Project Name

Instructions: All text highlighted in yellow should be replaced with the suggested information and all text / instructions in red should be deleted.

Surface Water Discipline Report

Month Year

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Cover Sheet

Project Name

Insert project location.

City/County, Washington

Surface Water Discipline Report

Prepared By:

Insert company name & address.

Submitted By:

Insert company name & address.

Prepared For:

The Washington State Department of Transportation

Date

Cooperating Agencies:

Insert text here.

Table of Contents

List of Appendices:

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List of Tables:

Acronyms & Definitions

Create a list of acronyms and definitions for frequently used and technical terms found throughout the document.

Terms (alphabetical order)**:** Definitions

Chapter 1: Summary of Conclusions

A brief summary of conclusions relating to the water quality and quantity effects of the proposed project appears at the beginning of the report. This summary should highlight the water quality and quantity issues that need to be presented in a SEPA Environmental Checklist, NEPA EA, and a SEPA or NEPA EIS.

A. The scope of the project and final use of the discipline study should be presented.

B. Findings and impact conclusions relating to water quality and quantity effects of the proposed project.

C. Mitigation recommendations to offset any adverse impacts of the project.

Chapter 2: Purpose and Need for the Action

This section should present the purpose and need for the project. If the purpose and need are thoroughly described in another document, it may be best to reference that document to avoid duplication of effort and ensure content consistency.

A. Purpose and need for the project to include what the project entails and why it's being conducted. Its critical the project description, purpose, and need are consistent with other discipline reports.

B. Relevant background information on the project should be included, along with an identification of the project's proponents.

Chapter 3: Description of Alternatives

This section should include a succinct description of each alternative being evaluated, including the no-action or no-build alternative. 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). WSDOT may develop one report that describes the project alternatives and construction methods rather than repeating the description in each technical or discipline report. Reference such documents when they exist and only include discipline-specific information in the discipline report.

A. The descriptions of each alternative should include the proposed actions to be taken under the alternative, and how each alternative may differently affect water quality and quantity conditions.

B. A summary description of the major water quality and quantity concerns for the project and the general differences between each alternative as they relate to these concerns. The differences between alternatives may be presented in a table for easy comparison, see below. The use of a table will be especially important if there are many alternatives to be compared.

Table 3-1: Summary Description of Concerns For Each Alternative

Alternatives	Water Quality Concerns	Water Quantity Concerns
No-Build Option		
Option 1		
Option 2		

C. Project boundaries should be clearly defined and shown on a map(s) of the area encompassed by all of the alternatives. These graphics are preferred within the body of the text but placing them in an appendix is also acceptable.

Chapter 4: Studies, Coordination, Methods, and Regulations

The purpose of this section is to document the process, resources, and tools used to develop the Surface Water Discipline Reports for use in the water quality and quantity sections of Environmental Checklists, EAs, and EISs in order to 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 technical document entitled "Information Source Listing for WSDOT Surface Water Discipline Reports (found at http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA *)," includes resources commonly used to determine the applicability of WSDOT's Environmental Procedures Manual Exhibit 430-1 checklist items. As the resource listing is not exhaustive, additional sources may also be required.*

Discipline studies are based on the best available data. In rare cases, however, additional baseline data may be required to document current water quality and quantity 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. Consult with WSDOT's Environmental Services Office prior to making any commitments to collect baseline data, as monitoring and quality assurance plans would be required. These efforts should also be coordinated with other disciplines.

A. Summarize baseline documentation. 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.

1. Describe all potentially affected surface water resources in the project area.

2. All reports, data sources acquired, and contacts made during project development 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.

3. Summarize those data sets or reports most pertinent to the project, how they will be used for the analysis, and why they were selected. If it was decided not to use a particular data set or report, reasoning for this decision should also be provided. For example, the analyst could choose to not use water quality or quantity data that is more than 20 years old when defining the existing environment. All data sets used for the analysis should be placed in an appendix to the discipline report. This section must identify the tools or methods used for technical evaluation of water quality and quantity data (e.g., hydrological methods and pollutant loading calculations). Since the methods described in the WSDOT technical guidance document entitled "Quantitative Procedures for Surface Water Impact Assessments

(found at http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA),"

have already been approved for use in discipline reports, writers may simply identify the method selected, provide the rationale for selecting that method, and reference the technical guidance document. The analyst is not constrained to using the methods in this technical guidance if more recent, site specific data is available. However, if a method is selected for use that has not already been described in this technical guidance, a detailed description of the method and rationale for its use must be provided.

B. Identify the rules and regulations that are relevant to the project and how they relate to current and future surface water conditions. Consider the following to determine if they apply and if so, provide reasoning for their applicability:

1. WSDOT Plans, Programs, and Policies. Applicable rules, regulations, plans and policies should be summarized in sufficient detail to ensure the project will avoid and minimize impacts.
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 (only relevant if runoff will be discharging to a sewer system).
7. Total Maximum Daily Loads (TMDLs). Answer the question "is there a TMDL plan in place, under development, or in the implementation phase? Who are identified as the main contributing polluters if there is a TMDL plan? How would this relate to the WSDOT project?
8. Limiting factors analysis or habitat conservation plans.
9. Local shoreline plans and ordinances.
10. Shellfish closure response plans.

Chapter 5: Project Area Then and Now

The primary function of this section is to describe the framework against which the effects of the project 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, and stream hydrology and morphology changes) and how they influence the natural framework.

The level of detail 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 its the first phase in planning for a regional road network then most of the listed 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 Surface Water Discipline Report will be linked to the Groundwater, Floodplains, Wetlands, and Fisheries Discipline Reports. The Surface Water Discipline Report should be written to minimize redundancy while also insuring there are no conflicts with the other reports. This requires coordination with authors of the other discipline reports and inclusion of references to those reports.

A. Description of natural framework to surface water.

1. Description of general topography and soils. Geologic setting, slopes, hazardous areas, soil types, soil drainage, water holding characteristics, and erodibility. Provide a brief discussion of their potential to cause water quality or quantity problems and refer to the appropriate discipline reports, if available.

2. Description of climate that focuses on local rainfall and temperature conditions as well as, how these conditions relate to water quality and quantity in the surrounding environment. It should also be discussed how these conditions will effect the project in terms of construction timing and erosion control issues.

B. Description of surface water resources.

1. Identify basin, sub-basin, and project boundaries (display on a map).

2. Identify existing drainage pathways and stormwater outfall locations (display on a map). Also, quantify existing impervious surfaces contributing to outfall locations.

3. Identify WRIA(s).

4. Stream locations and typing (may be easier to show on a map if the description becomes complex).

5. Water quality classifications (Department of Ecology specified) of waterbodies and how they are currently used by the public.

6. Summarize available water quality or quantity sampling data and provide an assessment of it's adequacy in order to quantify existing conditions for waterbodies potentially affected by the project.

7. CWA 303(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?

8. Source identification for existing and historical water quality problems (point and non point source pollutants).

9. Description of existing sediment quality and contamination (reference hazardous materials discipline report).

10. Identification of water quality and quantity factors that are limiting factors to local fisheries.

11. Stream channel features (width, depth, riparian vegetation, bank condition, flood storage capacity, off channel habitat, existing bridges, piers, etc.).

12. Surface water hydrologic features (discharge rates, minimum in stream flows, or other limits).

13. Lakes (water quality characterization, sediment toxicity, limiting factors, existing management strategies, restoration efforts, etc.).

14. Marine waters (tidal and current patterns, flushing rates for estuarine systems, etc.) if needed to quantify impacts.

15. Aquatic ESA issues (brief summary, discuss any applicable recovery plans or other related discipline reports).

16. Reference the floodplain, wetland, groundwater, and fisheries discipline reports and summarize key related issues.

C. Other issues and constraints.

1. Describe public and private water supply sources including wellhead protection areas and identified aquifer recharge areas in relation to project boundaries (may be easier to show on a map if the description becomes complex).

2. Describe project area wastewater removal systems.

3. Briefly describe spill data (historical records of major spills, locations, extent, etc.) and reference the hazardous materials discipline report.

4. Briefly describe groundwater contamination and remediation actions, also referencing the hazardous materials discipline report.

Chapter 6: Environmental Consequences

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 surrounding environments, should be addressed on a watershed scale. A summary statement should be included for all significant impacts. The following are suggested criteria to help determine whether an action will lead to significant surface water effects:

1. *Leads to a violation of a water quality standard.*
2. *Results in a substantial reduction in the suitability or availability of water for state-designated use.*
3. *Leads to or exacerbates conditions that limit fish populations or habitat, as determined by the project biologist or through analysis in a Biological Assessment, Fisheries Discipline Report, or Biology/Wetlands Discipline Report.*
4. *Threatens or damages a unique hydrologic characteristic of the area.*

This technical portion of the discipline report must provide evidence that all potential impacts have been considered, present information to support findings of significant impacts, and demonstrate 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.

General Guidance to Avoid Common Problems

It is inappropriate for discipline reports, which are informational documents, to include statements that could later be interpreted as design, research, or maintenance commitments. The policies governing those activities are set on a programmatic level in accordance with appropriate permits and resources. As such, statements of the following nature that have been included in past Surface Water Discipline Reports must be avoided:

- ***Suggestions to evaluate the effectiveness of approved BMPs as mitigation measures.*** *Approved BMPs in the Highway Runoff Manual constitute All Known and Reasonable Treatment (AKART) and are presumed by the Washington State Department of Ecology to effectively treat runoff to meet water quality standards.*

- ***Suggestions to monitor the receiving waters as a mitigation measure.*** *The effectiveness of approved BMPs along with their maintenance needs are evaluated on a programmatic, statewide basis. Caution must be used when considering the demonstrative approach. Procedural guidelines found in Chapter 5-3.5.3 and 5-3.6 of the Highway Runoff Manual must be followed.*

- ***Stating the exact type, number, size or location of BMPs that will be employed prior to design certainty.*** *The appropriate combination of BMPs can only be selected after adequate design information has been developed. Statements concerning stormwater facilities should primarily reference the programs or guidance documents that establish the criteria for designing and maintaining stormwater facilities and not attempt to describe facilities in detail. This approach helps maintain consistency and accurate expectations, especially when unpredictable changes in treatment facility design or policies related to stormwater are likely.*

- ***Suggestions to use alternative, experimental stormwater treatment approaches.*** *All WSDOT projects are required to employ an appropriate combination of approved Best Management Practices (BMPs) in accordance with WSDOT's Highway Runoff Manual (M31-16) as part of their design. This constitutes the presumptive approach to stormwater design and is the approach that is generally encouraged for use. There is the opportunity to use alternative, experimental stormwater treatment as mitigation. However, this constitutes the demonstrative approach to stormwater design and isn't the favored method. Caution must be used when considering the demonstrative approach. Procedural guidelines found in Chapter 5-3.5.3 of the Highway Runoff Manual must be followed.*

- ***Setting of specific maintenance frequencies or methods.*** *The BMP maintenance activities are established on a programmatic statewide basis and reflect Legislative funding allocations.*

Comparison of Alternatives

Typically the evaluation of consequences 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 the direct relationship between the number of acres that are cleared and graded and the potential for impact to surface water. 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 effects 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. This minimizes redundancy and clarifies the comparison between alternatives. Typically short term consequences (those that occur or have the potential to occur during project construction) are addressed separately from long-term effects, for each of the project alternatives.

It is critical to clearly identify all significant project consequences. It isn't appropriate to provide a paragraph of text describing the potential for effect and how it will be avoided without providing the reader with a final statement about its significance. A table, graph or list that contains all the potential consequences and their final evaluation result (i.e., significant, insignificant, discountable, minimal), or a one sentence summary statement are typical means of insuring the final effects have been identified.

A. Clearly identify all significant project consequences. Evaluate construction impacts for each alternative, considering:

1. Erosion and sedimentation potential and predicted impacts to water quality based on the timing and duration of construction (e.g., turbidity, suspended solids, and nutrients). Example: If work will be occurring through the winter, consider how

the project will impact erosion and erosion related pollutants based on the timing and phasing of construction activities.

2. Describe all potential activities that could have an effect on surface water resources such as in-water, over-water, or near-water work.
3. Work near identified sensitive areas (e.g. steep slopes, shoreline, erosion hazard zone, etc.).
4. Availability of short term water rights permits for construction activities in areas subject to low flow conditions and restrictions, if applicable.
5. Seasonal impacts on water quality (low dissolved oxygen levels, high temperatures, etc.) that are directly related to construction of the roadway.
6. Clearing and grading impacts.
7. Potential impacts associated with project staging areas.
8. Refer to groundwater discipline report for potential impacts to groundwater quality and sole source aquifers from contaminant sources.
9. Refer to hazardous materials discipline report for information on sediment quality and contaminant sources.
10. Spill potential and materials that may be hazardous.

B. Evaluate operational impacts for each alternative, considering:

1. Impacts of typical highway runoff pollutants, projected loadings (use WSDOT technical guidance document entitled "Quantitative Procedures for Surface Water Impact Assessments" found at http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA), impacts to receiving water bodies, etc. A summary table of projected pollutant loadings, that compares estimates for each alternative to the no build option, belongs in this section as well as a discussion of the results. All other

spreadsheets created that document the methodology used and stages of calculation belong in an appendix to this report. Note, over the next year WSDOT will be reevaluating existing impact assessment methods with the intent of incorporating a watershed based approach.

Table 6-1: Annual Pollutant Loading Comparison of Alternatives

Pollutant	No-Build Option	Option 1	Option 2
Total Suspended Solids (Lbs/year)			
(% Increase/Decrease)			
Total Copper (Lbs/year)			
(% Increase/Decrease)			
Dissolved Copper (Lbs/year)			
(% Increase/Decrease)			
Total Zinc (Lbs/year)			
(% Increase/Decrease)			
Dissolved Zinc (Lbs/year)			
(% Increase/Decrease)			

2. Effects of impervious surface additions and alterations to surface hydrology. There will most likely be effects, however, there is not an agreed upon methodology to quantify these effects. Make general statements about soil compaction causing more surface flow vs. subsurface flow and discuss flow control BMPs that are routinely employed to attenuate these peak flows. *Highway Runoff Manual* design standards are driven by the water quality and quantity regulations that are in place. By following the presumptive approach and designing stormwater treatment systems to standards set forth in the *Highway Runoff Manual*, most stormwater impacts from WSDOT projects should be insignificant.

3. Potential spillage pathways identified from WSDOT stormwater outfall inventory data (i.e., locations where WSDOT drainage is tightlined to waterbodies and locations where off site drainage may be contributing to WSDOT drainage systems). If applicable, reference the hazardous materials discipline report.

Indirect and Cumulative Effects

Indirect and Cumulative Effects 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.*

A. Evaluate indirect impacts for each alternative, considering:

1. Nonpoint source problems.
2. Water quantity concerns.
3. Hydrologic impacts due to long term stream flow impairment and changes in stormwater quantities.
4. Changes in land use patterns along the transportation corridor.

Cumulative Effects *are direct and indirect effects that result from incremental impacts of the proposed project when added to the other past, present, and foreseeable future actions. These effects can result from individually minor but collectively significant actions taking place over a period of time. 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. This will be a qualitative assessment since, there is no agreed upon*

methodology to quantify cumulative effects and future potential impacts will be dependant on local, state, and federal land use regulations and environmental standards.

Two important factors to consider in determining the potential for Cumulative Effects 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 Effects because of the absence of other development activity. Conversely, in areas of rapid development, a highway improvement can add measurably to aggregate change leading to long-term effects. Capacity improvements, additional interchanges, and construction in a new location generally have greater potential for Cumulative Effects than upgrades of existing facilities. For example, even if an increase in stormwater runoff was considered to be undetectable or insignificant, the project would still contribute to the cumulative effects associated with increased impervious surface in the basin.

B. Evaluate cumulative impacts for each alternative, considering:

1. Direct impacts on a watershed scale (e.g. pollutant loading, impervious surface increases and stormwater runoff, permanent stream crossings, loss of properly functioning riparian zone).
2. Indirect impacts on a watershed scale, especially considering the impacts of future development (e.g. changes in stream flow pattern and morphology).

Conservation and Mitigation

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, not mitigation measures. In order to make this distinction clear, it can be an advantage to begin the mitigation discussion with a summary of "conservation measures" included in the project design to avoid and minimize project effects. This could easily segue into a simple summary or bulleted list of the effects that remain despite the conservation measures.

Mitigation measures must be identified for all adverse effects (both significant and non-significant). The analyst should use the following "mitigation sequence" recommended by FHWA when considering mitigation options. The FHWA mitigation sequence is:

1. *Avoid the impact altogether (Conservation).*
2. *Minimize impacts by limiting the scale of the action (Conservation).*
3. *Rectify the impact by repairing, rehabilitating, or restoring the affected environment (Mitigation).*
4. *Reducing or eliminating the impact over time by preservation and maintenance operations (Mitigation-only if proposed measures exceed WSDOT programmatic activity requirements otherwise, would be considered Conservation measures that are built into WSDOT program policy).*
5. *Compensating for the impact by replacing or providing substitute resources or environments (Mitigation).*

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 effects can be fully mitigated. If no mitigation options have been identified for a specific effect, 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 the discipline report to ensure that project effects are fairly assessed.

A. Conservation Measures: Required activities or standard practices that are routinely employed on WSDOT projects to avoid or minimize impacts on water quality and quantity. These activities are often considered mitigation measures but should be discussed separately.

1. Provide a brief description with general statements about the most current version of WSDOT's *Highway Runoff Manual* and project specific requirements such as

temporary erosion and sediment control, spill prevention measures, groundwater protection, and stormwater treatment. A general discussion about maintenance practices should primarily reference WSDOT's Regional Road Maintenance Endangered Species Act program guidelines & Section 4-D rules.

The following is suggested content for discussing Conservation Measures that are routinely employed on WSDOT projects. Note: Each WSDOT project will need to customize this information so that it will accurately represent expected project conditions.

"Stormwater runoff will be managed in accordance with the Washington State Department of Transportation's *Highway Runoff Manual* (HRM). The HRM reflects the best available science in stormwater management and ensures that WSDOT projects adequately protect the functions and values of critical environmental areas. The HRM requires projects to provide permanent stormwater treatment when new impervious surfaces are added.

Permanent negative effects of the build alternative(s) will be largely minimized through the inclusion of stormwater treatment and flow control facilities. Overall, these facilities will address increased peak flow concerns and maintain or reduce current pollutant loading levels to waterbodies in the project area. Additionally, the improved stormwater treatment associated with this project will decrease the possibility of groundwater contamination and may actually improve groundwater quality in some cases.

It should also be noted that any discharge of stormwater during construction will require a National Pollutant Discharge Elimination System (NPDES) permit to be obtained from Ecology. Temporary Erosion and Sediment Control (TESC) as well as Spill Prevention Control & Countermeasures (SPCC) BMPs will be implemented and maintained in accordance with the NPDES Construction Stormwater permit and in the HRM (2008). Best Management Practices (BMPs) for construction will be employed to avoid and minimize impacts to water quality from grading and construction work that exposes erodible soils and increases storm runoff rates as a result of soil exposure and compaction. To minimize the risks of fuel and hydraulic leaks or spills from construction machinery, an SPCC plan will be developed.

WSDOT's *Highway Runoff Manual* also provides stormwater runoff treatment and flow control BMP design criteria. Additional maintenance standards for stormwater BMPs can be found in WSDOT's *Regional Road Maintenance/Endangered Species Act Program Guidelines* (found at http://www.wsdot.wa.gov/maintenance/roadside/esa.htm). These statewide maintenance criteria and guidelines are designated to ensure that all BMPs function at design performance levels and that the maintenance activities themselves are protective of receiving water quality and its beneficial uses."

B. Mitigation Measures: Summarize the activities that will reduce impacts that remain despite required conservation measures. Consider measures to reduce impacts and restore or replace environmental resources. Mitigation measures should be evaluated for their ability to eliminate or reduce site specific problems and cumulative impacts related to overall watershed development.

1. Identify mitigation for all adverse direct, indirect, and cumulative impacts for each alternative. Mitigation strategies may include: stormwater treatment retrofit above and beyond what is required in the *HRM*, off-site mitigation or restoration options (mitigation banking or stand alone restoration projects), use of special/newly researched BMPs (Chapter 5-3.5 of the *Highway Runoff Manual* provides guidance that must be followed when using this approach), off-site supplemental treatment BMPs, assistance with watershed priorities (set through watershed planning), dovetailing stormwater treatment options with WSDOT HQ NPDES monitoring research needs, and potential joint projects.

2. Summarize project elements to reduce impacts or the potential for impacts from construction and operation activities which, may include the following:

- Measures to protect water resources above and beyond what is required by the *HRM*.
- Protection measures for sewer lines above and beyond what is already required by the *HRM*.

- Potential stormwater BMP retrofit opportunities above and beyond what is required by the *HRM*.

3. Identify a means of committing to the proposed mitigation measures and the realistic probability of their implementation.

Chapter 7: References

Reports, data sources acquired, and contacts that were directly utilized for the analysis should be cited within the report and included in the references section. The following are references that should always be cited in the preparation of WSDOT Surface Water Discipline Reports:

Washington State Department of Transportation (WSDOT). 2008. *Highway Runoff Manual.* M 31-16. Prepared by the Washington State Department of Transportation Design Office. June 2008. Can be accessed online at:
http://www.wsdot.wa.gov/Environment/WaterQuality/Runoff/HighwayRunoffManual.htm

Washington State Department of Transportation (WSDOT). 2009. *Environmental Procedures Manual.* M 31-11. Prepared by the Washington State Department of Transportation Environmental Services Office. June 2009. Can be accessed online at:
http://www.wsdot.wa.gov/Publications/Manuals/M31-11.htm

Washington State Department of Transportation (WSDOT). 2009. *Quantitative Procedures for Surface Water Impact Assessment.* Prepared by the Washington State Department of Transportation Environmental Services Office. April 2009. Can be accessed online at:
http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA

Appendix A

This appendix should contain all reports, data sources acquired and contacts made during project development. Only the data sources directly utilized should be cited in the report and included in the references section. See the technical document entitled "Information Source Listing for WSDOT Surface Water Discipline Reports," located at:

http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA .

Appendix B

This appendix should contain any data sets that were used for the baseline analysis summary.

Appendix C

This appendix should contain any pollutant loading spreadsheets that were used to create the pollutant loading summary table for the Comparison of Alternatives. See the technical document entitled "Quantitative Procedures for Surface Water Impact Assessments," located at

http://www.wsdot.wa.gov/Environment/WaterQuality/default.htm#NEPA_SEPA .