Growth Management

See **Section 451** for background on land use or growth management requirements that may apply to the project.

(2) Coastal/Shorelines

See **Section 452** for background on any coastal/ shoreline requirements that may be included in contract documents.

(3) Wild and Scenic Rivers

See **Section 453** for background on any wild and scenic rivers requirements that may be included in contract documents.

(4) Farmlands

See **Section 454** for background on any farmlands requirements that may be included in contract documents.

(5) Public Lands (Forests)

For work in forested areas, the Project Engineer should encourage the contractor to comply with all federal and state forest rules and regulations governing the protection of forests and carrying out work within national and state forests. The contractor shall take all reasonable precautions to prevent and suppress forest fires. The Project Engineer shall report to the nearest forest fire warden at the earliest possible moment the location and extent of any fire and shall take immediate steps to control the fire if practicable. *[Ref: CM1-2.2D]* For a Memorandum of Understanding between WSDOT and the U.S. Forest Service regarding coordination of transportation activities on National Forest Lands, see **Section 455.04**.

See **Section 455** for background on other public lands requirements that may apply to the project.

(6) Historic and Cultural Resources

See **Section 456** for background on historic and cultural resource requirements that may apply to the project.

It is both national and state policy to preserve historical and prehistorical objects and ruins. These may include sites, buildings, artifacts, fossils, or other objects of antiquity that may have some particular significance from a historical, cultural, or scientific standpoint.

Material sources, storage areas, pit sites, staging areas, and other areas used for WSDOT projects are subject to Section 106 compliance. For state-owned sites, the Project Engineer should coordinate with the Region to ensure that material sources have been surveyed and cleared for cultural resources, so that known archeological resources may

be avoided. For contractor-owned sites, the contractor is required to obtain all necessary permits to operate the site. This will have included addressing historic and cultural preservation in the SEPA environmental checklist.

If there is a known probability of encountering historical objects, the contract will most likely have included provisions for archeological and paleontological salvage. The special provision will usually define any potential sites, and outline any recognized salvage procedures or required salvage provisions. (See **Exhibit 456-11**.)

If there is no special provision for archaeological and paleonto-logical salvage in the contract, Section 1-07.16(2)A Archaeological and Historical Objects, requires the contractor to notify the Project Engineer and take action to preserve the objects or ruins. Once they have been sufficiently protected, the Project Engineer should immediately notify the Region Construction Manager, who will provide any necessary initial assistance to the Project Engineer.

Where the Region determines appropriate, the Project Engineer will contact and inform through existing Region contracts and Region affiliations, Eastern Washington University, the State Historic Preservation Officer (SHPO), and FHWA of the discovery.

The Project Engineer will also help facilitate any on-site meetings for the appropriate parties should either FHWA, SHPO, or Eastern Washington University believe it necessary.

[Ref: CM 1-1.10]

(7) Environmental Justice

See **Section 458** for background on environ-mental justice requirements that may apply to the project.

(8) Aesthetics and Visual Quality

See **Section 459** for background on aesthetics and visual quality requirements that may apply to the project.

Visual quality referred to in FHWA guidance on construction impacts.

510.11 Transportation/Traffic

Traffic control, pedestrian safety are environmental issues under NEPA/SEPA, and impacts will have been considered during project development. See **Section 460** for background on transportation and traffic requirements that may apply to the project.

When the work area encroaches upon a sidewalk, crosswalk, or other areas that are near an area utilized by pedestrians or bicyclists, special consideration should be given to their accommodation and safety. Pedestrians are more susceptible to personal injury in work areas than are motorists. Visibility and recognition of hazards is an important requirement for the safety of pedestrians and bicyclists. For details, see WSDOT's *Construction Manual* (M 41-01), Section 1-2.2 I(5).

When railroads are involved within the project limits, an agreement covering the work is usu-ally entered into between WSDOT and the railroad company. If an agreement has not been made, the Project Engineer should coordinate and monitor the development and processing of the agreement. See WSDOT *Construction Manual* (M 41-01), Section 1-2.2F.

510.12 Public Services & Utilities

See **Section 470** for background on public service and utilities requirements that may apply to the project.

In some cases, utility adjustments will be completed prior to contract work. In other cases, adjustments are to be made concurrently with the work. For details on Project Engineer and contractor responsibilities, see the WSDOT *Construction Manual* (M 41-01), Section 1-2.2E.

510.13 Non-Road Requirements

No special requirements identified.

510.14 Exhibits

None.

520.01 Overview of Maintenance Phase
520.02 Statutes, Regulations, and Permits
520.03 MOUs and Implementing Agreements
520.04 Policy Guidance
520.05 Technical Guidance
520.06 Non-Road Project Requirements
520.07 Exhibits

Key to Icons

Web site.*

Reference document, such as a manual, book, or published article.

Permit or application for a permit, approval or certification.

520.01 Overview of Maintenance Phase

At WSDOT, highway maintenance includes both maintenance and operations. The maintenance service objective, stated in the State Highway Systems Plan, is to "maintain and operate state highways on a daily basis to ensure safe, reliable, and pleasant movement of people and goods."

Maintenance work is performed to care for and maintain the highway and associated features so it substantially retains its original intended use and function. Maintenance activities include patching pavement, cleaning ditches and culverts, repairing slopes and streambank stabilization structures, controlling vegetation, and painting stripes on the road surface.

Operations activities affect the reliability of a direct service to users of the highway system. Activities include operating rest areas, reversible lane gates, highway lighting, traffic signals, snow and ice control, and keeping the roads operational during a disaster.

When damage to a highway or associated facility is extensive and the repair is beyond the resources of the maintenance division, the work is turned over to WSDOT's Highway Construction Program and becomes a capital project. Such work typically requires preliminary engineering services and contract plans, specifications and estimates (PS&Es). It goes out to bid and private contractors are hired to complete the repairs.

Maintenance is WSDOT's most visible activity with respect to environmental consequences. Painting, sanding, anti-icing, applying herbicide, mowing and brush control, restoring native plants, and maintaining drainage facilities are among the maintenance activities that can have environmental impacts. All material handling can have environmental safety implications for WSDOT employees and the general public. Environmental, health, and safety issues are being addressed through an education and training program for maintenance employees provided by the Olympia Service Center. *[Ref: Maintenance Manual, Chapter 11]*

This section summarizes environmental requirements covered in WSDOT's *Maintenance Manual for Water Quality and Habitat Protection* and *Maintenance Manual* and gives additional details on several environmental issues with reference to Part 400 of the EPM, the *Highway Runoff Manual*, *Roadside Manual*, and other WSDOT documents.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

The information referenced in this section primarily applies to highway maintenance; it also covers procedures for compliance with state water quality standards applicable to ferry system maintenance activities.

(1) Summary of Requirements

Various statutes, regulations, memoranda of understanding and implementing agreements, WSDOT policies, and permits applicable to maintenance activities are summarized below. Maintenance plans may be attached to permits issued when a project is constructed; for example plans for long term revegetation and restoration, wetland mitigation site maintenance; and spill prevention, containment (SPCC).

Technical guidance is summarized in this section by reference to the WSDOT manuals described below. Refer to these documents for details.

(a) Water Quality and Habitat Protection Manual

This WSDOT maintenance manual defines general and specific practices WSDOT will utilize to avoid adverse impacts to the aquatic environment from maintenance activities. Whenever avoidance is not attainable, impacts will be minimized. The manual was developed in compliance with the Endangered Species Act, Section 4(d) Limitation #10 Roadside Maintenance. The document also has been reviewed for consistency with Hydraulic Permit Approval (HPA) requirements by the National Oceanic and Atmospheric Administration Fisheries (NOAA Fishers) and Washington State Department of Fish and Wildlife (WDFW), and for consistency with state water quality standards by Washington Department of Ecology. The current draft of the manual is online at WSDOT's web site:

http://www.wsdot.wa.gov/

Click on Site Index, then M, then Maintenance Office, then Environment, then Endangered Species Act, then Maintenance Manual for Water Quality and Habitat Protection.

Or by direct link:

http://www.wsdot.wa.gov/fossc/maint/4d_rule/

(b) Maintenance Manual (M 51-01)

This manual covers procedures for highway maintenance. In several chapters maintenance activities have environmental implications: emergency operations (hazardous materials spills), drainage (aquatic habitat, water quality, wetlands, shorelines), bridge repair, roadside maintenance (integrated vegetation management), snow and ice control, and procuring materials from quarries or pits. References in this section are to the February 2002 edition.

(c) Maintenance Accountability Process (MAP)

This document is the primary tool used by the Maintenance Office for evaluating program service delivery and identifying budget investment choices. See the *Water Quality and Habitat Protection Manual*, Appendix 1.

(d) Highway Runoff Manual (M 31-16)

This manual is a guide to design and operation of transportation facilities that are related to or affect stormwater runoff. The manual is intended to provide uniform procedures for implementing design and maintenance decisions regarding highway runoff facilities. Chapter 7 covers roadway maintenance practices, including

disposal of highway-generated waste, stormwater facility maintenance, snow and ice control operations, and bridge maintenance. Chapter 7 is included in the *Water Quality and Habitat Protection Manual,* Appendix 20.

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library. Find Highway Runoff Manual and 2002 Instructional Letter.

Or by direct link:

http://www.wsdot.wa.gov/FASC/EngineeringPublications/Manuals/Highway.pdf

And:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/IL4020.pdf

(e) Roadside Manual (M 25-30)

This manual provides consistent guidelines for roadside management, and supplements guidelines in WSDOT's *Roadside Classification Plan* (M 25-31). It is organized around a framework of roadside functions: operational, environmental, visual, and auxiliary. Environmental functions include water quality preservation, protection and improvement; stormwater detention and retention, wetland and sensitive area protection, noxious weed control, noise control, habitat protection and connectivity, air quality improvement, and erosion control. Sections of the manual offer resources on designated and sensitive areas, wetlands, water quality, wildlife, and noise abatement.

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library. Find Roadside Manual.

Or by direct link:

http://www.wsdot.wa.gov/eesc/cae/design/roadside/rm.htm

(f) Design Manual

This manual is the basic reference for highway design. Chapter 700 of the manual, on roadside safety, is included in the *Water Quality and Habitat Protection Manual,* Appendix 28.

http://www.wsdot.wa.gov/

Click on Site Index, then E, then Engineering Publications, then On-Line Library. Find Design Manual, then select a version.

Or by direct link:

http://www.wsdot.wa.gov/fasc/EngineeringPublications/library.htm

(2) Acronyms and Abbreviations

See the general list of acronyms and abbreviations in the appendix. Those relevant to maintenance activities are listed in the *Water Quality and Habitat Protection Manual.*

(3) Glossary

A glossary of terms relevant to maintenance activities is given in the *Water Quality and Habitat Protection Manual.*

520.02 Statutes, Regulations, and Permits

There are several permit programs in which legal authority to protect water quality, fish, and the aquatic environment has been vested in state agencies and local governments by action of the Washington State Legislature. Many WSDOT maintenance activities are required to be permitted by these state permit programs. The conditions of the permits provide for protection of water quality, fish, and their habitat, and other elements of the environment. More than one permit from more than one agency may be required for work in streams or fish-bearing waters. The most common restriction has to do with timing. Normally, these restrictions will require that work by done during low flow conditions to minimize impacts to fish and water quality. *(Ref WQHP, Appendix 10, and Roadside Manual, p. 440-11.)* Additionally, when maintenance activities are carried out on tribal lands, environmental protection measures may be required by the tribal government or the U.S. Environmental Protection Agency (USEPA). Local governments also have authority to issue permits regulating activities in their jurisdiction.

(1) Federal

Clean Water Act, Section 404 permit, administered by the U.S. Army Corps of Engineers, required occasionally for bank stabilization projects. See **Section 431.06.**

Rivers and Harbors Act of 1899, Section 10 permit, administered by the U.S. Army Corps of Engineers, required occasionally for bank stabilization projects. See **Section 431.06.**

Endangered Species Act (ESA) – See **Section 431.02** and *Water Quality and Habitat Protection Manual,* Appendix 6.

(2) State

State Environmental Policy Act (SEPA), RCW 43.21C and WAC 197-11. See **Section 410** through **Section 412.**

Washington State Department of Natural Resources (DNR), Aquatic Use Authorization (Aquatic Lease), RCW 79.90 through 79.92, and WAC 332-30. See **Section 437.06.**

Coastal Zone Management Certification, Department of Ecology. See **Section 452.06.**

Hydraulic Project Approval (HPA), RCW 77.20 and WAC 220-110, administered by WDFW. See *Water Quality and Habitat Protection Manual,* Appendix 34 for Hydraulic Code Rules. A General HPA is in draft covering specific WSDOT maintenance activities, including removal of beaver dams; see **Section 436.06.**

NPDES Stormwater Permit. See **Section 431.06** and *Water Quality and Habitat Protection Manual,* Appendix 24.

Minimal Functional Standards for Solid Waste Handling, WAC 173-304, and Washington State Dangerous Waste Regulations, WAC 173-303. See **Section 447.05** and *Water Quality and Habitat Protection Manual,* Appendix 14.

(3) Local Governments

Critical/Sensitive Areas Ordinances adopted under the Washington State Growth Management Act, RCW 36.70A, WAC 173-14 through 173-28.

Shorelines Permit Programs adopted under the Washington State Shorelines Management Act, RCW 90.58 and WAC 173-14 through 173-28.

Clearing and grading permits.

520.03 MOUs and Implementing Agreements

(1) Implementing Agreement on Water Quality Standards

The Implementing Agreement between Ecology and WSDOT regarding compliance with state surface water quality standards (February 13, 1998) is intended for use by WSDOT and WSDOT contractors. (See **Section 431.04** and *Water Quality and Habitat Protection Manual,* Appendix 19.) The agreement covers general conditions for the following activities:

- Concrete work
- Erosion control
- Hazardous spill prevention and control
- Spill reporting

The Implementing Agreement also covers activity-specific conditions for the following highway and ferry system maintenance activities:

- Beaver dam removal
- Ferry system maintenance pile driving and removal
- Highway bridge and ferry terminal transfer span cleaning and painting
- Bridge pier, structure, bridge protection device, stream bank and roadway protection maintenance and repair.
- Debris removal from bridge piers, piles, braces and abutments
- Ditch, stream, and culvert cleaning and maintenance
- Ferry sacrificial structures, wing walls, dolphins
- Maintenance and relocation of navigation buoys
- Maintenance of stormwater control and treatment structures

The agreement is available on WSDOT's web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Regulatory Compliance, then Water Quality Implementing Agreement (under Documents).

Or by direct link:

http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf

(2) MOA Concerning Compliance with the Hydraulic Code

The MOA between WSDOT and WDFW June 2002, is designed to provide a mutual understanding between the participating agencies for the application and acquisition of Hydraulic Project Approvals (HPAs). See **Section 431.04** and *Water Quality and Habitat Protection Manual,* Appendix 18.

(3) MOA on Work in Sate Waters

This MOA, establishes procedures to prevent habitat loss through damage by flooding and future land development. See **Section 431.04** and *Water Quality and Habitat Protection Manual,* Appendix 17.

(4) MOU on Highways over National Forest Lands

This MOU establishes procedures for coordinating transportation activities on National Forest lands. See **Section 455.04** and *Water Quality and Habitat Protection Manual,* Appendix 16.

For compliance with the ESA 4(d) Rule for projects without a federal nexus, WSDOT is pursuing coverage under the routine road maintenance limit. A program specific to WSDOT road maintenance activities has been developed and is currently undergoing NMFS review. The program provides coverage for routine, unscheduled, and emergency/disaster maintenance activities. It defines general practices (such as adaptive management, monitoring, and training) and specific practices (such as BMPs) that WSDOT will utilize to avoid adverse impacts to the aquatic environment.

The WSDOT program, described in *The Washington State Department of Transportation Maintenance Manual for Water Quality and Habitat Protection*, June 2000, is designed to plug into the Tri-County Regional Road Maintenance plan. The regional plan is also under NMFS review. See **Section 436.05 (3)** for details.

520.04 Policy Guidance

WSDOT policy is to "minimize the impact that construction, operation, and maintenance of transportation facilities has on the state's surface and ground water" (Washington Transportation Commission Policy 6.3.3). Please see **Section 431.03** for details.

WSDOT will utilize the BMPs in the *Water Quality and Habitat Protection Manual* as required by the various permits, and agreements referenced therein. In areas where none of these referenced documents apply, and there is potential from a maintenance activity(s) to harm a fish or aquatic habitat protected under the ESA, BMPs will be utilized to avoid and minimize adverse impacts. BMPs will generally be used for activities conducted within 300 feet of protected riparian areas. BMPs will also be used where some type of conveyance (i.e. roadside ditch or channel) serves to potentially convey impacts beyond a 300-foot buffer. To assure adequate usage of BMPs, WSDOT is identifying, mapping, and marking sensitive areas so maintenance field personnel know where to apply protective BMPs. See map and marking example in the *Water Quality and Habitat Protection Manual,* Appendix 9.

In some areas of Washington State (most notably some of the more arid parts of central and eastern Washington) highway maintenance activities have no potential to harm protected fish or aquatic habitat, simply because there is no habitat, fish, or conveyances to fish habitat in these areas. Under these circumstances, maintenance superintendents will determine the need to use BMPs for operational efficiencies. (Reference: *Water Quality and Habitat Protection Manual, p. 26.)*

WSDOT will utilize statewide meetings of maintenance engineers and maintenance superintendents to identify and announce any modifications or changes to the avoidance and minimization actions identified in the *Water Quality and Habitat Protection Manual* and other related, referenced documents. New technologies will also be discussed at these meetings. Modifications will be shared with the NOAA Fisheries for concurrence to maintain the status of "ESA compliant." Additional forums will be utilized or created if needed to adequately include key stakeholders (i.e. federal and state regulatory agencies and additional WSDOT personnel) in changes of applicable environmental protection practices.

WSDOT, NOAA Fisheries and USFWS shall meet annually to assess how the program is working and to discuss recommended changes, if any are needed. Any substantive changes in environmental protection BMPs or procedures prior to the annual meeting will be communicated to staff, NOAA Fisheries and the USFWS through an instructional letter for their concurrence. (Reference: *Water Quality and Habitat Protection Manual,* excerpt from Sandy Stephens.)

520.05 Technical Guidance

(1) Introduction

This section summarizes references to guidance in the *Water Quality and Habitat Protection Manual* and other WSDOT manuals. As in the *Water Quality and Habitat Protection Manual,* the section is organized by maintenance activity groups as described in the Maintenance Accountability Process (MAP). The manual gives general and specific conditions as minimum BMPs expected to be utilized when performing maintenance activities. A range of BMP options are provided to achieve prescribed outcomes. This allows the crew supervisors the flexibility to select or modify BMPs for each site based on conditions in the field as long as they meet performance standards that focus on avoiding and minimizing erosion/sedimentation, containing pollutants, and avoiding and minimizing impacts to habitat.

(2) General Practices

The following general practices provide the basic foundation that applies to any maintenance activity occurring in riparian areas. BMPs will also be used where a roadside ditch or channel serves to potentially convey impacts to waters of the state.

(a) Adaptive Management

Adaptive management is a formal process for evaluating the current resource status and, over time, for evaluating the effectiveness of this WSDOT maintenance manual in protecting, maintaining, and enhancing habitat necessary to meet resource goals and objectives. The intent of this process is to make any needed adjustments to road maintenance practices.

(b) Environmental Deficiencies (Retrofit)

The Environmental Retrofit Improvement subprogram (I-4), administered through the ESO, consists of projects intended to reduce or mitigate the impact of highway construction projects on the environment. The retrofit program is in addition to WSDOT's ongoing commitment to environmental mitigation as part of all highway system improvement projects. The program focuses on:

- Fish passage barriers
- Stormwater initiative
- Stormwater BMP retrofits
- Long term tracking
- ESA compliance

(c) Timing Limitations

To minimize impacts to fish, maintenance activities will occur within the time periods identified in WDFW's preferred in-water work windows (see *Water Quality and Habitat Protection Manual*, Appendix 10), except for unscheduled maintenance and emergency/ disaster maintenance. Additionally, in non-marine waters, work will be conducted when streams are either dry or at low-flow stages and the weather conditions have been predicted to ensure that the stream remains in a low-flow stage.

Work outside the timing limitations will require notification to the Corp of Engineers, Ecology, WDFW, and the local Shoreline Permit Manager or Shoreline

Administrator prior to or in conjunction with responding to the event (see *Water Quality and Habitat Protection Manual,* Appendix 11, WSDOT Emergency Project Checklist.). All unscheduled maintenance and emergency/disaster maintenance will utilize as many activity-specific BMPs as possible to avoid and minimize impacts to fish, fish habitat, and water quality.

If any equipment leaks or fuel spills within or adjacent to waters of the state, work activities will immediately cease, spill will be contained, and WDFW and Ecology will be notified of the incident. Work activities will not resume until further approval is given by WDFW and Ecology.

If fish are observed in distress, a fish kill occurs, or water quality problems develop, work activity will immediately cease and WDFW Habitat Program and Ecology shall be notified immediately. If salmon are involved, the NOAA Fisheries will also be notified immediately. Work will not resume until further approval is given by the notified agencies.

(d) Waste Disposal

Highway maintenance activities generate a variety of waste materials, including hazardous waste. Management and disposal of these waste materials are regulated under state law (see above, **Section 520.02**). WSDOT recycles waste materials suitable for recycling. For example, road sweepings can be screened to remove litter and other debris and re-used as a road shoulder dressing materials. Sweepings are not suitable for recycling when there are too many fines in the material, or if a traffic accident resulted in petroleum contamination of the sweepings.

WSDOT-owned sites at which maintenance waste materials are either temporarily stockpiled or disposed will be assessed for proximity to sensitive riparian habitat and potential for adversely impacting nearby habitat areas. Erosion and sediment controls and/or other environmental protection BMPs will be implemented at WSDOT-owned waste disposal sites as needed to minimize adverse environmental impacts. Highway maintenance-generated wastes and other materials will not be disposed at sites where disposal will result in damage to federally-protected species of fish and/or their habitat. See and *Water Quality and Habitat Protection Manual,* Appendix 15 for findings and recommendations to date.

(e) Training

It is the responsibility of maintenance personnel to understand and correctly implement environmental protection BMPs for a variety of maintenance activities as they conduct their daily tasks. WSDOT has an extensive outreach and training program for its maintenance personnel in which environmental protection information is included. Please see *ESA 101 Course Outline Agenda and Curriculum*, Appendix 6; *Erosion and Sediment Control Training Curriculum*, Appendix 7; and *Equipment Trainers' Handbook*, Appendix 8.

(f) Compliance Monitoring, Documentation, Review Process

The *Water Quality and Habitat Protection Manual* includes a proposed program for compliance monitoring to meet environmental protection requirements in areas where fish are protected as "threatened" or "endangered" species. Documentation and reporting procedures are also included, as are procedures for review by

maintenance engineers and superintendents to consider modifications or changes to the avoidance and minimization actions identified in the manual and other documents.

For compliance with the ESA 4(d) Rule for projects without a federal nexus, WSDOT is pursuing coverage under the routine road maintenance limit. A program specific to WSDOT road maintenance activities has been developed and is currently undergoing NOAA Fisheries review. The program provides coverage for routine, unscheduled, and emergency/disaster maintenance activities. It defines general practices (such as adaptive management, monitoring, and training) and specific practices (such as BMPs) that WSDOT will utilize to avoid adverse impacts to the aquatic environment.

The WSDOT program, described in *The Washington State Department of Transportation Maintenance Manual for Water Quality and Habitat Protection*, June 2000, is designed to plug into the Tri-County Regional Road Maintenance plan. The regional plan is also under NOAA Fisheries review. See **Section 436.05(3)** for details.

(3) Group 1 – Roadway Maintenance and Operations

This activity group includes five program elements: patching, repairing, crack sealing, shoulder maintenance, sweeping and cleaning, and miscellaneous roadway maintenance.

(4) Group 2 – Drainage Maintenance and Slope Repair

This activity group includes five program elements: clearing ditches, channels, culverts, and catch basins; and correcting moderate slides and slope failures. See the following references in the Water Quality and Habitat Manual:

- Appendix 3 – Stormwater BMP Retrofit Projects
- Appendix 7 – Erosion and Sediment Control
- Appendix 21 – 5-Year GHPA for Removal of Newly Constructed Beaver Dams
- Appendix 22 – 5-Year GHPA for Removal/Relocation of Debris
- Appendix 23 – Integrated Streambank Protection Guidelines

WSDOT's *Maintenance Manual,* Chapter 5, describes procedures for maintaining drainage facilities such as ditches, gutters, drains, culverts, storm sewers, and retention as nearly as possible in the condition and at the capacity for which they were originally designed and constructed. It also provides general guidance for bi-annual inspections, additional inspections during heavy storms and high runoff, keeping natural drainage ways open, preventing drainage from abutting properties; and lists regulations that may affect drainage maintenance.

As described in the Roadside Manual, maintenance of stormwater control facilities such as detention ponds or swales usually includes:

- Weed control and noxious weed removal
- Periodic sediment removal and disposal
- Reestablishing grass after sediment removal.

It is important that grass-lined swales remain grass lined. It is the roughness of the vegetation that slows water movement and aids in removal of sediment and pollutants from the water. *[Ref Roadside Manual, p. 440-10]*:

Also consult the guidance on requirements, BMPs, and roadway maintenance practices found in the *Highway Runoff Manual* (Chapters 2, 4-5, 7-8), the regional environmental

and hydraulics staff, or the Area Maintenance Superintendent before performing activities (such as deepening ditches or plugging existing drainage structures) that alter the designed drainage pathways within the roadside area.

Refer to long-term revegetation and restoration plan for the project, including ponds, swales, etc.

Personnel working in the roadside environment must be aware of the fundamental differences in regulatory restrictions for natural wetlands and detention/retention ponds. While these ponds might look similar to some natural wetlands, a detention/retention pond is build specifically for receiving and/or treating runoff and is not regulated as a jurisdictional wetland (ref: *Roadside Manual* p. 440-10).

(5) Group 3 – Roadside and Landscape Maintenance

Roadsides are defined as the areas between the outside edges of the shoulders and the right of way boundaries. This includes unpaved median strips, wetlands and associated buffers, stormwater treatment facilities, park and ride lots, and auxiliary features such as rest areas, roadside parks, viewpoints, heritage markers, and bicycle and pedestrian facilities. See the following references in the *Water Quality and Habitat Manual:*

- Appendix 25 – WSDOT Design Manual Figure 700-1, Clear Zone.
- Appendix 26 – Integrated Vegetation Management for Roadsides.
- Appendix 27 – State Noxious Weed List and Schedule of Monetary Penalties (WAC 16-750).

The *Maintenance Manual,* Chapter 7, Roadside Maintenance, addresses maintenance issues primarily related to vegetation management, and also covers litter control and maintenance of rest areas, viewpoints, and historical markers. It has been written to integrate with information relating to roadside management topics presented in WSDOT's *Roadside Manual*, *Roadside Classification Plan*, *Highway Runoff Manual, Integrated Vegetation Management for Roadside*s, and *Design Manual*. It also lists as references WSDOT guidance on the Endangered Species Act *(ESA 7(d) Project List and Storm Water Effects Guidance*, IL 4020.00, July 1, 1999).

The *Maintenance Manual* defines biological, chemical, and mechanical methods for vegetation management, and gives general guidance for noxious weed control, removal of hazard trees, use of pesticides, use of mowing equipment, other cutting methods, cultural and biological control methods, debris burning, monitoring for illegal tree removal.

The *Roadside Manual* (page 420-13) lists long term maintenance required for wetland mitigation sites:

- Repairing damage to the site from vandalism, storms, or fire.
- Control of exotic and invasive weed species.
- Eradication of state-listed noxious weeds.
- Plant replacement, if necessary, to meet permitting requirements.
- Selective removal of some trees to facilitate natural succession.

Also refer to vegetation management guidance in the *Roadside Manual* regarding:

- MOU with WDFW – no mowing in Eastern Washington during upland bird and migratory fowl nesting season. Delay mowing until after July 1.
- Avoid clearing vegetation in sensitive areas without consulting with ESO.
- Avoid use of herbicide in or adjacent to ditches with drain into wetlands and/or streams, or adjacent to sensitive plant habitat.

- Integrated Vegetation Management for Roadsides – includes provisions to allow and encourage native plant growth where possible and provides guidance for doing so.

See also **Section 431.06** of the EPM for information on permits for application of herbicides for noxious and non-noxious weeds. When any herbicide application is made in or on to waters of the state, it is considered an aquatic herbicide application and falls under the jurisdiction of the Department of Ecology. Prior to the application the conditions established in the Water Quality Permit for aquatic noxious weed control or the Administrative Order for non-noxious aquatic weed control must be met (see **Exhibit 431-11** and **Exhibit 431-12**). Contact the Region Landscape or Environmental Office for further information and copies of the Water Quality Permit and Administrative Order, or contact the Regional Ecology office in the area the work will be performed.

Other references in the EPM **(Section 437.05)** include:

- Wetlands Maintenance Action Plan
- Maintenance Action Plan
- Contingency Plan

(6) Group 4 – Bridge and Urban Tunnel Maintenance and Operations

This activity group includes bridge deck repair, structural bridge repair, bridge cleaning, and miscellaneous bridge maintenance. See *Water Quality and Habitat Protection Manual,* Appendix 29, Bridge List, and Appendix 30, Bridge Scour Repair.

WSDOT's *Maintenance Manual* Chapter 6, Bridge Maintenance and Repair, focuses on items in which area maintenance personnel assist in maintenance of bridges and minor structures such as drainage structures, retaining walls, acoustical barriers, and cribbing. In describing environmental aspects of bridge maintenance and repair, it lists 24 environmental concerns for which maintenance personnel are increasingly being held accountable.

See EPM **Section 447.05** for information on lead paint.

(7) Group 5 – Snow and Ice Control

During winter months from November to March, the primary focus of highway maintenance is to keep the highways operational by removing snow and ice, and patrolling the roadway for early detection of slides, icing, and other winter hazards. For traffic safety in some locations, "anti-icing" chemicals may be applied to prevent icing. Between snow storms, crews may sweep up accumulated sand, to reduce dust and minimize air quality impacts and reduce the sediment contribution to adjacent water bodies.

See *Water Quality and Habitat Protection Manual*:

- Appendix 31, Snow and Ice Control Service Level Objectives.
- Appendix 32, Chemical Deicer Specifications
- Appendix 33, Chemical Deicer Test Methods.

(8) Group 6 – Traffic Services

Traffic services are necessary for safe and efficient movement of traffic and include maintaining highway signs, delineators, pavement markings, traffic islands, curbs, barriers, guardrail, traffic signals, and highway lighting. Environmental practices include timing of painting activities and fueling and maintaining equipment away from nearby waterways.

(9) Group 7 – Rest Areas

An operation and maintenance manual is required for industrial wastewater facilities including those at WSDOT rest areas and other facilities (WAC 173-240-150). Ecology has enforcement responsibility.

(10) Group 8 – Support Operations

This activity covers a variety of miscellaneous activities needed for efficient, effective operation, including servicing equipment and tools, organizing and inventorying stockpile sites and store rooms, and having a radio dispatcher. Environmental practices primarily relate to maintenance of stockpiles to protect water quality.

(11) Group 9 – 3rd Party Damages and Disaster Operations

This activity group includes fixing damage to roadways, roadsides and structures caused by such things as storms, floods, and accidents. Unscheduled maintenance activities require action to preserve public safety and welfare but there may not be time to go through the normal permitting process. In such cases, WSDOT notifies regulatory agencies that applications for expedited permits will be submitted. If the danger becomes more immediate and regulations cannot be complied with, the applications should be treated as emergency actions.

(a) Maintenance Manual Guidance

WSDOT's *Maintenance Manual*, Chapter 1, provides guidance to reduce WSDOT's vulnerability from any emergency or disaster and incorporates day-to-day operational procedures from *WSDOT's Disaster Plan and Emergency Procedures Manua*l (M 31-11). WSDOT will periodically provide training and conduct exercises to test the WSDOT Disaster Plan and Procedures to assure maintenance of a readiness mode and reflection of current department operational practices. Procedures for responding to hazardous materials spills are given for maintenance field personnel and maintenance superintendents or supervisors.

(b) Emergency Response Guidance

M&O Maintenance has developed a brief document providing guidance for emergency response. The document will include the definition of "emergency," outline the appropriate environmental procedures for responding to emergency and imminent threat situations, provide an emergency response checklist, and list regulatory agency personnel to contact by phone during emergency repair projects.

(12) Other

(a) Excavation from State Quarries or Pits

A section in the *Maintenance Manual*, Chapter 11, summarizes rules regarding materials from state-owned quarries or pits, and notes that Ecology stormwater permits are required at pits and quarries where aggregate is being mined or crushing operations are taking place. This topic will be covered in the next revision of the *Water Quality and Habitat Protection Manual.*

(b) Noise during maintenance

Construction noise is temporary but may adversely affect nearby residents. During project development, the design engineer should have considered ways to reduce or mitigate the adverse impacts of construction. All reasonable methods should have been incorporated in the plans and specifications of the contract.

In most cases, daytime noise from construction activities is exempt from local laws. For some projects, permits from local jurisdictions may be needed. For each project, the local jurisdiction will need to be contacted to determine the local regulation and if a permit is required. Some acoustical analysis may be needed before the local agency will grant the permit. This is done on a case-by-case basis.

These same regulations apply to maintenance activities in all but emergency situations. In the latter case, the police department and the local permitting agency should be contacted and apprised of the situation at the earliest possible opportunity.

For guidance on obtaining a local variance, see the WSDOT web site:

http://www.wsdot.wa.gov/eesc/environmental/

Click on Air/Acoustics/Energy, then Acoustics.

Or by direct link:

http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

520.06 Non-Road Project Requirements

Environmental procedures for ferry-related maintenance activities are covered in the *Water Quality and Habitat Protection Manual.* See **Section 520.03** for a list of ferry maintenance activities covered under the Implementing Agreement between Ecology and WSDOT regarding compliance with state surface water quality standards (February 13, 1998).

520.07 Exhibits

None.

530 Surplus Real Property Disposal

530.01 Surplus Property Disposal Overview
530.02 Environmental Considerations in Surplus Property Disposal
530.03 Non-Road Project Requirements
530.04 Exhibits

Key to Icons

Web site.*
Reference document, such as a manual, book, or published article.
Permit or application for a permit, approval or certification.

530.01 Surplus Property Disposal Process Overview

This section reviews the environmental issues to be addressed when WSDOT is considering dis-posal of real property. Procedures are given in the *Right of Way Manual* (M 26-01), Chapter 11, Disposal of Surplus Property.

WSDOT may determine that a real property owned and under the jurisdiction of WSDOT is no longer required for transportation purposes. If it is in the public interest, WSDOT may dispose of the property by sale or exchange to entities listed in the *Right of Way Manual*, Chapter 11.

Regional offices periodically review the properties they manage and determine if any should be declared surplus. If such a determination is made, the Regional Office completes a disposal review, including consideration of the environmental issues listed below in **Section 530.02**. If the review results in a recommendation to dispose of the property, a disposal package is compiled and submitted to the OSC Real Estate Services Office. The package is routed to the Environmental Services Office (ESO) and other Headquarters Offices for approval and comments.

530.02 Environmental Considerations in Surplus Property Disposal

The Regional Office review of property considered for disposal includes completion of an Environmental Checklist (**Exhibit 530-1**). Property is not appropriate for disposal if:

- It is suitable for retention to restore, preserve, or improve the scenic beauty adjacent to the highway. See **Section 459** for background on scenic quality.
- It is suitable for inclusion in WSDOT's wetlands inventory. See **Section 437** for background on wetland requirements.
- It is needed for a park and ride lot, flyer stop, or similar facility to accommodate high occupancy vehicles
- Hazardous material is present on the site or any necessary cleanup has not been completed. See **Section 447** for background on hazardous waste requirements.

* Web sites and navigation referenced in this section are subject to change. For the most current links, please refer to the online version of the EPM, available through the ESO home page: http://www.wsdot.wa.gov/eesc/environmental/

If any of these environmental uses for the property become evident during the regional office review, the OSC would not become involved. If these uses are not suitable and the region recommends disposal, the Environmental Checklist and other documents listed in the *Right of Way Manual*, Chapter 11, are submitted to OSC.

If the property to be disposed of is or was a pit site, the following additional documentation needs to be submitted to OSC:

- Pit Evaluation Report (DOT Form 350-023)
- Reclamation Plan
- Hazardous Materials Assessment and Remediation Reports. Any suspected hazardous materials on WSDOT property should be reported to the Area Maintenance Superintendent (inside the operating right of way), Region Real Estate Services Manager (outside the operating right of way), and/or Capital Facilities Manager. Areas of responsibility may overlap, but these managers maintain close lines of communications and will make sure the ESO and Attorney General's office are consulted for assessment, remediation, and determination of liability. See **Section 447.05** for background technical guidance.

530.03 Non-Road Project Requirements

Procedural requirements for property used by ferry, aviation, and rail facilities are the same as described above for highways.

530.04 Exhibits

Exhibit 530-1 – Environmental Checklist for Surplus Property Disposal

Washington State Department of Transportation

Environmental Checklist
Surplus Property Disposal

I.C. Number	Project	Date
1. Type of Review ☐ Field ☐ Office	2. Past or Recent Land Use ☐ Pasture/Crop ☐ Pit/Stock Piles ☐ Other ☐ Residential/Business ☐ Undeveloped Roadside Describe Use	
3. Describe existing vegetation at the site (including type and size of trees if known)		
4. Describe the topography of the site (flat, gently or steeply sloping, hummocky, etc.)		
5. Is surface water present on or near the property? ☐ Yes ☐ No What type (River, lake, pond, etc.)? How close?		
6. Is there wetland on or adjacent to this site? ☐ Yes ☐ No ☐ Not Sure Describe		
7. Does it appear that the site holds surface water at any time during the year? ☐ Yes ☐ No Describe		
8. Does the site have potential as a future wetland mitigation site? ☐ Yes ☐ No Describe		
9. Is there evidence of potential hazardous materials (fuel tanks, dump sites, asphalt waste, etc.)? ☐ Yes ☐ No Describe		
10. Could this site be used for future stormwater treatment or storage needs? ☐ Yes ☐ No ☐ N/A Describe		
11. Could this site have potential for reducing or maintaining reduced traffic noise levels? ☐ Yes ☐ No		

Recommendation and Review

Do You Recommend Disposal?

☐ Yes Explain _____

_____

☐ No Explain _____

_____

☐ See Attached _____

Recommendation By _____ Date _____

Title _____

Specialty Review By _____ Date _____

Title _____

Specialty Review By _____ Date _____

Title _____

DOT Form 220-015 EF 9/97

Abbreviations and Acronyms

401 Cert.	Clean Water Act Section 401 Water Quality Certification
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
AHB	Area Habitat Biologist
AKART	All known, available, and reasonable methods of prevention, control, and treatment
ASTM	American Society for Testing and Materials
ATMS	WSDOT's Automated Training Management System
BA	Biological Assessment
BE	Biological Evaluation
BFE	Base Flood Evaluation
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practice
BO	Biological Opinion
BPJ	Best Professional Judgement
CAA	Clean Air Act (Federal), 42 USC Section 7901
CAAA	Clean Air Act Amendments
CAO	Critical Areas Ordinance
CAPP	County Arterial Preservation Program
CARA	Critical Aquifer Recharge Area
CAWA	Clean Air Washington Act
CBRA	Coastal Barrier Resources Act
CE	Categorical Exclusion (NEPA) or Categorical Exemption (SEPA)
CEQ	Council of Environmental Quality (Federal)
CERCLA	Comprehensive Environmental Response, Compensation; and Liability Act. 42, USC Section 9601.
CFP	Capital Facilities Plan
CFR	Code of Federal Regulations
CHWCP	Construction Hazardous Waste Contingency Plan
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CMZ	Channel Migration Zone
CO	Carbon Monoxide
COE	U.S. Army Corps of Engineers
CRAB	County Road Administration Board
CRS	Cultural Resource Specialist
CTED	Department of Community, Trade, and Economic Development
CW	Contaminated Waste
CWA	Clean Water Act, 33 USC Section 1251
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
dB	decibel
dBA	A-weighted decibels
DCE	Documented Categorical Exemption
DEIS	Draft Environmental Impact Statement
DNR	Washington State Department of Natural Resources
DNS	Determination of Non-Significance (SEPA).
DOA	U.S. Department of Agriculture
DOH	Washington State Department of Health

DOI	United States Department of Interior
DS	Determination of Significance (SEPA)
DSI	Detailed Site Investigation
DWR	Dangerous Waste Regulations
EA	Environmental Assessment
EAP	Emergency Action Plan, appendix to SPCC Plan
Ecology	Washington Department of Ecology
ECS	Environmental Classification Summary
EDNA	Environmental Designation for Noise Abatement
EFH	Essential Fish Habitat
EILS	Environmental Investigations & Laboratory Services Program
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency (Federal)
EPF	Essential Public Facilities
ERS	Environmental Review Summary
ESA	Endangered Species Act
ESO	Environmental Services Office (WSDOT)
ESU	Environmentally Significant Unit
FAA	Federal Aviation Administration
FAPG	Federal Aid Policy Guide
FCAAP	Flood Control Assistance Account Program
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMP	Fisheries Management Plan
FONSI	Finding of Non-Significant Impact - (NEPA)
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FWA	Federal Wilderness Act
GHPA	General Hydraulics Project Approval
GIS	Geographical Information System
GMA	Growth Management Act
GSP	General Special Provisions
HC	Hydrocarbons
HGM	Hydrogeomorphic Model
HLP	Highways and Local Programs
HMTA	Hazardous Material Transport Act, 49 USC Section 1803
HOV	High Occupancy Vehicle
HPA	Hydraulics Project Approval
HRM	Highway Runoff Manual
HSP	Highway System Plan
HSWA	Hazardous and Solid Waste Amendments, 42 USC Sections 268, 280, 3001
HUD	US Department of Housing and Urban Development
IA	Implementing Agreement or Interagency Agreement
IAC	Interagency Committee for Outdoor Recreation
IDC	Interdepartmental Communication
IDT	Interdisciplinary Team
ISA	Initial Site Assessment
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991

JARPA	Joint Aquatic Resources Permit Application
L&I	Washington Department of Labor and Industries
LA	Landscape Architect
LAG	Local Agency Guidelines Manual
L_{dn}	Day-night sound level
L_{eq}	Equivalent sound level
$L_{eq(24)}$	Equivalent sound level for a 24-hour period
LOP	Letter of Permission
LOS	Level-of-Service
LUST	Leaking Underground Storage Tank
MDNS	Mitigated Determination of Nonsignificance (SEPA)
MHHW	Mean Higher High Water
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Act
MS4	Separate storm sewer system
MTCA	Model Toxics Control Act
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAT	Notice of Action Taken (SEPA)
NEPA	National Environmental Policy Act of 1969
NF	National Forest
NFIP	National Flood Insurance Program
NFMA	National Forest Management Act
NFP	Northwest Forest Plan
NOAA	National Oceanic and Atmospheric Association Fisheries
NOI	Notice of Intent (NEPA)
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NRCS	Natural Resource Conservation Service
NTSA	National Trails System Act
NWP	Nationwide Permit
NWSRA	National Wild and Scenic Rivers Act
O_3	Ozone
OAHP	Office or Archaeology & Historic Preservation
OCD	Office of Community Development
OEO	Office of Equal Opportunity (WSDOT)
OHWM	Ordinary High Water Mark or line
OSC	Olympia Service Center
OSHA	Occupational Safety and Health Act, 29 USC Sections 651 -678
OSS	On-site Sewer
PBA	Programmatic Biological Assessment
PCS	Petroleum Contaminated Soil
PE	Project Engineer
PFMC	Pacific Fishery Management Council
PHS	Priority Habitat and Species
PM_{10}	Respirable or fine particulate matter, smaller than 10 micrometers in diameter
$PM_{2.5}$	Respirable or fine particulate matter, smaller than 2.5 micrometers in diameter
POTW	Publicly Owned Treatment Works

PPM	Parts per million
PRP	Potentially Responsible Party (or Person)
PS&E	Plans, Specifications, and Estimates
PSD	Prevention of Significant Deterioration
PSI	Preliminary Site Investigation
PSRC	Puget Sound Regional Council
RAP	Rural Arterial Program
RCRA	Resource Conservation and Recovery Act, 42 USC Section 6901, 40 CFR 260-281
REC	Regional Environmental Coordinator
RES	Real Estate Services
ROD	Record of Decision (NEPA)
RPA	Reasonable and Prudent Alternative
RPZ	Runway Protection Zone
RTPO	Regional Transportation Planning Organization
R/W	Right of Way
SAO	Sensitive Areas Ordinance
SARA	Superfund Amendments and Reauthorization Act, 42 USC Section 9601-9651
SDWA	Safe Drinking Water Act, 42 USC Section 30
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Officers
SIP	State Implementation Plan
SMA	Shoreline Management Act
SMP	Shoreline Management Program
SO_2	Sulfur Dioxide
SOV	Single Occupancy Vehicle
SPCC	Spill Prevention, Control, and Countermeasures
SSA	Sole Source Aquifer
SSP	Stormwater Site Plan
STB	Surface Transportation Board
STIP	Statewide Transportation Improvement Program
STMs	Short-term Water Quality Modifications
STURAA	Surface Transportation and Uniform Relocation Assistance Act of 1987
SWAP	Source Water Assessment and Protection
SWD	State Waste Discharge
SWMP	Stormwater Management Plan
TCM	Transportation Control Measure
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century (PL 105-178), as amended by the TEA-21 Restoration Act of July 22, 1998
TESC	Temporary erosion and sedimentation control
TFW	Timber, Fish, & Wildlife
THPO	Tribal Historic Preservation Officer
TIP	Transportation Improvement Program
TMA	Transportation Management Agency
TMDL	Total Maximum Daily Load
TSCA	Toxics Substances Control Act, 15 USC Section 2601-2629
TSD	Transfer, treatment, storage or disposal – types of hazardous waste facilities
TSP	Total Suspended Particulates
UIC	Underground Injection Control
USDA	U.S. Department of Agriculture
USDOJ	U.S. Department of Justice

USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
WAD	EPA/Washington State identification number for wastes regulated under the Dangerous Waste Regulations
WDFW	Washington Department of Fish and Wildlife
WISHA	Washington Industrial Safety and Health Act
WNHP	Washington Natural Heritage Program
WP	Waste Profile
WRIA	Water Resource Inventory Area
WSF	Washington State Ferries
WSPI	Wetland Strategic Plan Implementation
WTP	Washington's Transportation Plan

Glossary

For a web link to *Terms of Environment: Glossary, Abbreviations, and Acronyms,* which defines in non-technical language the more commonly used environmental terms appearing in EPA publications, please see:

http://www.epa.gov/OCEPAterms/intro.htm

Click on the first letter of the word/s you want to look up under terms, then find the word/s.

A

Abatement – Reduction in degree or intensity.

Adverse Effect – Occurs when an effect on an historic property diminishes the integrity of the property's aspects of integrity (see below). See also Determination of Effect. [Criteria of adverse Effect: 36 CFR 800.9(b).]

Adverse Impacts – As applied to environmental justice, may include, but are not limited to: air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and service; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organization; increased traffic congestion; isolation, exclusion or separation of minority or low income individuals from the broader community; and the denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities. Consideration shall be given to individual or cumulative effects, as appropriate.

Advisory Council on Historic Preservation – An independent federal agency, established under the NHPA, which: (1) advises the President and Congress on matters of historic preservation; (2) carries out Section 106 reviews; and 3) provides technical assistance in historic preservation actions.

Affect (Verb) – Action that may change the character of an historic property.

American Indian Religious Freedom Act – Requires federal agencies and their representatives to consult with native groups (American Indians, Eskimos, Aleuts, and Native Hawaiians) "to protect and preserve Native American religious cultural rights and practices." [PL 95-341, 1978; 92 Stat. 469.]

Anadromous Fish - Species that hatch in freshwater, mature in saltwater, and return to freshwater to spawn.

Aquifer Recharge Area - Area which has a critical replenishing effect on aquifers used for potable water.

Area of Potential Effects (APE) – The geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties exist. APE should be defined before historic properties are identified. APE is not defined on the basis of land ownership, and should be determined based upon potential direct *and* indirect effects. [36 CFR 800.2(c).]

Aspects of Integrity – The seven physical features of historic properties as they relate to properties' significance: location, design, setting, materials, workmanship, feeling, or association. See Integrity below, and National Register *Bulletin* 15, pp. 44-45.

B

Background Noise – The total of all noise in a system or situation, independent of state highway traffic noise under study.

Baffle - Flow-deflecting structure that provides low velocity resting water for the passage of fish.

Barrier – A solid wall or earth berm located between the roadway and receiver location which provides noise reduction.

Building – A construction created to shelter any form of human activity, including animal husbandry.

Byway – Public road having special scenic, historic, recreational, cultural, archeological, and/or natural qualities that have been recognized as such through legislation or some other official declaration for its scenic, historic, recreational, cultural, archeological, or natural qualities.

C

Candidate Species - Any species of fish, wildlife, or plant considered for possible addition to the list of endangered and threatened species. These are *taxa* for which the NMFS or USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Carbon Monoxide (CO) – A by-product of the burning of fuels in motor vehicle engines. Though this gas has no color or odor, it can be dangerous to human health. Motor vehicles are the main source of carbon monoxide, which is generally a wintertime problem during still, cold conditions.

Categorical Exclusion/Exemption – An action that does not individually or cumulatively have a significant environmental effect, as defined in NEPA/ SEPA regulations, and is classified as excluded (NEPA) or exempt (SEPA) from requirements to prepare an Environmental Assessment/Checklist or Environmental Impact Statement.

Certified Historic Structure – A depreciable building or structure which is either listed in the National Register or located in a National Register Historic District, or in a state- or local-designated historic district, and certified by the Secretary of the Interior as being of historical significance to (i.e., a contributing element in) the district. [36 CFR 67.2.]

Certified Local Governments (CLGs) – Local government historic preservation entities participating in the national historic preservation program, certified by the SHPO. Existence may afford property owners in the CLG jurisdiction the opportunity to participate in local (state, county, etc.) preservation incentives (e.g., tax incentives).

Certified Rehabilitation – On a certified historic property (see definition), work that is certified by the Secretary of the Interior as being consistent with the historic character of the property and, where applicable, with the district in which it is located. [36 CFR 67.2.]

Community Enhancement Areas – Features such as roadside parks, viewpoints, agricultural uses, and historic markers.

Compensatory Mitigation – The restoration, creation, enhancement, or in exceptional circumstances, preservation of wetlands and/or other aquatic resources expressly for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization have been achieved. (See also **Mitigation Bank**.)

Conceptual Mitigation Plan – A document that includes the transportation project description, wetland impacts, and discussion of the mitigation concepts.

Concurrency – The requirement to have needed infrastructure (e.g., roads, sewers, water systems) in place or planned and funded within the next six years in the jurisdiction where the project is located. The "concurrency" process was established through the GMA.

Conformity – Projects are in conformity when they do not (1) cause or contribute to any new violation of any standards in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area (EPA's Conformity Rule).

Constructed Wetlands – Areas created or restored specifically to treat either point or nonpoint source pollution wastewater. Although a constructed wetland might look the same as a created wetland, different regulations apply. Design and maintenance of constructed wetlands is determined according to their stormwater and hydraulic functions. Vegetation is used to maximize the desired functions.

Contaminant – Any physical, chemical, biological, or radiological substance or matter that has an adverse affect on air, water, or soil.

Contributing Element (or Resource) – A building, site, structure, or object that adds to the historic architectural qualities, historic associations, or archaeological values for which a property is significant because: (a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period; or (b) it independently meets the National Register criteria. See National Register *Bulletin 16A*, p. 16.

Corridor – Road or highway right-of-way and the adjacent area that is visible from and extending along the highway. The distance the corridor extends from the highway could vary with different intrinsic qualities.

Corridor Management Plan – Written document that specifies the actions, procedures, controls, operational practices, and administrative strategies to maintain the scenic, historic, recreational, cultural, archeological, and natural qualities of the scenic byway.

Council (Advisory Council on Historic Preservation) – An independent federal agency that administers the Section 106 review process.

Council on Environmental Quality (CEQ) – An oversight council established within the Executive Office of the President with passage of the National Environmental Policy Act of 1969. The Council has been assigned the task of ensuring that federal agencies meet their obligations under NEPA. Its role is to advise and assist the President on environmental policy development; recommend strategies and oversee implementation; report, coordinate, support, interpret, and approve procedures; and issue guidance. Regulations are codified as 40 CFR 1500-1508.

Created Wetlands – Wetlands that have been constructed on a nonwetland site specifically to compensate for wetland losses permitted under Section 404 of the Clean Water Act. Created wetlands can also be created to compensate for impacts under local permits or WSDOT directive. Wetlands can also be accidentally created as a result of construction activities.

Criteria for Evaluation (National Register Eligibility Criteria) – Standards used for determining the eligibility of properties for inclusion in the National Register of Historic Places. [36 CFR 60.4(a-d)]. See National Register *Bulletin* 15, pp. 11-24.

Criteria Considerations – Additional standards applying to certain kinds of historic properties. [36 CFR 60.4 (a-g). See National Register *Bulletin* 15, pp. 24-43.

Criteria Pollutants – Carbon monoxide, sulfur dioxide, particulate matter, ground level ozone, lead, and nitrogen dioxide.

Critical Aquifer Recharge Area (CARA) – Area designed by a city or county for protection under the Growth Management Act.

Critical Habitat - Specific area occupied by a listed species within its geographic range, which contains the physical or biological features essential to the conservation of the species and which may require special protection or management considerations.

Cultural Landscape – Also known as Rural Historic Landscape or Historic Landscape. A geographical area that historically has been used by people, or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features. See National Register Bulletin 30 and C.A. Birnbaum and C.C. Peters, *The Secretary of the Interior's Standards for the Treatment of Historic Properties, with Guidelines for the Treatment of Cultural Landscapes*, NPS, GPO, Washington, D.C., 1996.

Cultural Patrimony – Regarding cultural items, defined in NAGPRA as material remains of "historical, traditional, or cultural importance to the Native American group or culture itself."

Cultural Resource – A place, object, or event that is important to a community or region's history, traditions, beliefs, customs, or social institutions.

Cultural Resource Specialist (CRS) – A WSDOT employee in the Environmental Affairs Office who advises department staff on policies relating to items of historic/archaeology significance that may be affected by a project and who conducts regulatory compliance procedures.

Cultural Resources Management – The body of laws and regulations pertaining to historic, archaeological, and cultural properties, and the manner in which those directives are implemented.

Cumulative impact – Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.

D

Dangerous Waste – Solid waste designated as dangerous, or extremely hazardous or mixed waste in Washington's. Dangerous Waste Regulations (WAC 173-303). Under RCRA, solid waste may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed (listed in RCRA, 40 CFR 261). Dangerous wastes, not necessarily listed under 40 CFR 261, are characteristically reactive, corrosive, toxic, or ignitable. Radioactive substances are excluded from RCRA regulation.

Data Recovery Plan – A plan developed in consultation with the SHPO and interested parties for conducting research, gathering information, and documenting an historic property that will be adversely affected by a WSDOT project.

Delineated Wetlands – Wetlands whose boundaries have been identified by a qualified biologist using a standard delineation methodology evaluating soils, vegetation, and hydrology. A right of entry might be required to formally delineate a wetland for project purposes if it does not occur entirely on WSDOT right of way. The delineated boundary is flagged in the field and surveyed. The biology report includes the delineation survey with flag locations and numbering.

Design Year – The future year used to estimate the probable traffic volume for which a highway is designed, usually 10 to 20 years from the beginning of construction.

Designated River – River area added to the National Rivers System by an act of Congress.

Designed Historic Landscape – A landscape that has significance as a design or work of art; that was consciously designed and laid out to a design principle or recognized style or tradition; that has an historical association with a significant person, trend, or event in landscape architecture; or that has a significant relationship to the theory or practice of landscape architecture. See National Register *Bulletin 18*.

Determination of Effect – A finding, by a federal agency in consultation with SHPO, pursuant to compliance with Section 106 (see definition) that a proposed undertaking will have an effect on historic properties. If an effect is identified, the Criteria of Adverse Effect is applied to determine potential Adverse Effect (see definition). Other possibilities are determinations of No Effects and No Adverse Effect.

Determination of Eligibility – Formal recognition (by the SHPO, state Advisory Council, the Keeper of the National Register, or an agency) of a property's eligibility for inclusion, but not actual listing, in the National Register of Historic Places. Determinations of Eligibility may be prepared on National Register Registration Forms (NPS 10-900).

Direct Impact/Effect – A direct impact (or effect) is caused by the proposed action or alternative and occurs at the same time and place. Impacts may be ecological, aesthetic, historic, cultural, economic, social, or health-related. For example, a highway crossing a stream may directly impact its water quality, though such impacts can be mitigated. For NEPA, see 40 CFR 1508.8.

Discipline Report – A WSDOT report prepared by Regional Offices or Divisions to document environmental studies and investigations. The discipline reports form the basis of the Environmental Impact Statement.

Disproportionately High Impact – The adverse impact is disproportionately high if it is predominately borne by a minority and/or low income population, or if the adverse impact that could be suffered by the minority or low income community is more severe or greater in magnitude than the adverse impact that could be suffered by the non-minority or non-low income community.

District – A significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. May be an archaeological or historic district, or may contain elements of both.

E

Easement (Preservation Easement) – An agreement between a private property owner and a public body obligating the owner and future owners to preserve historic features of the property. The owner surrenders opportunities for development potential at "fair market value" for income, estate, and gift tax benefits of equal value.

Economic Recovery Tax Act of 1981 (ERTA) – Establishes the Investment Tax Credit (ITC) program for rehabilitation of older buildings, including certified historic buildings (see definition). [PL 97-34] Amended by the Tax Reform Act of 1986 (see definition).

EDNA - Environmental designation for noise abatement, being an area or zone (environment) within which maximum permissible noise levels are established.

Effect – See "Impact."

Effect (Historic Properties) – Occurs when an undertaking may alter characteristics that qualify a property for inclusion in the National Register. [Criteria of Effect: 36 CFR 800.9(a).]

Eligible – A property is eligible for inclusion in the National Register of Historic Places if it meets the National Register Criteria (see Criteria for Evaluation).

Endangered Species - Any species which is in danger of extinction throughout all or a significant portion of its range.

Enforceable Policies – Under the CZMA, legally binding policies (such as constitutional provisions, laws, regulations, land use plans, ordinances, or judicial or administrative decisions) by which a state exerts control over private and public land and water uses and natural resources in the coastal zone.

Enhancement – Actions taken to augment one or more functions and societal values at an existing degraded wetland where wetland criteria are currently met, along with its associated upland buffer area.

Environmental Document – Includes Environmental Assessments (NEPA), Environmental Checklists (SEPA), Draft and Final EISs, Section 4(f) Evaluations, Section 106 Reports, and other documents prepared in response to state or federal environmental requirements.

Environmental Enhancement – May be added to a transportation project to improve community acceptance (see 1990 FHWA Environmental Policy Statement). Environmental enhancements are incorporated into a project as part of routine decision-making to make it more compatible with and sensitive to community needs.

Environmental Impact Statement (EIS) – Required by NEPA and SEPA (see definitions), to include identification of known cultural resources in a federal or Washington State project area and disclosure of potential impacts.

Environmental Justice – Refers to the process of identifying and addressing disproportionately high and adverse health and/or environmental impacts on minority and low income populations. Incorporating environmental justice into the project development process entails documenting the demographics of affected minority and low income populations, recognizing any adverse impacts associated with the project, and identifying mitigation and enhancement measures to ensure that minority and low income populations are not disproportionately impacted by adverse effects.

Environmental Review – Consideration of environmental factors as required by NEPA and SEPA. The "environmental review process" is the procedure used by agencies and others to give appropriate consideration to the environment in decision making.

Essential Public Facility – Defined in the Growth Management Act (RCW 47.06.140), to include airports, and state and state or regional transportation facilities among other public facilities that are typically difficult to site. Improvements to facilities and services of statewide significance identified in the statewide multi-modal plan are considered essential state public facilities.

Evolutionarily Significant Unit – A designation used by National Marine Fisheries Service (NMFS) for certain local salmon populations or "runs" which are treated as individual species under the Endangered Species Act. This is equivalent to the U.S. Fish and Wildlife Service (USFWS) "Distinct Population Segment" classification.

Exempt Projects – Listed in federal and state regulations (40 CFR 93.126 and WAC 173-420-110). These projects improve safety, mass transit, or air quality, or preserve or maintain existing transportation facilities, and are considered to have a neutral impact on air quality.

Existing Noise Level – Natural and man made noises considered to be usually present within a particular area's acoustic environment.

Exotic Species – Species found in, but not native to, a particular area.

F

Farmland of Statewide or Local Importance – Farmland, other than prime or unique farmland, that is of statewide or local importance for the production of food, feed, fiber, forage, or oil-seed crops, as determined by the state or local government agency or agencies, using U.S. Department of Agriculture guidelines.

Federal Nexus - When the federal government is connected to a project either by owning land within the project limits, providing project funding, or by requiring a permit.

Final Wetland Mitigation Plan – A document that includes description of all wetlands in the project area, wetland site plan, wetland site plan, wetland revegetation plan, standards of success, operation and maintenance of the mitigation site, and the monitoring plan.

Flood – A general and temporary condition of partial or complete inundation of normally dry land areas from one of the following four sources: (1) Overflow of inland or tidal waters. (2) Unusual and rapid accumulation or runoff of surface waters from any source. (3) Mudslides or mudflows that are like a river of liquid mud on the surface of normally dry land area, as when earth is carried by a current of water and deposited along the path of the current. (4) Collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water.

Floodplain – Any land area susceptible to being inundated by flood waters from any source; usually the flat or nearly flat land on the bottom of a stream valley or tidal area that is covered by water during floods.

Floodplain Boundaries – Lines on flood hazard maps that show the limits of the 100- and 500-year floodplains.

Floodway – The channel of a river or watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively raising the water surface elevation more that a designated height. Normally, the base flood is defined as the 1 percent chance flood and the designated height is 1 foot above the pre-floodway condition.

Fugitive Dust – Particulate matter that is suspended in the air by wind or human activities and does not come out of a stack

Function Assessment – Systematic method(s) designed to evaluate the presence and level of performance of wetland functions. Function Assessment methods include, but are not limited to, Reppert et al., Habitat Evaluation Procedure, Wetland Evaluation Technique, Indicator Value Assessment, and Hydrogeomorphic methods.

Functions and Values – Functions are the physical, chemical, and biological characteristics of a wetland. Values are those characteristics, which are beneficial to society. Specific wetland functions include ground water recharge, ground water discharge, flood flow alteration, sediment stabilization, sediment and toxicant retention, nutrient removal and transformation, production export, fish and wildlife habitat, wildlife diversity and abundance, and aquatic diversity and abundance. Wetland values can include uniqueness and heritage value, education, economic importance and recreation.

G

Groundwater – Water that occurs below the surface of the earth, contained in pore spaces. It is either passing through or standing in the soil and underlying strata and is free to move under the influence of gravity.

H

Habitat - Place where a plant or animal naturally or normally completes its life cycle.

Historic American Building Survey (HABS) and Historic American Engineering Record (HAER) – The historical architecture and engineering programs of the National Park Service that promote preservation through documentation in the Library of Congress of significant structures. HABS/HAER documentation can be sponsored by NPA, individuals, or organizations, but often is completed by agencies pursuant to Sections 106 or 110(b) of the National Historic Preservation Act. Those HABS/ HAER mitigation projects record properties to be demolished or substantially altered as a result of agency action or assisted action.

Hazardous Materials (or Substances) – In general, any hazardous or toxic substance, pollutant, or chemical regulated under the CAA, CWA, TSCA, and/or RCRA, excluding petroleum (CERCLA Sec. 101(14)); a pollutant or contaminant as any substance likely to cause death, disease, abnormalities, etc. (CERCLA Sec. 101(33)). Listed in 40 CFR 302.

Hazardous Waste – Solid wastes designated by 40 CFR Part 261, and regulated as hazardous and/or mixed waste by the USEPA according to Washington's Dangerous Waste Regulations (WAC 173-303). Hazardous wastes defined under RCRA are included as a subset of hazardous materials defined under CERCLA.

Herbicide – A chemical pesticide designed to control or destroy plants, weeds, or grasses.

Historic Context – A body of information about historic properties organized by theme, place, and time. It is the organization of information about prehistory and history according to the states of development occurring at various times and places.

Historic Preservation – Identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance and reconstruction, or any combination of the foregoing activities relating to historic properties. [16 USC 470w(8)]

Historic Property – A property or cultural resource that is listed in or eligible for listing in the National Register and, under SEPA, in state and local historic registers. Historic properties may be buildings or other structures, objects, sites, districts, archaeological resources, and traditional cultural properties (landscapes).

Hot-spot Analysis – An estimate of likely future localized CO and PM_{10} pollutant concentrations and a comparison of those concentrations to the national ambient air quality standards. Hot-spot analysis assesses impacts on a scale smaller than the entire nonattainment or maintenance area (for example, congested roadway intersections and highways or transit terminals), and uses an air quality dispersion model to determine the effects of emissions on air quality (40 CFR 93.101). See 40 CFR 93.116 for analysis procedure.

Hydrology – The science that relates to the occurrence, properties, and movement of water on the earth. It includes water found in the oceans, lakes, wetlands, streams, and rivers, as well as in upland areas, above and below ground, and in the atmosphere.

I

Impact – Synonymous with "Effect". Includes ecological impacts (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health impacts, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes the effect will be beneficial.

Impact (Wetland) – An action that adversely affects a wetland or other ecosystem; for example, road construction, timber clearing, or agricultural activities that result in wetland conversion or degradation.

Impact Criteria – The yardstick used to describe the noise environment acceptable in a given situation. In most cases, projects are strictly transit or highway with the possibly the inclusion of some transit components. There are two sets of criteria, one for each type of project. Transit project criteria is covered in the April 1995 Final Report *Transit Noise and Vibration Assessment.* FHWA considers 23 CFR 772 to be the criteria for highway type projects.

Impacted Community – Noise sensitive receptor sites (such as schools or neighborhoods) where people would be exposed to substantially increased noise levels or noise levels that approach abatement criteria due to a project.

Incidental Take - Take of listed species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by a Federal agency or applicant.

Indicator – One of the specific environmental attributes measured or quantified through field sampling, remote sensing, or compilation of existing data from maps or land use reports, used to assess ecosystem condition or functions or exposure to environmental stress agents.

Indirect Conversion – Acres remaining in a tract that is partially taken for right of way which (a) could no longer be farmed because the project would restrict access, or (b) would likely be converted because of accessibility to a new highway.

Indirect Impact/Effect – Indirect impacts (or effects) are caused by the proposed action or alternative and are later in time or farther removed in distance, but still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems. For example, a road project may shift existing or projected housing growth into a different area of a region. The growth was happening already, but "indirectly" the road project influenced where it took place. (Note: "Indirect" is defined somewhat differently under NEPA and ESA rules). For NEPA, see 40 CFR 1508.8.

Injection Well – Any disposal system designed to place fluids, including highway runoff and treated wastewater from onsite sewage disposal systems, into the subsurface. Such systems include bored, drilled, or dug holes; for example dry wells, French drains, and drainfields.

In-kind Compensation – Development of wetlands that are of the same system and class, as defined by Cowardin et al., (1979) in *Classification of Wetlands and Deepwater Habitats of the United States,* and that provide similar wetland functions and values as those wetlands adversely impacted by development activities.

Integrity – A measure of a property's evolution and current condition, especially as it relates to the authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic or prehistoric period.

Interdependent Effects – Effects caused by actions that have no independent utility apart from the proposed action.

Interrelated Effects – Effects created by a proposed action that would not occur "but for" that action.

Intrinsic quality – Scenic, historic, recreational, cultural, archeological, or natural features that are considered representative, unique, irreplaceable, or distinctly characteristic of an area

Invasive Vegetation – Those (typically) nonnative plant species that often outcompete native plant communities.

Investment Tax Credit (ITC) –Credit granted by the federal government against tax liability for the certified rehabilitation of buildings for income-producing purposes. Made available by the Economic Recovery Tax Act of 1981.

Irretrievable – Impossible to retrieve or recover.

Irreversible – Impossible to reverse.

J

Joint Development – Participating jointly with a local jurisdiction or private party in an element of the project or impact mitigation

Jurisdiction - Governing authority which interprets and applies laws and regulations.

Jurisdictional Wetlands – All naturally occurring wetlands, some wetlands unintentionally created as the result of construction activities, and those created specifically for the compensation of wetland losses. These wetlands are regulated by the Army Corps of Engineers and local jurisdictions. (Ditches created in non-wetland areas that support wetland vegetation are not usually considered jurisdictional wetlands.) Check with the Environmental Affairs Office for site-specific clarification.

K

Keeper of the National Register – Maintains the National Register of Historic Places, and makes final decisions on listing of properties nominated to the National Register.

L

Large Woody Debris - Conifer or deciduous logs, limbs, or root wads of a certain diameter which interact with the stream channel and contribute to the habitat diversity of the stream.

Late-successional – Stage in forest development that includes mature and old growth forest.

Lead Agency – The agency or agencies preparing or having taken primary responsibility for preparing the environmental documents

Level of Service – A tool for identifying when a public service or infrastructure has reached capacity and requires an improvement or another similar facility. The most common use is the LOS A-F standard for capacity, volume, and delays at a traffic intersection, F being the worst congestion and delay time period.

Listed Species - Any species of fish, wildlife, or plant which has been determined to be endangered or threatened under Section 4 of the ESA.

Low Income – A person whose median household income is below the Department of Health and Human Services poverty guidelines for that size of household.

M

Maintenance Area – An area which previously was considered a "Nonattainment Area" but has achieved compliance with the NAAQS.

Management Plan – Typically addressed appropriate treatments and preservation strategies for managing historic properties. Often included as an item in a Programmatic Agreement (PA – see definition).

Minority – A person who is a citizen or lawful permanent resident of the United States and who is: (a) Black (a person having origins in any of the black racial groups of Africa), (b) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or the Spanish culture or origin, regardless of race), (c) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands), or (d) American Indian or Alaskan Native (a person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition).

Mitigation – (1) Avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree of the action; (3) rectifying the impact by repairing or enhancing the affected environment; (4) reducing or eliminating the impact over time; (5) compensating for the impact by replacing or substituting resources or environment; or (6) monitoring the impact and taking appropriate corrective measures. Also referred to as "mitigation sequencing". For NEPA, see 40 CFR 1508.2. For SEPA, see WAC 197-11-768.

Mitigation (Wetlands) – Mitigation means sequentially avoiding impacts, minimizing impacts, and compensating for remaining unavoidable impacts. In the following order of decreasing preference, mitigation is: (a) Avoiding the impact altogether by not taking a certain action or part of an action. Avoidance has the greatest reliability and is the simplest and most effective way to minimize impacts. (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts. (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment. (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action. (e) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation Bank – A net gain in wetlands to be drawn upon to offset several small wetland losses from several off-site sites or projects. A property that has been protected in perpetuity, and approved by appropriate county, state and federal agencies, expressly for the purpose of providing compensatory mitigation in advance of authorized impacts. The compensatory mitigation may be through restoration, creation, and/or enhancement of wetlands, and the preservation of adjacent wetland or stream buffers and other habitats.

Mitigation Bank Credits – The acres or other agreed upon unit of currency available at a mitigation bank site for use as compensation. A unit of trade representing the increase in the ecological value of the site, as measured by acreage, functions and/or values, or by some other assessment method.

Mitigation Bank Currency – The medium of exchange of credits for debits in a mitigation bank. The currency represents an amount of wetland area and functions and values.

Mitigation Bank Debits – The acres or other agreed upon unit of currency adversely impacted by development activities.

Mitigation Bank Implementation Plan – A plan under which each mitigation bank site must be explicitly authorized to document the following: (a) site selection (b) service area (c) preliminary design (d) final design and number of credits anticipated (e) as-builts and number of potential credits (f) mechanism for tracking credits (transaction ledger) (g) hydrology performance standards (h) other performance standards (I) schedule for credit release (j) contingency plans (k) maintenance and monitoring schedules (l) long term management of bank

Mitigation Bank Instrument – The documentation of agency and bank sponsor concurrence on the objectives and administration of a mitigation bank. The instrument describes in detail the physical and legal characteristics of the bank, including the service area, and how the bank will be established and operated.

Mitigation Bank Service Area – A designated geographic area (e.g., watershed, county) wherein a mitigation bank can reasonably be expected to provide appropriate compensation for impacts to wetlands and/or other aquatic resources.

Mitigation Bank Sponsor – Any public or private entity responsible for establishing and, in most circumstances, operating a mitigation bank.

Mitigation Measures – Actions required to mitigate adverse effects to historic properties. Usually stipulated in an MOA/PA.

Modified Natural (River) – River area where the associated natural environment of the river area is relatively undisturbed with little evidence of cultural development and natural resource management. Forest roads, hunters' cabins, and semi-primitive campgrounds may be evident. Natural features dominate the viewscape.

Monitoring – The systematic evaluation of a mitigation site to determine the degree to which the site meets its performance standards and to determine if modifications in the maintenance or management of the site is necessary to achieve the performance standards.

Multiple Property Nomination – A registration of several significant properties linked by a common property type or historic context. Submitted to SHPO and NPS on National Register Multiple Property Documentation Forms (NPS 10-900-b), known as "MPDs." See National Register Bulletin 16B.

N

National Historic Landmark – Historic properties of national significance, established by the Historic Sites Act of 1935 [PL 74-292]. NHLs are also listed in the National Register. [National Historic Landmark Program, 36 CFR 65.]

National Register of Historic Places – The nation's official listing of properties significant in national, state and/or local history, meeting one or more criteria for evaluation (36 CFR 60.4). Listing is commemorative, but may require compliance by property owners with federal/state/local laws and regulations. May also provide private property owners with opportunities to take advantage of preservation incentives, such as easements and tax relief.

Nationwide Rivers Inventory – A national listing of rivers potentially suitable for inclusion in the National Rivers System.

Natural Wetlands – Wetlands that exist due to natural forces alone, or unintentionally developed through construction or management practices which alter hydrology. Natural wetlands can be found in unusual areas, including filled areas, some ditches, inactive borrow pits, ponds, and agricultural fields. Natural wetlands are protected by federal, state, and local regulations as well as WSDOT's internal policies.

Noise Abatement Criteria (NAC) – Noise levels for various activities or land uses which, when approached or exceeded, are considered to be traffic noise impacts.

Nomination – Official request to have a property listed in the National Register. Documentation is placed on a National Register of Historic Places Registration Form (NPS 10-900) and submitted to the CLG (if appropriate), the SHPO, and the Keeper of the National Register (see definitions). See National Register *Bulletin 16A*

Nonattainment Area – Area that exceeds health-based NAAQS for certain air pollutants designated by the EPA. Current nonattainment areas are shown in WSDOT's GIS Workbench (see **Section 425.05 (1)**).

Non-contributing Element (Resource) – A building, site, structure, or object that *does not* add to the historic architectural qualities, historic associations or archaeological values for which a property is significant because: (a) it was not present during the period of significance; (b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or (c) it does not independently meet the National Register criteria. See National Register *Bulletin 16A*.

Non-jurisdictional Wetlands – Non-jurisdictional wetlands include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, canals excavated in uplands, stormwater detention ponds, wastewater treatment facilities created in uplands, and certain agricultural activities and landscape amenities created in uplands. Grass-lined swales and wastewater treatment facilities can be constructed in wetlands but must be so designated and specifically designed for water treatment purposes. Mitigation is required to compensate for the wetland lost to such a facility. The Shoreline Management Act and Growth Management Act include as non-jurisdictional those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. WSDOT has a "no net loss" policy regarding wetlands and will mitigate impacts to wetlands created after that date.

Noxious weeds – Non-native plants that are highly destructive, competitive, and difficult to control or eliminate. Noxious weeds should be controlled wherever they occur and should not be introduced to new sites.

O

Object – A construction primarily artistic in nature or relatively small in scale.

Old growth - Forest stand with moderate to high canopy closure; a multilayered, multispecies canopy dominated by large overstory trees; a high incidence of large trees with large, broken tops, and other indications of decadence; numerous large snags and heavy accumulations of logs and other woody debris on the ground.

Out-of-Kind Compensation – Compensation that replaces one wetland system and class, as defined by Cowardin, with another.

Ozone (O_3) – A highly reactive form of oxygen that occurs naturally in the earth's upper atmosphere (stratosphere). Stratospheric ozone is a desirable gas that filters the sun's ultraviolet (UV) radiation. Ozone at ground level is not emitted directly into the air; instead it forms in the atmosphere as a result of a series of complex sunlight-activated chemical transformations between oxides of nitrogen (NO_x) and hydrocarbons which together are precursors of ozone.

P

Particulate Matter (PM_{10} and $PM_{2.5}$) – Includes both naturally occurring and man-made particles with a diameter of less than 10 microns or 2.5 microns respectively. Sources of particulate matter include sea salt, pollen, smoke from forest fires and wood stoves, road dust, industrial emissions, and agricultural dust. Particles of this size are small enough to be drawn deep into the respiratory system where they can contribute to infection and reduced resistance to disease.

Patent – Legal title to real property. Granted by the federal government for parcels of the public domain when alienation occurs as the result of homesteading or similar action.

Performance Standards – Quantifiable standards capable of measuring the degree of success of a mitigation site when compared to previously established goals and objectives. An observable or measurable benchmark for a particular objective, against which a mitigation site can be compared. If the specified standard is met, the related objective is considered to be successful.

Pollutant – Any substance of such character and in such quantities that upon reaching the environment (soil, water, or air), is degrading in effect so as to impair the environment's usefulness or render it offensive.

Preservation – Setting aside of wetlands in their existing condition to protect them in perpetuity as part of a plan for compensatory mitigation.

Prime Farmland – Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Prime farmland includes land that possesses the above characteristics and may include land currently used as cropland, pastureland, water storage,.rangeland, or forestland. It does not include land already in or committed to urban development or water storage.

Primitive (River) – River area that is in pristine condition with minimal evidence of human activity.

Programmatic Agreement (PA) – An agreement typically developed for a large or complex project or types of undertakings that would otherwise require a number of individual actions.

Programmatic Biological Assessment – A biological assessment designed to cover programs, not specific projects.

Project Description – A narrative written by the proponent to describe the project proposal. It may include explanations of the existing physical, environmental, social, and economic setting in which the proposed project is situated, a legal description of the location, and an explanation of the intended improvements.

Property Type – Historic properties sharing physical or associative characteristics.

Proposed species - Any species of fish, wildlife, or plant that is proposed in the Federal Register to be listed under Section 4 of the ESA.

Public Service – SEPA lists fire, police, schools, parks or other recreational facilities, maintenance, communications, water/stormwater, sewer/solid waste, and other governmental services or utilities as elements of the built environment to be considered during the environmental review process.

R

Recreational River Areas – Rivers or sections of rivers that are readily accessible by road or railroad that may have undergone some impoundment or diversion in the past.

Regionally Significant Project – A transportation project (other than an exempt project) that serves regional transportation needs (such as access to and from the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, or transportation terminals as well as most terminals themselves). Such projects would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel (40 CFR 93.101).

Registration Requirements – Attributes of significance and integrity qualifying a property for listing in the National Register; especially important in establishing eligibility for each property type in Multiple Property submissions.

Rehabilitation – The process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values. [36 CFR 67.2]

Relocation (Historic/Cultural Resources) – The adjustment of utility facilities required by a highway project. Includes removing and installing facilities, acquiring necessary property rights in the new location, moving or rearranging existing facilities, or changing the type of facility, including any necessary safety and protective measures. Also means constructing a replacement facility, functionally equal to the existing facility, where necessary for continuous operation of the utility service, project economy, or for staging highway construction.

Request for Proposal (RFP) – Issued by agencies soliciting contracted cultural resource studies.

Resource – Referred to in NEPA and SEPA implementing regulations as "natural or depletable" resources (CEQ 1502.16; WAC 197-11-440 (6)) and renewable or nonrenewable resources (WAC 197-11-444). FHWA Technical Advisory T6640.8A (October 30, 1987) refers to "natural, physical, human, and fiscal resources" in guidance on irreversible and irretrievable commitments of resources.

Responsible Official – Official of the lead agency who has been delegated responsibility for complying with NEPA/SEPA procedures. For most WSDOT projects, the Responsible Official is the Director of Environmental Services. For SEPA-only projects the Regional Administrator is the Responsible Official.

Restoration – Actions taken to intentionally reestablish wetland area, and functions and values where wetlands previously existed, but are currently absent due to the absence of wetland hydrology or hydric soils. Re-establishment of historic wetland types with high quality functions and values where degraded wetlands are currently present may also be considered restoration (e.g. conversion of diked palustrine wetland to estuarine wetland).

Rural (River) – River area characterized by extensive agricultural and other resource-related activities. Cultural development is typically scattered homes and communities.

Rural Historic Landscape – See Cultural Landscape, and National Register Bulletin 30.

S

Scenic River Areas – Rivers or sections of rivers that are free of impoundment, with shorelines or watersheds still largely undeveloped, but accessible in places by roads.

Scoping – Formal scoping for an EIS includes identifying the range of proposed actions, alternatives, environmental elements and impacts, and mitigation measures to be analyzed in an environmental document. Public and agency scoping meetings are generally associated with this activity for NEPA scoping activities. (SEPA does not require a public hearing during the SEPA scoping for an EIS.)

Secondary Effect/Impact – Same as indirect effect under NEPA.

Secretary of the Interior's Standards for Rehabilitation – Ten general rules outlining appropriate rehabilitation (see definition) for historic properties. Used to evaluate whether the historic character of a building is preserved in the process of rehabilitation, and to determine eligibility of certified rehabilitation (see definition) projects. [36 CFR 67.]

Setting – Quality of integrity applying to the physical environment of an historic property.

Shorelines – Land within 200 feet of the ordinary high water mark of waters of the state, including marine waters, rivers, streams, lakes, and reservoirs, and their associated wetlands, floodways, deltas, and floodplains. The Shoreline Management Act (RCW 90.58.030 (2d)) excludes streams with a mean annual flow of 20 cfs or less and lakes smaller than 20 acres (including adjacent wetlands).

Shorelines of Statewide Significance – Shorelines for which there is special interest in preserving the natural characteristics and encouraging and increasing public access.

Significant Impact –The significance of potential impact on the natural or built environment depends upon context, setting, likelihood of occurrence, and severity, intensity, magnitude, or duration of the impact. WAC 197-11-330 specifies a process, including criteria and procedures, for determining whether a proposal is likely to have a significant adverse environmental impact.

Determining the "significance" of an impact is not defined in black and white. It is based on past experience of the person preparing the document and is influenced by court interpretations. Ultimately, the definition may rest with the legal system if the document is challenged. WSDOT and FHWA practice is to not use the word "significant" in an environmental document unless the document is referring to a 4(f) or Section 106 resource or quoting a regulation or law. Use a synonym such as substantial, primary, major, or high level.

Site – Any alternative alignment on a highway project, including areas converted directly (within the right of way) or indirectly by a proposed action (see "Indirect Conversion").

Site (Historic/Cultural Resources) – The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

Sole Source Aquifer (SSA) – Any aquifer which (1) is so designated by USEPA, (2) supplies 50 percent or more of the drinking water to the population living over the aquifer, (3) has distinct hydrogeological boundaries, and (4) for which there is no economically feasible alternative source of drinking water if it should be contaminated.

Solid Waste – Under RCRA Sec. 1004(27), any garbage, refuse, sludge, from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Excludes solid or dissolved material in domestic sewage, irrigation return flows, industrial discharges, nuclear, or nuclear byproduct material.

Source Water Protection Area – Area protected for drinking water supplies.

Special Flood Hazard Area – An area with a one percent chance of being flooded in any given year; hence the property is in the 100-year floodplain.

State Implementation Plan (SIP) – Framework for complying with federal law (40 CFR Part 51) requiring that the state take action to quickly reduce air pollution to healthful levels in a non-attainment area, and to provide enough controls to keep the area clean for 20 years. States have to develop a SIP that explains how it will do its job under the CAA. A SIP is a collection of the regulations a state will use to clean up polluted areas. EPA must approve the SIP, and if a SIP is not acceptable, EPA can take over, enforcing the CAA in that state. WSDOT projects must conform to the SIP before the FHWA and the EPA can approve construction.

Stormwater – Rainwater that flows over land and into natural and artificial drainage systems. Stormwater runoff is a major transporter of nonpoint source pollutants.

Structure – Functional constructions made usually for purposes other than creating shelter.

Study River – River area to be studied to determine if it qualifies for addition to the National Rivers System.

Substantial Development – Any development of which the total cost, or fair market value, exceeds $2,500.00, or any development that materially interferes with normal public use of the water or shorelines of the state.

Substantial increase – Defined as a ten decibels (dBA) increase over existing noise levels

Surface Runoff – Overland flow of water

Surface Runoff/Stormwater – Precipitation, snow melt, or irrigation in excess of what can infiltrate the soil surface and be stored in small surface depressions; runoff is a major transporter of nonpoint source pollutants. Urban runoff is surface runoff from urban areas such as streets, parking lots, and residential developments.

Surface Water – All water naturally open to the atmosphere, such as rivers, lakes, reservoirs, ponds, streams, seas, and estuaries.

Suspended Sediment – Fine material or soil particles that remain suspended by the current until deposited in areas of weaker current. Can be measured in a laboratory as "Total Suspended Solids" (TSS).

T

Take – Defined under the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct," including modification to a species' habitat.

Threatened Species – Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Threshold Determination – The decision by the responsible official of the lead agency whether or not an EIS is required for a proposal that is not categorically exempt.

Traditional Cultural Property – A place eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that are (a) rooted in that community's history, and (b) important in maintaining the continuing cultural identity of the community. The concept is based upon the introductory section of the National Historic Preservation Act, which states that "the historical and cultural foundations of the Nation should be preserved as a living part of our community life in order to give a sense of orientation to the American people." [16 USC 470(b)(2)] See National Register *Bulletin 38*. Authorized by the 1992 Amendments to the National Historic Preservation Act. [Section 101(d)(6)(A).]

Traffic Noise Impacts – Impacts which occur when the predicted traffic noise levels approach or exceed the Noise Abatement Criteria or when the predicted traffic noise levels substantially exceed the existing noise levels.

Transportation Enhancements – Funded through a provision of ISTEA with funds set aside from the Surface Transportation Program. Transportation Enhancements funding may be available to help meet these needs.

Transportation Facilities of Statewide Significance – Defined in RCW 81.104.015 to include the interstate highway system, interregional state principal arterials including ferry connections that serve statewide travel, intercity passenger rail services, intercity high-speed ground transportation, major passenger intermodal terminals excluding all airport facilities and services, the freight railroad system, the Columbia/Snake navigable river system, marine port facilities and services that are related solely to marine activities affecting international and interstate trade, and high-capacity transportation systems serving regions.

Transportation Improvement Program (TIP) – A staged, multiyear intermodal program of transportation projects covering a metropolitan planning area which is consistent with the state and metropolitan transportation plan, and developed pursuant to 23 CFR Part 450. The entire program must conform with the NAAQS in order for any federal funding to be granted for individual projects.

Turbidity – A condition in water or wastewater caused by the presence of suspended material resulting in scattering and absorption of light rays.

Type I Project (Noise) – A proposed highway construction at a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of traffic through lanes.

Type II or Retrofit Project (Noise) – A proposed project for noise abatement on an existing highway or highway configuration.

U

Undertaking – Any activity that can result in changes in the character or use of historic properties. The activity must be under the direct or indirect jurisdiction of a federal agency or licensed or assisted by a federal agency. [36 CFR 800.2(o).]

Unique Farmland – Land other than prime farmland that is used for production of specific high-value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include lentils, nuts, annual cropped white wheat, cranberries, fruits, and vegetables.

Universal Transverse Mercator (UTM) Grid System – Method for locating historic properties using USGS maps and measurements cited in linear, decimal units. Measurements are referred to as "UTMs."

Urban River – River area that is intensively modified by cultural activities, primarily residential and light commercial development. The river has high water quality and highly rated natural features such as historical and archaeological sites, fisheries resources, wildlife, or recreational values.

Urban Growth Area — The identified boundary that allows for higher density and focused infrastructure development to control growth from "sprawling" into the identified rural and sensitive areas of local jurisdictions.

Utility – Privately, publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, cable television, electric power, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, and other similar commodities, including any fire or police signal systems, street lighting systems, and traffic control system interties, which directly or indirectly serve the public. (WSDOT *Utilities Manual* (M 22-87), Chapter 2.)

V

Vehicular – Refers to public, private vehicles; single and high occupancy vehicles, freight, bicycles, and pedestrians.

Viability - Ability of a population to maintain sufficient size so it persists over time in spite of normal fluctuations in numbers; usually expressed as a probability of maintaining a specific population for a defined period.

Visual Element – A particular feature of the visual quality.

Visual Function – Element of a transportation project that is designed and experienced primarily from a visual perspective; includes positive guidance and navigation, distraction screening, corridor continuity, roadway and adjacent property buffering, and scenic view preservation.

Visual Quality – Character of the landscape, which generally gives visual value to a setting; the view from the road.

W

Wastewater – Literally, water that has been used for some purpose and discarded, or wasted; typically liquid discharged from domestic residential, business, and industrial sources that contains a variety of wastes.

Water Right – Legal authorization to use a certain amount of public water for specific beneficial purposes.

Watershed - Basin including all water and land areas that drain to a stream or common body of water; the watershed for a major river may encompass a number of smaller watersheds that ultimately combine at a common point.

Wellhead Protection Area – Area managed by a community to protect groundwater drinking water supplies.

Wetland Buffer – The area adjacent to a wetland that serves to protect the wetland from outside influences. Wetland buffers also contribute to the integral functions of the wetland. Regulated buffer widths vary depending upon the quality of the wetland and guidelines established by the local jurisdiction under the state Growth Management Act. Required buffer widths are identified in the project's wetland/biology report. Wetland buffers must be shown on contract plans sheets. No work may occur within an identified wetland buffer area unless it has been approved by the appropriate permitting agency.

Wetland Functions – Wetland functions are the physical, chemical, and biological processes or attributes that are vital to the integrity of wetland/upland landscape interrelationships (landscape systems).

Wetland Inventory – A wetland inventory is a data collection process during which information about the presence, approximate extent, and in some cases the characteristics of wetlands are collected. Inventories can be general (e.g., aerial photographs) or site-specific (through field inventory work).

Wetlands – Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not usually include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate conversion of wetlands, if permitted by the appropriate authority.

Wetland Values – Wetland values are those attributes that, although not necessarily essential to the integrity of the landscape systems, are perceived as valuable to society (Adamus et al, 1991).

Wild River Areas – Areas or sections of rivers of the United States that are free of impoundment and generally inaccessible, except by trail, with watersheds or shorelines essentially untouched and waters unpolluted. They represent vestiges of America prior to European settlement.

Wilderness – Areas defined in the Wilderness Act where "the earth and its community of life are untrammeled by man, where man is a visitor who does not remain…."

FEDERAL

Agencies and Organizations	Acronym or Abbreviation	Web Site
Advisory Council on Historical Preservation	ACHP	http://www.achp.gov/
Bureau of Land Management, Oregon/Washington	BLM	http://www.or.blm.gov/
Council on Environmental Quality	CEQ	http://www.whitehouse.gov/CEQ/
Federal Aviation Administration	FAA	http://www.faa.gov/
Federal Register	FR	http://www.archives.gov/
Federal Transit Administration	FTA	http://www.fta.dot.gov/
Legal Information Institute *Useful for viewing federal statutes*	LII	http://www4.law.cornell.edu/uscode/
National Archives and Records Administration *Useful for viewing federal regulations*	NARA	http://www.access.gpo.gov/nara/cfr/
National Marine Fisheries Service	NMFS	http://www.nmfs.noaa.gov/
National Park Service	NPS	http://www.nps.gov/
Natural Resource Conservation Service	NRCS	http://www.nrsc.usda.gov
US Access Board	Access Board	http://www.access-board.gov/
US Army Corps of Engineers Seattle District	COE	http://www.nws.usace.army.mil/ index.cfm
US Department of Justice	USDOJ	http://www.usdoj.gov/
US Department of Transportation Federal Highway Administration	FHWA	http://www.fhwa.dot.gov/
US Environmental Protection Agency	USEPA	http://www.epa.gov/
US Fish and Wildlife Service	USFWS	http://www.fws.gov/
USDA Forestry Service	FS	http://www.fs.fed.us/
USDA Natural Resources Conservation Service	NRCS	http://www.nrcs.usda.gov/
Wilderness Information Network		http://www.wilderness.net/

WASHINGTON STATE

Agencies and Organizations	Acronym or Abbreviation	Web Site
Associated General Contractors of Washington	AGC	http://www.agcwa.com/
Community, Trade, and Economic Development	CTED	http://www.cted.wa.gov/
County Road Administration Board	CRAB	http://www.crab.wa.gov/
Department of Ecology	Ecology	http://www.ecy.wa.gov/
Department of Fish and Wildlife	WDFW	http://www.wa.gov/wdfw/
Department of Natural Resources	DNR	http://www.wa.gov/dnr/

Agencies and Organizations	Acronym or Abbreviation	Web Site
Department of Transportation	WSDOT	http://www.wsdot.wa.gov/
WSDOT Environmental Services Office	ESO	http://wsdot.wa.gov/eesc/environmental/
Governor's Office	Governor	http://www.governor.wa.gov/
Office of Community Development	OCD	http://www.ocd.wa.gov/
Puget Sound Regional Council	PSRC	http://www.psrc.org/
Statute Law Committee Office of the Code Reviser *Useful for viewing state statutes and regulations*	Statute Law Committee	http://slc.leg.wa.gov/

REFERENCES BY SECTION

Section Number & Title		Web Sites Referenced in Section
100	**Purpose and Overview**	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/fasc/EngineeringPublications/
200	**Transportation**	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/ppsc/planning/ http://www.wsdot.wa.gov/ppsc/wtp/
210	**Legal and Policy Framework for Transportation Planning**	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/env_sum.htm http://www.fhwa.dot.gov/tea21/index.htm http://www.fhwa.dot.gov/reauthorization/index.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/ppsc/planning/Manuel.pdf http://www.wsdot.wa.gov/ppsc/wtp/ http://www.wsdot.wa.gov/PPSC/WTP/
220	**Relationships of State, Regional, and Local Transportation Planning**	http://www.crab.wa.gov/ http://www.crab.wa.gov/grants/ http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/ppsc/planning/rtpo.pdf
230	**Washington's Transportation Plan**	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/Aviation/ http://www.wsdot.wa.gov/Ferries/ http://www.wsdot.wa.gov/ppsc/wtp/ http://www.wsdot.wa.gov/pubtran/ http://www.wsdot.wa.gov/TA/HOMEPAGE/HLPHP.html

Section Number & Title		Web Sites Referenced in Section
300	Programming and Project Definition Phase	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/ppsc/planning/
310	Project Programming	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/TA/ProgMgt/STIP/STIPHP.htm
320	Project Definition and Budgeting	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/nepa/doc_ce.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www.wsdot.wa.gov/ppsc/planning/ http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM
400	Project Development Phase	No web sites.
410	NEPA/SEPA Process Overview	http://ceq.eh.doe.gov/nepa/nepanet.htm http://search.leg.wa.gov/wslwac/WAC 468 TITLE/WAC 468 - 12 CHAPTER/WAC 468 - 12 Chapter.htm http://slc.leg.wa.gov/ http://www.ecy.wa.gov/ http://www.ecy.wa.gov/programs/sea/sepa/e-review.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/00001.htm http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0771.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.whitehouse.gov/CEQ/ http://www.wsdot.wa.gov/environment/eao/regcomp/SAC_committee.htm http://www.wsdot.wa.gov/environment/eao/wqec/docs/swmp1.pdf
411	Environmental Documentation and Procedures	http://ceq.eh.doe.gov/nepa/nepanet.htm http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm http://www.ecy.wa.gov/ http://www.ecy.wa.gov/programs/sea/sepa/197-11_toc.html http://www.ecy.wa.gov/programs/sea/sepa/lawandrule.htm http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/alts.htm http://www.fhwa.dot.gov/environment/mitig2.htm http://www.fhwa.dot.gov/environment/nepa/document.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm

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412	WSDOT Environmental Procedures	http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm http://www.ecy.wa.gov/ http://www.ecy.wa.gov/apps/sepa/ http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch13.htm http://www.fhwa.dot.gov/environment/pubinv2.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fhwa.dot.gov/reports/pittd/cover.htm http://www.wsdot.wa.gov/eesc/environmental/
420	Earth (Geology and Soils)	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_training.htm http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm
425	Air	http://search.leg.wa.gov/wslrcw/RCW 70 TITLE/RCW 70 . 94 CHAPTER/RCW 70 . 94 chapter.htm http://www.access.gpo.gov/nara/cfr/ http://www.agcwa.com http://www.agcwa.com/public/education_foundation/class_schedule.asp http://www.ecy.wa.gov/ http://www.ecy.wa.gov/laws-rules/ecywac.html#air http://www.ecy.wa.gov/programs/air/local.html http://www.epa.gov/ http://www.epa.gov/airs/criteria.html http://www.epa.gov/oar/ http://www.epa.gov/oar/caa/contents.html http://www.epa.gov/oar/oaqps/publicat.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch1.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fhwa.dot.gov/tea21/index.htm http://www.psrc.org/ http://www.psrc.org/datapubs/pubs/publist_airquality.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironLeg.htm
431	Water Quality / Surface Water	http://search.leg.wa.gov/wslrcw/RCW 90 TITLE/RCW 90 . 48 CHAPTER/RCW 90 . 48 chapter.htm

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432	**Floodplain**	http://slc.leg.wa.gov/ http://www.ecy.wa.gov/ http://www.ecy.wa.gov/biblio/forms/ecology-order.asp http://www.ecy.wa.gov/programs/sea/grants/fcaap/intro.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch6.htm http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0650a.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.leg.wa.gov/pub/rcw/rcw 86 TITLE/rcw 86 TITLE/rcw 86 TITLE.htm http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/docs/SWMP1.pdf http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm
433	**Groundwater**	http://search.leg.wa.gov/wslrcw/RCW36TITLE/RCW 36.70ACHAPTER/RCW36.70A chapter.htm http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.48CHAPTER/RCW90.48 chapter.htm http://search.leg.wa.gov/wslwac/WAC 173TITLE/WAC173-200CHAPTER/WAC 173-200 CHAPTER.htm http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173-218CHAPTER/WAC173-218 CHAPTER.htm http://search.leg.wa.gov/wslwac/WAC246TITLE/WAC246-290CHAPTER/WAC 246 -290 CHAPTER.htm http://slc.leg.wa.gov/ http://www.ecy.wa.gov/ http://www.ecy.wa.gov/biblio/96002.html http://www.ecy.wa.gov/biblio/97030.html http://www.ecy.wa.gov/biblio/rporder.html http://www.ecy.wa.gov/laws-rules/ecyrcw.html http://www.ecy.wa.gov/laws-rules/ecywac.html http://www.ecy.wa.gov/programs/sea/pac/index.html http://www.ecy.wa.gov/programs/wq/grndwtr/cara/index.html

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436	**Wildlife, Fish, and Vegetation**	http://endangered.fws.gov/ http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2001_register&docid=fr17ja01-142.pdf http://laws.fws.gov/lawsdigest/baldegl.html http://laws.fws.gov/lawsdigest/esact.html http://laws.fws.gov/lawsdigest/fwcoord.html http://laws.fws.gov/lawsdigest/marmam.html http://laws.fws.gov/lawsdigest/migtrea.html http://search.leg.wa.gov/wslrcw/RCW 90 TITLE/RCW 90 . 58 CHAPTER/RCW 90 . 58 chapter.htm http://slc.leg.wa.gov/ http://www.archives.gov/ http://www.ecy.wa.gov/ http://www.ecy.wa.gov/programs/sea/pac/enhan.htm http://www.ecy.wa.gov/programs/sea/pac/jarpa.html http://www.faa.gov/ http://www.faa.gov/arp/ace/625/wildlife.htm http://www.faa.gov/arp/pdf/5200-33.pdf http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch4.htm

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		http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fs.fed.us/ http://www.fs.fed.us/forum/nepa/nfmalaw.html http://www.fs.fed.us/im/directives/ http://www.fws.gov/ http://www.governor.wa.gov/ http://www.governor.wa.gov/esa/ http://www.nmfs.noaa.gov/ http://www.nmfs.noaa.gov/ess_fish_habitat.htm http://www.nwr.noaa.gov/ http://www.nwr.noaa.gov/1salmon/salmesa/pubs/1pgr.pdf http://www.nws.usace.army.mil/index.cfm http://www.or.blm.gov/ http://www.or.blm.gov/nwfp.htm http://www.wa.gov/dnr/ http://www.wa.gov/dnr/htdocs/fp/fpb/act.html http://www.wa.gov/dnr/htdocs/fr/nhp/wanhp.html http://www.wa.gov/wdfw/ http://www.wa.gov/wdfw/hab/engineer/habeng.htm#upstrm http://www.wa.gov/wdfw/hab/phspage.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/fossc/maint/4d_Rule/default.htm http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironmentalHP.htm http://www.wsdot.wa.gov/TA/Operations/Environmental/noeffectba.html http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM http://www4.law.cornell.edu/uscode/ http://www4.law.cornell.edu/uscode/16/1361.html http://www4.law.cornell.edu/uscode/16/661.html http://www4.law.cornell.edu/uscode/16/668.html http://www4.law.cornell.edu/uscode/16/703.html http://www4.law.cornell.edu/uscode/16/ch35.html
437	**Wetlands**	http://search.leg.wa.gov/wslrcw/RCW36TITLE/RCW36.70ACHAPTER/RCW36.70A chapter.htm http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.48CHAPTER/RCW90.48chapter.htm http://search.leg.wa.gov/wslrcw/RCW90TITLE/RCW90.58CHAPTER/RCW90.58chapter.htm http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173-26CHAPTER/WAC173 - 26 Chapter.htm http://search.leg.wa.gov/wslwac/WAC173TITLE/WAC173-201ACHAPTER/WAC173 -201A

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		CHAPTER.htm http://slc.leg.wa.gov/ http://www.ecy.wa.gov/ http://www.ecy.wa.gov/biblio/sea.html http://www.ecy.wa.gov/programs/sea/pac/index.html http://www.ecy.wa.gov/programs/sea/pac/jarpa.html http://www.ecy.wa.gov/programs/sea/shorelan.html http://www.ecy.wa.gov/programs/sea/wetlan.html http://www.ecy.wa.gov/programs/sea/wetmitig/index.html http://www.epa.gov/ http://www.epa.gov/owow/wetlands/ http://www.epa.gov/owow/wetlands/laws/ http://www.epa.gov/owow/wetlands/mitbankn.html http://www.faa.gov/ http://www.faa.gov/arp/ace/625/wildlife.htm http://www.faa.gov/arp/pdf/5200-33.pdf http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/environment/wetland/index.htm http://www.fhwa.dot.gov/environment/wetland/wet_abs.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fws.gov/ http://www.fws.gov/r9dhcbfa/hpmpol.htm http://www.nws.usace.army.mil/ers/index.html http://www.nws.usace.army.mil/index.cfm http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=Home_Page http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=REG&pagename=NWP_2002 http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/biology/bio_wetdelmit.htm http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/AlternativeMitigationPolicy2000.pdf http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/Banking_Defn.doc http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/bankWSDOTWBMOAFinalMOA(1=4=94).doc http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/bpjtool.pdf http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/success.html.doc http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/Wetland_Preservation.doc

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		http://www.wsdot.wa.gov/eesc/environmental/programs/biology/docs/WetlandHA.pdf http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/doc_merger.htm http://www.wsdot.wa.gov/eesc/environmental/programs/watershed/wspi/WSPI.htm http://www.wsdot.wa.gov/eesc/environmental/programs/wetmon/wetmon.htm http://www.wsdot.wa.gov/environment/eao/regcomp/SAC_committee.htm http://www.wsdot.wa.gov/fasc/EngineeringPublications/manuals/Plnsprep.pdf http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www4.law.cornell.edu/uscode/ http://www4.law.cornell.edu/uscode/16/ch33.html http://www4.law.cornell.edu/uscode/16/ch35.html http://www4.law.cornell.edu/uscode/33/ch26.html
	Exhibit 437-4	http://www.fws.gov/r9dhcbfa/HPMPOL.HTM
440	**Energy**	http://www.epa.gov/globalwarming/emissions/national/index.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/Regions/Northwest/SpecialSvc/environmental/ http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm
446	**Noise**	http://wsdot.wa.gov/eesc/environmental/ http://www.access.gpo.gov/nara/cfr/ http://www.access.gpo.gov/nara/cfr/waisidx_01/23cfr772_01.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/AB_NOISE.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch8.htm http://www.fhwa.dot.gov/environment/noise/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t616002.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fta.dot.gov/fta/library/planning/enviro/noise/ftanoise.html http://www.fta.dot.gov/library/planning/enviro/ http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/policies.htm http://www4.law.cornell.edu/uscode/ http://www4.law.cornell.edu/uscode/23/109.html http://www4.law.cornell.edu/uscode/42/4901.html

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447	Hazardous Materials	http://www.agcwa.com/ http://www.agcwa.com/Public/education_foundation/coned/class_schedule_materials.asp http://www.ecy.wa.gov/ http://www.ecy.wa.gov/biblio/9128.html http://www.ecy.wa.gov/biblio/9130.html http://www.ecy.wa.gov/permit.html http://www.ecy.wa.gov/programs/wr/wells/wellhome.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch7.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/docs/doeagree.pdf http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz.htm http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www.wsdot.wa.gov/TA/Operations/Environmental/EnvironLeg.htm
	Exhibit 447-7	http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm
451	Land Use and Growth Management	http://www.cted.wa.gov/ http://www.faa.gov/ http://www.faa.gov/arp/birdstrike/appendC.pdf http://www.faa.gov/arp/pdf/5200-33.pdf http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.ocd.wa.gov/info/ldg/growth http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

Section Number & Title		Web Sites Referenced in Section
452	Coastal Areas and Shorelines	http://www.ecy.wa.gov/ http://www.ecy.wa.gov/biblio/wac17327.html http://www.ecy.wa.gov/programs/sea/pac/jarpa.html http://www.ecy.wa.gov/programs/sea/shorelan.html http://www.ecy.wa.gov/programs/sea/swce/index.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/design/projectdev/gsppage1.htm http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www4.law.cornell.edu/uscode/ http://www4.law.cornell.edu/uscode/16/ch33.html
453	Wild and Scenic Rivers	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch15.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.nps.gov/rivers/ http://www.wilderness.net/ http://www.wilderness.net/nwps/legis/default.cfm http://www4.law.cornell.edu/uscode/ http://www4.law.cornell.edu/uscode/16/ch27.html
454	Agricultural and Farmland	http://nrcs.us.gov http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.nrcs.usda.gov/ http://www.nrcs.usda.gov/programs/fppa/AD1006.PDF http://www.nrcs.usda.gov/programs/fppa/CPA106.pdf http://www.nrcs.usda.gov/programs/lesa/cfr/7cfr658.html http://www.wa.nrcs.usda.gov/
455	Public Lands (Section 4(f), 6(f), and Forests)	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch16.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fs.fed.us/ http://www.fs.fed.us/im/directives/field/r6pnw/fsm/1500/1561_9b.doc http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm

Section Number & Title		Web Sites Referenced in Section
456	Historic, Cultural, and Archaeological Resources	http://www.achp.gov/ http://www.achp.gov/work106.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch10.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch14.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch15.htm http://www.fhwa.dot.gov/environment/te.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.ocd.wa.gov/ http://www.ocd.wa.gov/info/lgd/oahp/ http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/TA/Operations/LAG/ http://www.wsdot.wa.gov/TA/Operations/LAG/LAGHP.HTM
	Exhibit 456-6	http://www.achp.gov/
	Exhibit 456-11	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/CAE/pse/PLANTBCN.HTM http://www.wsdot.wa.gov/eesc/design/projectdev/gsppage1.htm
457	Social and Economic Conditions	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/ejustice/lib/ejbib.pdf http://www.fhwa.dot.gov/environment/ejustice/lib/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fhwa.dot.gov/realestate/act.htm
458	Environmental Justice	http://www.epa.gov/docs/oejpubs/execordr.txt.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/ej2.htm http://www.fhwa.dot.gov/environment/ejustice/lib/index.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch16.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.wsdot.wa.gov/eesc/environmental/

Section Number & Title		Web Sites Referenced in Section
459	**Visual**	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch1.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch14.htm http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/environment/te.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.fhwa.dot.gov/legsregs/legislat.html http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/cae/design/roadside/VisQual.htm http://www.wsdot.wa.gov/eesc/design/roadside/default.htm http://www.wsdot.wa.gov/eesc/design/roadside/pdf/fhwavia.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/environment/eao/ http://www.wsdot.wa.gov/fasc/EngineeringPublications/library.htm http://www.wsdot.wa.gov/fasc/engineeringpublications/Manuals/RoadsideManual.pdf http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm
460	**Transportation**	http://www.access-board.gov/ http://www.epa.gov/globalwarming/ http://www.epa.gov/globalwarming/emissions/national/index.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0652.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.usdoj.gov/ http://www.usdoj.gov/crt/ada/adahom1.htm http://www.usdoj.gov/crt/ada/publicat.htm http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/commission/ReportsPlans/Catalog.pdf http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm

Section Number & Title		Web Sites Referenced in Section
470	Public Services and Utilities	http://search.leg.wa.gov/wslrcw/RCW 47 TITLE/RCW 47 . 44 CHAPTER/RCW 47 . 44 chapter.htm http://search.leg.wa.gov/wslwac/WAC 468 TITLE/WAC 468 - 34 CHAPTER/WAC 468 - 34 Chapter.htm http://www.access.gpo.gov/nara/cfr/ http://www.access.gpo.gov/nara/cfr/waisidx_01/23cfr645_01.html http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.leg.wa.gov/ http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/fasc/EngineeringPublications/library.htm http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/UtilitiesManual.pdf http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm
480	Cumulative	http://www.fhwa.dot.gov/ http://www.fhwa.dot.gov/environment/2nd_cml.htm http://www.fhwa.dot.gov/environment/guidebook/chapters/v2ch6.htm http://www.fhwa.dot.gov/environment/guidebook/index.htm http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm http://www.wsdot.wa.gov/eesc/environmental/
500	Post-Design Phase Overview	No web sites listed
510	Construction Phase	http://www.ecy.wa.gov/ http://www.ecy.wa.gov/programs/wq/stormwater/sw_prmts.html http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/hazwqec/haz_docpubs.htm http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm
520	Maintenance Phase	http://www.wsdot.wa.gov/ http://www.wsdot.wa.gov/eesc/cae/design/roadside/rm.htm http://www.wsdot.wa.gov/eesc/environmental/ http://www.wsdot.wa.gov/eesc/environmental/programs/regcomp/docs/impagfin.pdf http://www.wsdot.wa.gov/fasc/EngineeringPublications/library.htm http://www.wsdot.wa.gov/FASC/EngineeringPublications/Manuals/Highway.pdf http://www.wsdot.wa.gov/fasc/EngineeringPublications/Manuals/IL4020.pdf http://www.wsdot.wa.gov/fossc/maint/4d_rule/ http://www.wsdot.wa.gov/regions/Northwest/SpecialSvc/environmental/aae/default.htm
530	Surplus Real Property Disposal	No web sites listed
	Glossary	http://www.epa.gov/OCEPAterms/intro.htm
	Interagency Agreements and Memoranda	http://www.fhwa.dot.gov/environment/ http://www.wsdot.wa.gov/eesc/environmental/

Abbreviation	Common Name	Codification	Implementing Regulations	Manual Sections
	Abandoned and Historic Cemeteries Act	RCW 68.04-05		456
	American Indian Religious Freedom Act, 1978	PL 95-341; 92 Stat. 469		456
ADA	Americans with Disabilities Act	PL 336-101	23 CFR 652	460
	Antiquities Act, 1906	16 USC 431		456
	Archaeological and Historic Preservation Act, 1974	16 USC 469; PL 93-291		456
ARPA	Archaeological Resources Protection Act, 1979	16 USC 470; PL 93-95	43 CFR 3	456
	Aviation Siting	RCW 36-71A-510		460
	Bald and Golden Eagle Protection Act	USC 16-5a	WAC 232-12-292	436
	Bicycle and Pedestrian Traffic	RCW 47.30		460
	Civil Rights Act	USC 42-20 et al.		458
CWA & CWAA	Clean Air Act and Amendments	42 USC 7901 et seq.		210, 425, 447
CAWA	Clean Air Washington Act	RCW 70.94	WAC 173-420	210, 425, 454
CWA	Clean Water Act (Water Pollution Control Act)	33 USC 1251 et seq.	33 CFR 26	210, 431, 433, 437, 447, 452, 520
	Clean Water Act (Washington)	RCW 90.48	WAC 173-200; WAC 173-201A	431, 433, 437, 447
CAO	Critical (or Sensitive) Areas Ordinances	City & County		431, 436, 452
CZMA	Coastal Zone Management Act	16 USC 1451	15 CFR 923-930	431, 437, 452
CERCL:A	Comprehensive Environmental Response, Compensation, and Liability Act	42 USC 103		447
CARA	Critical Aquifer Recharge Ordinances	City & County (RCW 36.70A)		433
	Dangerous Waste Regulations	RCW 70-105	WAC 173-303	447
Section 4(f)	Department of Transportation Act, Section 4(f)	49 USC 303	23 CFR 771	411, 453, 455, 456
	Design, Arts, and Architecture Program	DOT Order 5610C, revised		455, 456
	Design Standards – Vehicular Traffic	RCW 47.24; RCW 47.18-04	WAC 468-04	460
	Diversity and Equity	Governor's EO 93-07		458
	Economic Recovery Tax Act, 1981	PL 97-34		456
ESA	Endangered Species Act, 1973	16 USC 35		431, 436, 437, 520
	Environmental Justice	President's EO 12898		458
	FAA Regulations		FAR Part 77.13(a)(2)	460
	Farmlands Preservation	Governor's EO 80-01		454
FPPA	Farmlands Protection Policy Act	7 USC 4201-4209		454
	Federal Highway Act	23 USC 109(h)		458
	Fish and Wildlife Coordination Act	16 USC 661-667(e)		436
	Fish Passage Law	RCW 77.55.060		436

Abbreviation	Common Name	Codification	Implementing Regulations	Manual Sections
Magnuson-Stevens Act	Fisheries Conservation & Management Act, 1976	16 USC 1800		436
	Flood Control Management Act	RCW 89.09		432
	Floodplain Management	President's EO 11988		432
	Forest Management Act	16 USC 1604(g)(3)(B)		436
	Forest Practices Act	RCW 76.09.020	WAC 222-20	436, 455
	Franchises on State Highways	RCW 47.44		470
GMA	Growth Management Act, 1990 Growth Strategies Act, 1991	RCW 36.70a		210, 433, 437, 451, 454, 460
	Hazardous Waste Management Act (Dangerous Waste Regulations)	RCW 70-105	WAC 173-303	447
	Highway Beautification Act, 1965		23 CFR 750	459
	Highway Beautification Act (Washington)	RCW 47-40.010		459
Section 106	Historic Preservation Act, 1966; amended 1976, 1980, 1992	16 USC 470, PL 89-655	30 CFR 800	411, 456
	Indian Graves and Records Act	RCW 2744		456
ISTEA	Intermodal Surface Transportation Efficiency Act, 1991	23 USC 101(g) – 133(b)	40 CFR 93 (CEQ) 23 CFR 450 (FHWA)	210, 425, 456, 459
Section 6(f)	Land & Water Conservation Funds Act	16 USC 460L 4-11; PL 88-578	WAC 286-24-050	411, 455
	Lead-Based Paint Regulations		WAC 173-303, 296-62 & 296-155	447
	Marine Mammal Protection Act	USC 16-31		436
	Migratory Bird Treaty Act	USC 16-7-11		436
	Model Toxics Control Act	RCW 70-105D	WAC 173-340	447
NEPA	National Environmental Policy Act	42 USC 4231; PL 91-90	40 CFR Part 1500.1 (CEQ) 23 CFR 771 (FHWA)	320, 410 - 480
	Native American Graves Protection and Repatriation Act	PL 101-601; 104 Stat. 3048		456
	Noise Control Act, 1972	42 USC 4901 et seq. 23 USC 109i	24 CFR 772	446
	Noise Control Act, 1974 (Washington)	RCW 70-107 RCW 88.12 (Vessels)	WAC 173-58, 60, 62	446
OSHA	Occupational Safety and Health Act		29 CFR 1910; WAC 296-62	447, 510
	Rail Traffic Easements	RCW 47.12.026		460
RCRA	Resource Conservation and Recovery Act and Hazardous Waste Amendments		40 CFR 280, 281;40 CFR 61 WAC 173-303	447, 520
	Rivers and Harbors Act, 1899	33 USC 403		431, 452, 520
	Safe Drinking Water Act, 1974 Amendments,1986 and 1999	42 USC 6A; PL 104-182		433, 447
	Salmon Restoration Act (Washington)			210, 436

Abbreviation	Common Name	Codification	Implementing Regulations	Manual Sections
	Scenic Rivers System	RCW 79.72	WAC 173-204	453
SMA	Shoreline Management Act	RCW 90.58	WAC 173.26, WAC 173.19	431, 436, 437, 452
	Section 4(f)	See Dept. of Transportation Act	23 CFR 771.135(d)	411, 453, 455, 456
	Section 6(f)	See Land & Conservation Funds Act	16 USC 460L 4-11; PL 88-578 WAC 286-24-050	411, 456
	Section 106	See Historic Preservation Act	30 CFR 800	411, 456
	Solid Waste Management Act	RCW 70.95	WAC 173-304	447
SEPA	State Environmental Policy Act	RCW 43-21C	WAC 197-11 (Ecology) WAC 468-12 (WSDOT)	320 410 through 480, 520
STURAA	Surface Transportation & Uniform Relocation Assistance Act, 1987	23 USC 144 (o)		456
TRA	Tax Reform Act, 1986	PL 99-514		456
TSCA	Toxic Substances Control Act	15 USC 2601-2629		447
	Trails System Act	16 USC 1241 – 1249		453
TEA-21	Transportation Equity Act for the 21st Century	PL 105-178		210, 310, 456
UIC	Underground Injection Control	RCW 43-21A.445	WAC 173-218	433
	Underground Storage Tanks		WAC 173-360, WAC 51-34-7902.1.7.2.3	447
	Uniform Relocation Assistance and Real Property Acquisition Act			457
	Utility Franchises and Permits	RCW 47.44	WAC 468.34	470
	Utility Relocation Reimbursement		23 CFR 645	470
	Water Pollution Control Act (Clean Water Act)	33 USC 1251 et seq.	33 CFR 26	210, 431, 433, 437, 447, 452, 520
	Water Quality Standards	RCW 90.48	WAC 173-210 (surface & marine water) WAC 173-200 (groundwater)	431, 433
	Wellhead Protection		WAC 246.290	433
	Wetland Mitigation Banking	RCW 90.84	WAC 173-700	437
	Wetland Protection	President's EO 11990 DOT Order 5660.1A Governor's EO 89-10 & 90-04		437
	Wild and Scenic Rivers Act	16 USC 28		453
	Wilderness Act	16 USC 1131-1136		453

Index of Interagency Agreements and Memoranda

Topic	Formal Title	Location	Manual Section
Programmatic Categorical Exclusion Approvals	Memorandum of Understanding Between Washington State Department of Transportation and Federal Highway Administration. May 1999.	**Exhibit 320-5**	
NEPA Categorical Exclusions	Implementing Agreement between WSDOT and Ecology Concerning Adoption of NEPA Documented Categorical Exclusions. June 1996.	**Exhibit 320-6**	320
NEPA / SEPA merger with Clean Water Act - Section 404	Signatory Agency Committee Agreement to integrate aquatic resources permit requirements into the National Environmental Policy Act and the State Environmental Policy Act processes in the State of Washington, September 2002.	http://www.wsdot.wa.gov/environment/eao/regcomp/SAC_committee.htm	320, 410, 411, 412, 431, 437
Fugitive Dust	MOA between the Washington State Department of Transportation and the Puget Sound Clean Air Agency Regarding the Control Fugitive Dust from Construction Projects. October 14, 1999.	**Exhibit 425-1**	425
Surface Water Quality Standards	Implementing Agreement between the Washington State Department of Ecology and the Washington State Department of Transportation Regarding Compliance with the State of Washington Surface Water Quality Standards, February 13, 1998.	http://www.wsdot.wa.gov/eesc/environmental/ > Regulatory Compliance > Documents > Water Quality Implementing Agreement	431, 510, 520
Construction of Projects in State Waters	MOA between Washington State Department of Fish and Wildlife and Washington State Department of Transportation concerning construction of Projects in State Waters, June 2002.		431, 432, 436, 520
COE Permit Process	Working Agreement Between the Seattle District, Corps of Engineers, the Washington Division, Federal Highway Administration, and the Washington State Department of Transportation. July 26, 1993.	**Exhibit 431-2**	431, 437
Alternative Mitigation Policy – Aquatic Permits	Interagency Agreement - State of Washington Alternative Mitigation Policy Guidance for Aquatic Permitting Requirements from the Departments of Ecology and Fish and Wildlife. February, 10, 2000.	http://www.wsdot.wa.gov/eesc/environmental/ > Regulatory Compliance > Documents > State of Washington Alternative Mitigation Policy	431, 437
Hydraulic Code Compliance	MOU Between Washington State Departments of Fisheries, Wildlife, and Transportation, Concerning Compliance With the Hydraulic Code (RCW 75.20.100 and Chapter 220-110 WAC) (August 1990 – revision under review January 22, 2001).	**Exhibit 431-3** – to be added when revision is approved	431, 436, 520

Topic	Formal Title	Location	Manual Section
Sole Source Aquifer	MOU Between the FHWA Region 10, Portland, Oregon, and the USEPA Region 10, Seattle Washington, and WSDOT, Olympia Washington; Sole Source Aquifer, State of Washington, June 1988	**Exhibit 433-1**	433
Culvert Installations	MOU Between Washington State Departments of Fisheries, Wildlife, and Transportation. Fish Passage Guidelines: Culvert Installations (August 1990).	**Exhibit 436-2**	436
Wetlands Protection & Management	Implementing Agreement – between the Washington State Department of Transportation and the Washington State Department of Ecology Concerning Wetlands Protection and Management. July 1, 1993.	**Exhibit 437-7**	437, 510
Wetland Compensation Bank Program	MOA between WSDOT, USEPA, USACOE, USFWS, NMFS, FHWA, Ecology, and WDFW on the Wetland Compensation Bank Program, September 15, 1994, amended October 1998	http://www.wsdot.wa.gov/eesc/environmental/ > Wetland Banking > WSDOT Memorandum of Agreement **Exhibit 437-8** – Appendix A and October 1998 Amendment.	437, 510
Noise Analysis and Abatement	Interagency Agreement on FTA-FHWA Sound Transit Noise Analysis and Abatement Policy and Procedures. December 18, 2000.	**Exhibit 446-5**	446
Hazardous Waste Management	Implementing Agreement between the Department of Ecology and the Department of Transportation Concerning Hazardous Waste Management. April 1993.	http://www.wsdot.wa.gov/eesc/environmental/ > Hazardous Materials > Guidance Documents > MOU … (May 2000 Draft)	447
U.S. Dept of Transportation Act - Section 4(f) – Wild & Scenic Rivers	Memoranda Between Office of Environmental Policy and FWHA on applicability of Section 4(f) to Wild & Scenic River designations. June 6, 1978 and May 26, 1981.	http://www.fhwa.dot.gov/environment/ > Environmental Guidebook > Wild & Scenic Rivers	453
Mitigation on Wild & Scenic Rivers	CEQ Memorandum incorporating August 1979 Presidential Directive on avoiding impacts to rivers designated wild, scenic or recreational. October 3, 1980	http://www.fhwa.dot.gov/environment/ > Environmental Guidebook > Wild & Scenic Rivers	453
Agricultural & Forest Land Preservation	MOU between WSDOT and Washington State Conservation Commission to enhance cooperation in preserving agricultural and forest lands, etc. September 1982.	**Exhibit 454-1**	454
Highways over National Forest Lands	MOU between WSDOT, USDA and U.S. Forest Service re coordination of transportation activities over National Forest Lands. June 17, 1991	http://www.fs.fed.us/im/directives/field/r6pnw/fsm/1500/1561_9b.doc	455, 470, 520

Topic	Formal Title	Location	Manual Section
Historic Properties – Nationwide	National Programmatic Agreement among the Federal Highway Administration (FHWA), National Conference of State Historic Preservation Officers (SHPOs), and the Advisory Council on Historic Preservation (ACHP) for Implementation of Transportation Enhancement Activities. June 11, 1997.	**Exhibit 456-2**	456
Historic Properties – State	Draft Programmatic Agreement between the Federal Highway Administration, the Washington State Department of Transportation, the Advisory Council on Historic Preservation, and the Washington State Historic Preservation Officer Regarding Implementation of the Federal Aid Highway Program in Washington State. July 2000.	**Exhibit 456-3**	456

Note: Abbreviations are listed at the end of this table; for water quality permits, see details in **Exhibit 431-9;**

Permit or Approval	Responsible Agency	Conditions Requiring	Manual Section	Statutory Authority
National Environmental Policy Act (NEPA)	FHWA and WSDOT	Activities that require federal permits, approvals, or funding trigger NEPA procedural and documentation requirements.	320, 410-480	42 USC 4321 23CFR 771 40 CFR 1500-1508
State Environmental Policy Act (SEPA)	Ecology	Any activity not categorically exempt triggers SEPA procedural and documentation requirements.	410-480	RCW 43.21C WAC 197-11, WAC 468-12
U.S. Dept of Transportation Act - Section 4(f)	FHWA and Affected Agency (WSDOT)	Use of park and recreation lands, wildlife and waterfowl refuges, and historic sites of national, state, or local significance triggers Section 4(f) procedural and documentation requirements.	411, 455	49 USC 1651 Sec. 4 (f) 23 CFR 138
Land and Water Conservations Act - Section 6(f)	FHWA and Affected Agency (WSDOT)	Use of lands purchased with LWCA funds triggers Section 6(f) procedural and documentation requirements.	411, 455	LWCA
Historic Preservations Act - Section 106	OAHP/SHPO	Potential impacts to historic or archaeological properties trigger Section 106 procedural and documentation requirements.	411, 456	16 USC 470 Sec.106 36 CFR 800 RCW 43.51.750
Critical/Sensitive Areas Ordinances	Counties and Cities	Local approval or permits may be required for projects impacting areas defined as “critical” by counties and cities under the GMA, including wetlands, aquifer recharge areas, wellhead protection areas, frequently flooded areas, geographically hazardous areas, fish and wildlife habitat, and conservation areas.	420, 431, 436, 437, 451, 520	RCW 90.58 RCW 36.70A
Clearing, Grading and Building Permits.	Counties / Cities	Clearing and grading of land for development with impacts outside WSDOT right of way; (includes connecting streets, frontage roads, etc.). Construction of any building for human habitation.	420, 451, 454, 460, 520	RCW 36.21.080
Operating Permit for Surface Mining	WDNR, USFS, BLM	Surface mining (pit and quarry sites); more than 3 acres disturbed at one time or pit walls more than 30 feet high and steeper than 1:1; pit site reclamation (WDNR). Borrow pits on federal land may require a permit or easement from the land-management agency.	420, 510	RCW 78.44
Temporary Air Pollution	Ecology, local Clean Air Agencies, fire protection agencies	Pollutants above allowed levels for temporary periods; includes building demolition and brush burning. Regulations may limit the type, size or timing of brush burning.	425	RCW 70.94
New Source Construction	Ecology, Local Clean Air Agencies	Air pollution from a point source (e.g., asphalt plants, rock crushers).	425	RCW 70.94.152

Permit or Approval	Responsible Agency	Conditions Requiring	Manual Section	Statutory Authority
Joint Aquatic Resource Permits Application (JARPA) [Note: JARPA is an application form, not a permit.]	COE, Coast Guard, EPA, WDFW, Ecology, DNR, and local governments.	Joint application for COE Section 10 and Section 404 permits, Coast Guard bridge permits, WDFW Hydraulic Project Approvals, Shoreline Management Permits, approvals for water quality exceedance, Section 401 water quality certifications, and DNR Aquatic Resource Use Authorization.	431, 432, 436, 437, 452, 453	See permits, certificates and approvals included in JARPA.
Rivers and Harbors Act - Section 9 (Bridge)	US Coast Guard	Bridges and causeways in navigable waters, including all tidally influenced streams used by boats over 21 feet in length.	431, 432, 452, 453	33 USC Sec. 9 33 USC 11 33 CFR 114 & 115 FHWA Sec 123(b)
Rivers and Harbors Act - Section 10	COE	Obstruction, alteration, or improvement of any navigable water (e.g., rechannel-ing, piers, wharves, dolphins, bulkheads, buoys).	431, 432, 452	Rivers & Harbors Act, Section 10 33 CFR 403
Hydraulic Project Approval	WDFW	Projects that will use, divert, obstruct, or change the natural flow or bed of any state waters (e.g., culvert work, realignment, bridge replacement).	431, 432, 436, 447, 452, 453, 510, 520	RCW 77.55.100 WAC 220-110
Clean Water Act - Section 401 Water Quality Certification	Ecology USEPA (federal and tribal lands)	Activity requiring a federal permit/license for discharge into navigable waters.	431, 432, 437, 452, 453	CWA Sec 401 RCW 90.48.260 WAC 173-225
Clean Water Act - Section 402 NPDES Permit	Ecology	Discharge of pollutants into state waters, including wetlands and groundwater. Municipal Stormwater Discharge, Industrial Stormwater, Construction Storm-water, or Sand/Gravel permits may be required, depending on the activity.	431, 433	CWA Sec 402 WAC 173-226
Clean Water Act - Section 404 Individual and Nationwide Permits	COE, USEPA, US Coast Guard	Discharging, dredging, or placing fill material within waters of the US or adjacent wetlands.	431, 432, 437, 452, 510	CWA Sec 404 33 USC 1344 33 CFR 330.5 & 330.6
State Waste Discharge (SWD) Permit	Ecology	Discharge or disposal of municipal and industrial wastewater into groundwater, or discharge industrial wastewater to an NPDES-permitted wastewater treatment plant.	433	RCW 90.48, WAC 173-226
Easement over Navigable Water	WDNR Harbor line commission	Rights of way or fills on, over, or across beds of navigable waters. If waters are part of harbor area, easements may also needed from harbor line commission.	431, 432, 451	RCW 47.12.026
Sewage Facilities	DOH Ecology	Construction/modification of domestic/industrial wastewater facilities (e.g., sewer relocation, rest area construction). Systems with design flow capacity of 3500-14500 gallons per day are regulated by DOH. Industrial systems (i.e., rest areas) with design flow capacity >14500 gallons per day are regulated by Ecology.	431, 432, 433	RCW 90.48.110 WAC 246-272 WAC 173-240
Short-Term Water Quality Modification	Ecology	Activity resulting in temporary minor increase in turbidity.	431, 432, 447, 452, 453	WAC 173-201A-110(3)
NPDES – herbicide use.	Ecology	Application of herbicides to control noxious or non-noxious weeds.	431, 432, 437, 510	RCW 90.48, WAC 173-201A-110

Permit or Approval	Responsible Agency	Conditions Requiring	Manual Section	Statutory Authority
Coastal Zone Management Certificate	Ecology	Applicants for federal permits/licenses are required to certify that the activity will comply with the state's Coastal Zone Management program (Shoreline Management Act).	431, 432, 437, 452, 520	CZMA Sec 6217 16 USC 1451 et seq. 15 CFR 923-930 RCW 90.58
Shoreline Permits	Ecology Cities and Counties	Development or construction valued at $2,500 or more interfering with shorelines or water use; lakes & reservoirs over 20 acres, streams over 20 cfs, lands 200 ft inland from OHWM, marshes, swamps, bogs & deltas.	431, 432, 437, 447, 452, 453, 520	RCW 90.58 WAC 173-14 through 173-28
Floodplain Development Permit	Ecology Counties and Cities	Any structure or activity that may adversely affect the flood regime of streams within the flood zone.	432	RCW 86.16 WAC 173-158
Water Rights Permit	Ecology (Water Resources Program) City or county	Appropriation of a specific amount of public ground water or surface water for a specific beneficial purpose.	433	RCW 18.104, 43.27A, 90.03, 90.14, 90.16, 90.44 and 90.54 WAC 173-100, 173-136, 173-150, 173-154, 173-166, 173-500 and 173-590,– and 508-12
Water System Project Approval	DOH City or county health departments	Any project with two or more water service connections for human consumption and domestic use.	433	RCW 43.20A WAC 246-290, 246-291 and 246-293.
Underground Injection Control	Ecology	Injection well that may contaminate drinking water.	433	40 CFR 144 RCW 43-21A.44 WAC 173-218
Threatened and Endangered Species	USFWS/NMFS	Projects affecting critical habitat of species listed under the ESA may be subject to water quality and wetland permits listed in **Section 431.06** and **Section 437.06.**	436, 447, 510, 520	16 USC 1531-1543
Fish Habitat Enhancement Project Application	WDFW	Streamlined process for projects designed to enhance fish habitat. Application is in addition to JARPA.	436	
Aquatic Resource Use Authorization	WDNR	Included in JARPA.	436, 437, 520	RCW 79.90 WAC 332-30
Wetlands Report	COE	Impact to lowlands covered with shallow and sometimes temporary/intermittent waters (e.g., swamps, marshes, bogs, sloughs, potholes).	437	49 USC 1651 EO 11990 (Protection of Wetlands)
Noise Permit	Counties / Cities	Construction and maintenance activities during nighttime hours may require a variance from local noise ordinances. Daytime noise from construction is usually exempt.	446	WAC 173-60
Hazardous Waste Tracking Form	Ecology	A WAD tracking number from Ecology is required for transport, storage, transport, or disposal of dangerous waste.	447	WAC 173-303
Monument Removal	WDNR	Removal or destruction of a monument.	451	

Permit or Approval	Responsible Agency	Conditions Requiring	Manual Section	Statutory Authority
Wild and Scenic Rivers	FHWA and Affected Agency	No specific permits are required for projects in wild and/or scenic river corridors, but water quality permits listed in **Section 431.06** may apply.	453	16 USC 1271
Farmland conversion	NRCS Counties/cities	NRCS Form AD1006 approval may be required if project entails conversion of farmlands. Local grading permits may also be required.	454	7 USC 4201 7 CFR 650
Forest Practices Application	WDNR	Road construction, pits, pesticide use, and other specified activities on public or private forest land (i.e., land capable of supporting merchantable timber).	455	RCW 76.09 WAC 222
Archeological Resources Protection Permit	Tribes Federal landowners, e.g. BLM, COE, NPS	Excavation or removal of archeological resources from tribal or federal land.	456	43 CFR 7.6 – 7.11
Airport/Highway Clearance	FAA (Federal)	Airspace intrusion by a highway facility (i.e. proposed construction in the vicinity of public use or military airports) may require FAA notification.	460	FHPM 6-1-1-2 FAA Regs. p.77

Abbeviations:

BLM	Bureau of Land Management (Federal)
CFR	Code of Federal Regulations
COE	US Army Corps of Engineers
CWA	Clean Water Act
CZMA	Coastal Zone Management Act (Federal)
DOH	Washington Department of Health
DSHS	Washington Dept. of Social and Health Services
Ecology	Washington Department of Ecology
EO	Executive Order
ESA	Endangered Species Act (Federal)
FAA	Federal Aviation Authority
FACA	Federal Action Community Act
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FWCA	Fish and Wildlife Coordination Act (Federal)
WPCA	Water Pollution Control Act (Federal)
GMA	Growth Management Act (State)
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resource Permits Application
LWCA	Land and Water Conservation Act (Federal)
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service (Dept. of Commerce)
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service (US Dept. of Agriculture)
OAHP	Office of Archaeology and Historic Preservation (State)
RCW	Revised Code of Washington
ROW	Right of Way
SDWA	Safe Drinking Water Act (Federal)
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Officer
SMA	Shoreline Management Act (State)
USC	United States Code
USEPA	U.S. Environmental Protection Agency
USFW	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service (Dept. of Interior)
WAC	Washington Administration Code
WAD	Dangerous Waste Identification Number
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources

Agency Contacts

Environmental Affairs Office

ESO – 360-705-7483

Regulatory Compliance Managers – 360-705-7448 / 7126

Planning/Programming Manager – 360-705 7476

Watershed Manager – 360-705-7493

Biology Manager – 360-705-7406

Cultural Manager – 360-570-6637

Hazardous Material Manager – 360-570-6656

Water Quality Manager – 360-570-6655

Wetlands Manager – 360-705-7518

Environmental Managers

Regional Offices

Eastern Region – 509-324-6131

North Central Region – 509-667-3055

South Central Region – 509-577-1750

North West Region – 206-440-4548

North West Region – 206-440-4960

Olympic Region – 360-357-2660

South West Region – 360-905-2174

Olympia Service Center and Others

FOSSC, WSDOT Highway Maintenance – 360-705-7812

Rails – 360-705-7902

Washington State Ferries – 206-515-3650

Noise/Air/Acoustics Manager – 206-440-4541

Design Services Managers

Regional Offices

Eastern Region – 509-324-6100

North Central Region – 509-667-3041

South Central Region – 509-577-1703

North West Region – 206-440-4664

Olympic Region – 360-357-2680

South West Region – 360-905-2171

Olympia Service Center

State Design Engineer – 360-705-7231

Roadside and Site Development – 360-705-7242

Hydraulic – 360-705-7259

Planning Managers

Regional Offices

Eastern Region – 509-324-6195

North Central Region – 509-667-2901

South Central Region – 509-454-7618

North West Region – 206-440-4727

Olympic Region – 360-357-2630

South West Region – 360-905-2051

Olympia Service Center

Transportation Planning – 360-705-7958

Highway and Local Program Managers

Regional Offices

Eastern Region – 509-324-6080

Assistant – 509-324-6081

North Central Region – 509-667-3090

Assistant – 509-667-3091

South Central Region – 509-575-2580

Assistant – 509-577-1781

North West Region – 206-440-4734

Assistant – 206-440-4734

Assistant – 206-440-4736

Olympic Region – 360-357-2666

Assistant – 360-357-2712

Assistant – 360-357-2613

South West Region – 360-905-2215

Assistant – 360-905-2216

Assistant – 360-905-2216

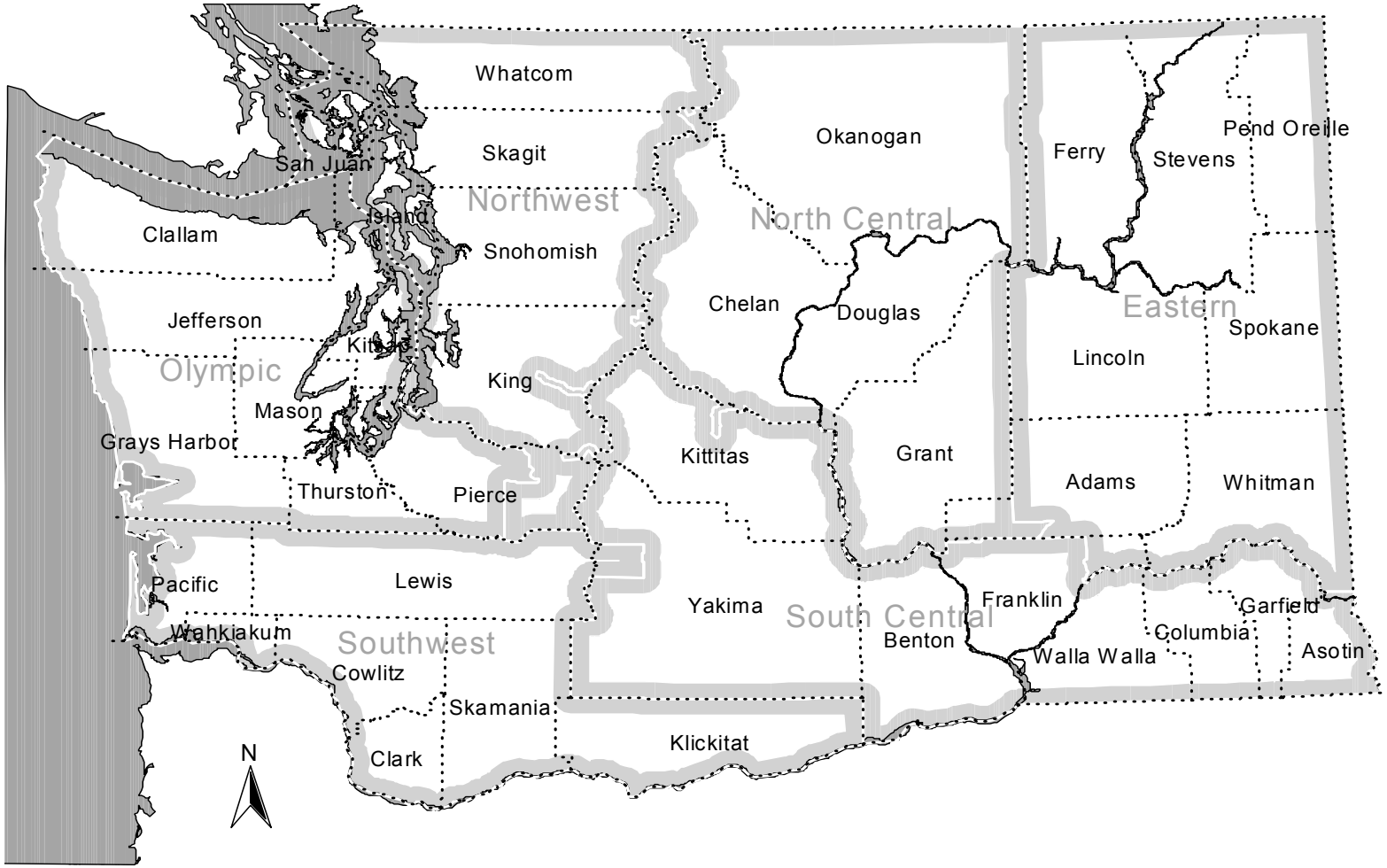
Olympia Service Center

Highway and Local Programs – 360-705-6975

Bicycle/Pedestrian – 360-705-7258

Heritage Corridors – 360-705-7274

WSDOT Regions



PROCESS IMPROVEMENT SUGGESTION FORM

Environmental Procedures Manual, M 31-11

Please submit your process improvement suggestion by mail or e-mail to:

WSDOT Environmental Affairs Office
P.O. Box 47408
Olympia, Washington 98504-7310
Attention: EPM Revision

Use the reverse side of this form, attach a separate sheet of paper, or send via e-mail. Clearly state your suggestion and the reasons why it would be an improvement.

Please provide the following information with your suggestion:

Date Submitted	
Your Name	
Your Organization	
Your Work Address/Mail Stop	
City and Zip Code	
Your Work Phone Number	
Title of the Manual Chapter	
Page number(s)	

We will contact you to be sure we clearly understand your suggestion, and we will keep you informed on how your suggestion will be handled.

Response

Attached is the outcome of our evaluation and an explanation of how we will, or why we will not, implement your suggestion.

Date of Response	
Evaluator's Name	
Evaluator's Telephone Number	
Evaluator's Signature	
Approved by (ESO Manager's Signature)	

Welcome to the Department of Ecology

Ecology is Washington's principal environmental management agency. Our **mission** is to protect, preserve and enhance Washington's environment, and promote the wise management of our air, land and water for the benefit of current and future generations. Our **goals** are to prevent pollution, clean up pollution, and support sustainable communities and natural resources. We are **working with you** for a better Washington.

News

- **Oct. 8: New discharge permit given to Cosmopolis pulp mill**
- **Oct. 8: Marine refueling company fined for illegal oil transfer**
- **Oct. 8: Gas station fined for failing to monitor for leaks**
- **Oct. 6: Ecology Department invites comment on mosquito control**
- **Oct. 6: State asks which beaches should have their water quality checked**
- **Oct. 6: Tidy up gardens and lawns without lighting a fire**

More Ecology News Releases . . . | **Ecology Newsletters**

Calendar

This calendar contains events designed to engage the

public in the **decision-making process**. The **Public Events Calendar** provides more detailed information on the events identified below and others. A Search feature also is provided. We invite your **feedback**.

[*Activities that are educational only or are co-sponsored by Ecology may be found under the "**More Ecology Events**" link on the Public Events Calendar page.*]

Public Hearings, Meetings, Workshops, Open Houses (Next 21 days)

October 9	**Open House:** Omak Buckhorn Mountain Gold Mine Proposal
October 9	**Public Meeting:** Chewelah Colville River Bacteria TMDL
October 14	**Public Hearing:** Friday Harbor Environmental Document for Georgia Strait Crossing Natural Gas Pipeline Project
October 14	**Public Meeting:** Poulsbo BEACH Program Information Meeting
October 15	**Public Hearing:** Bellingham Environmental Document for Georgia Strait Crossing Natural Gas Pipeline Project
October 16	**Public Meeting:** Westport BEACH Program Information Meeting
October 30	**Public Meeting:** Mount Vernon BEACH Program Information Meeting

Open Public Comment Periods

Comment Period Closes:

October 10	Okanogan County: Draft Renewal NPDES Permits to Discharge to State Waters for City of Okanogan POTW and City of Omak POTW

October 10	Grandview: Modification of Draft Renewal NPDES Permit to Discharge to State Waters for City of Grandview POTW
October 10	Oroville: Draft Total Maximum Daily Load Plan to Address Arsenic in the Similkameen River
October 11	Vancouver: Alcoa Vancouver Cleanup East Landfill Agreed Order
October 11	Okanogan County: Draft Reauthorization NPDES Permit to Discharge to State Waters for Wells Hydroelectric Project
October 12	Monroe: Draft Modified Wastewater Permit for the City of Monroe Wastewater Treatment Plant
October 18	Mason County: Application for Coverage under the General NPDES Sand & Gravel Permit by RJ Scuffy
October 19	Yakima: Yakima Valley Spray Consent Decree
October 20	Scope of Supplemental Environmental Impact Statement - Buckhorn Mountain Project
October 20	Hanford Site: Siting of Contact-Handled Transuranic Mixed Waste Facility
October 25	Environmental Document for Georgia Strait Crossing Natural Gas Pipeline Project
October 27	Cashmere: Cascade Helicopter Proposed Consent Decree
October 29	Wenatchee: Proposed Air Operating Permit for Alcoa, Wenatchee Aluminum Smelter
October 31	North Bonneville: Draft NPDES Permit for the North Bonneville Sewage Treatment Plant
November 1	Skykomish: Burlington Northern and Santa Fe Railway Former Maintenance and Fueling Facility -- Skykomish Site

November 8	Toledo: Application for Coverage under the General NPDES Sand & Gravel Permit by Good Incorporated

More Ecology Calendar Information . . .

Thursday, October 9, 2003

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