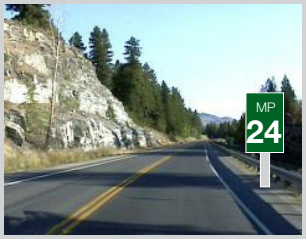
Washington State
Department of Transportation

Measures, Markers and Mileposts

The Gray Notebook for the quarter ending
December 31, 2006

WSDOT's quarterly report to the Governor and the
Washington State Transportation Commission
on transportation programs and department management

Douglas B. MacDonald
Secretary of Transportation



What Gets Measured, Gets Managed

This periodic report is prepared by WSDOT staff to track a variety of performance and accountability measures for review by the Transportation Commission and others. The content and format of this report is expected to develop over time. Information is reported on a preliminary basis as appropriate and available for internal management use and is subject to correction and clarification. The *Gray Notebook* is published quarterly in February, May, August, and November. For an online version of this or a previous edition of the *Gray Notebook*, visit www.wsdot.wa.gov/accountability.

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Measures, Markers and Mileposts

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Navigating the *Gray Notebook*

How is the *Gray Notebook* Organized?

Measures, Markers and Mileposts, also called the *Gray Notebook*, provides in-depth reviews of agency and transportation system performance. The report is organized into two main sections. The *Beige Pages* report on the delivery of the projects funded in the 2003 Transportation Funding Package, 2005 Transportation Funding Package, and Pre-Existing Funds. The *White Pages* describe key agency functions and provide regularly updated system and program performance information. The *Gray Notebook* is published quarterly in February, May, August and November. This edition and all past editions are available online at www.wsdot.wa.gov/accountability/default.htm

A separate detailed navigation folio is available at www.wsdot.wa.gov/publications/folio/GNBFolio.pdf

Beige Pages

The *Beige Pages* is WSDOT's project delivery performance report on the Nickel, Transportation Partnership Account, and Pre-Exisiting Funds project programs. It contains detailed narrative project summaries and financial information supporting WSDOT's "no surprises" reporting focus. See page 1 for details.

White Pages

The *White Pages* contain three types of transportation system and agency program performance updates:

Annual Performance Topics

System performance updates are rotated over four quarters based on data availability and relevant data cycles. Annual updates provide in-depth analysis of topics and associated issues. Examples include Pavement Condition, Congestion, and Bridge Condition.

Quarterly Performance Topics

Quarterly topics are featured in each edition since data is generally available more frequently. Quarterly topics include Worker Safety, Incident Response, Washington State Ferries, and Amtrak *Cascades*.

Special Topics

Selected Special Features and Program Highlights are provided in the back of each edition and focus on noteworthy items, special events, and innovations.

Tracking *Business Directions'* Results

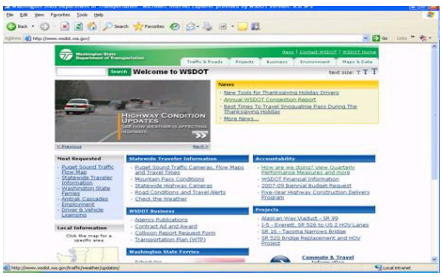
WSDOT's business plan, *Business Directions,* outlines the agency's strategic initiatives and associated activities. It reflects WSDOT's program and project delivery responsibilities with the goal of demonstrating the best possible return for taxpayers' dollars. The *Gray Notebook* complements the plan and tracks progress of the six key initiatives. For a copy of *Business Directions*, please visit: http://www.wsdot.wa.gov/accountability/publications/StrategicPlanWEB.pdf

Gray Notebook Lite

WSDOT publishes a quarterly excerpt of key performance topics and project delivery summaries from the *Gray Notebook*, called *Gray Notebook Lite*. *Lite* allows for a quick review and provides a short synopsis of selected topics. It is published as a four page folio with a two page *Beige Page* summary insert and can be accessed at www.wsdot.wa.gov/accountability/graynotebook/Lite.pdf

How to Find Performance Information

The electronic subject index gives readers access to current and archived performance information. The comprehensive index is easy to use and instantly links to every performance measure published to date. Measures are organized alphabetically within program areas. A click on the subject topic and edition number provides a direct link to that page. A copy of the subject index is also provided in the back of each edition. To access the index electronically, visit www.wsdot.wa.gov/accountability/graybookindex.htm



Linking Measures to Strategic Objectives

The mission of WSDOT is to keep people and business moving by operating and improving the state's transportation systems vital to our taxpayers and communities.

WSDOT Strategic Plan

Business Directions: WSDOT's 2007-11 Strategic Plan is a summary of WSDOT's work plan based on the programs and budgets authorized by the State Legislature and the policies adopted by the Governor. The plan describes the agency strategic directions and initiatives that are part of WSDOT's program and service delivery mandates. The plan also reflects WSDOT's internal performance management needs, Priorities of Government (POG) responsibilities, the Government Management and Accountability Performance (GMAP) process, the Cabinet Strategic Action Plan, the Legislative Transportation Benchmarks, the OFM Budget Activities, and the Washington State Transportation Plan's current investment priorities.

WSDOT's Plan Supports Priorities of Government and Government Management Accountability and Performance (GMAP)

"Priorities of Government" (POG) is the statewide approach used by the Governor to identify results as the basis for budget decision-making. This approach facilitates strategic thinking and uses performance evidence to make investment choices that maximize results. POG looks at all state activities and how these activities contribute to the framework for the ten statewide results that citizens expect. WSDOT's GMAP forums support the POG process by evaluating and improving the effectiveness of POG activities and reporting its progress in the *Gray Notebook*. The agency's strategic plan (*2007-11 Business Directions*) supports the "Improve statewide mobility of people, goods, and services" POG.

WSDOT actively supports POG goals through the agency's six initiatives (objectives) defined in the agency's strategic plan (2007-11 Business Directions). By tracking the progress of WSDOT's initiatives with key performance measures, the *Gray Notebook* connects WSDOT's initiatives with statewide outcome goals. The table below shows the six WSDOT initiatives and key related performance measures, as well as where and how the results are reported. WSDOT's strategic plan is available at www.wsdot.wa.gov/accountability/publications/StrategicPlanWEB.pdf

Draft Cabinet Strategic Action Plan

The Cabinet Strategic Action Plan is the focus of the Governor's Cabinet performance reporting efforts for 2007. It is a management tool based on a series of discussions with citizens, cabinet agency staff, and the Governor's policy and budget staff. The Draft Cabinet Strategic Action Plan sets the following goals for WSDOT to accomplish by December 31, 2007:

- Complete 90% of highway projects on time and within budget.
- Preserve 97% of bridges and 90% of roads in good or satisfactory condition.
- Reduce congestion by clearing highway accidents quickly: Reduce the average length of over 90 minute incidents by 5% (in coordination with the Washington State Patrol).
- Reduce highway fatalities by 4% (in coordination with the Washington State Patrol).

The *Gray Notebook* tracks results as indicated in the table below.

WSDOT Strategic Initiative	Linked to:	Key Performance Measure	Reporting Cycle	Last Report[1]
1. Manage and operate state transportation facilities to improve the safety and reliability of state transportation systems for the benefit of travelers, shippers, and communities.	Highway Safety	Fatality rates (Vehicle) Before and After collision analysis for safety projects Fatality rates (Bicyclists, Pedestrian) Cabinet Strategic Action Plan Measure: Reduce highway fatalities by 4%	Annual	GNB 20 pp. 54-55 GNB 24 pp. 61-62
	Incident Response	Number of over 90 min incidents; average clearance time Cabinet Strategic Action Plan Measure: Reduce the average length of over 90 minute incidents by 5%	Quarterly	pp. 75-77
	Delay and Congestion	Travel time performance for 35 Puget Sound routes; 95% Reliable Travel Time Duration of congestion	Annual	GNB 20 pp. 54-74
	Amtrak *Cascades*	Percent of trips on-time	Quarterly	pp. 93
	Ferries	Percent of trips on-time	Quarterly	pp. 89-92

Linking Measures to Strategic Objectives

WSDOT Strategic Initiative	Linked to:	Key Performance Measure(s)	Reporting Cycle	Last Report[1]
2. Maintain structures, facilities, support systems, and services to optimize their short-term and long-term usefulness and enhance environmental performance in highway and ferry operations.	Highway Maintenance	Rating for 33 maintenance activities tracked through the Maintenance Accountability Process (MAP)	Annual	GNB 24 pp. 72-74
3. Deliver asset and rehabilitation projects to preserve the state's existing infrastructure assets and utilize lowest lifecycle approaches to extend their useful life.	Ferries	Life Cycle Preservation Performance: Planned projects vs. actual systems/structures preserved, change in cost rating	Quarterly	pp. 77-80
	Pavement Conditions	Percent of pavement in good, fair, or poor condition (cumulative and by type) Cabinet Strategic Action Plan Measure: Maintain 90% of roads in good or satisfactory condition	Annual	GNB 24 pp. 53-57
	Bridge Conditions	Percent of bridges in good, fair, or poor condition (cumulative) Cabinet Strategic Action Plan Measure: Maintain 97% of bridges in good or satisfactory condition	Annual	GNB 23 pp. 49-53
4. Deliver high quality capital projects that add to and improve the state's transportation systems on-time and on-budget.	Capital Project Delivery Programs	Planned vs. actual results of scope, schedule and budget Cabinet Strategic Action Plan Measure: Complete 90% of highway projects on time and within budget	Quarterly	pp. 1-6
5. Communicate transportation system performance and WSDOT agency performance to the public through clear and consistent project delivery and program management reporting.	Performance Reporting	The *Gray Notebook* (Governor, WSTC, Public) GMAP Quarterly Review (Governor) Benchmarks Report (Legislature, WSTC) Priorities of Government (OFM) Budget Activities (OFM)	Quarterly Quarterly Annual Biannual Quarterly	
6. Assure the capability, efficiency, and safety of WSDOT's workforce.	Workforce Training	Compliance ratings for 25 statutory training courses	Quarterly	pp. 50-52
	Workforce Safety	Recordable injuries per 100 workers per calendar year	Quarterly	pp. 47-49

[1]When no *Gray Notebook* edition is indicated above, the measure can be found in this edition of the *Gray Notebook*. Previous editions are available in the *Gray Notebook* Subject Index at www.wsdot.wa.gov/accountability/graybookindex.htm. When viewing this report electronically, edition numbers are hyperlinked to the respective *Gray Notebook* article.

Transportation Benchmarks

In 2002, the Legislature passed RCW 47.01.012, instituting the transportation benchmarks recommended in 2000 by the Governor-appointed Blue Ribbon Commission on Transportation. The benchmarks require WSDOT to report performance data related to nine policy elements (see list below) to the Legislature and the Washington State Transportation Committee.

The benchmarks track transportation performance at a high level, and reflect social goals that are important to the health and safety of Washington State citizens, and to the efficiency of our state's transportation system. WSDOT does not have control over some of these benchmarks, for instance, the number of people who travel alone to work, or the number of miles they drive. Similarly, WSDOT works for citizens to meet their transportation needs by improving roadway, bridge, congestion, and safety conditions. The benchmark report is updated and published annually in the June edition of the *Gray Notebook*.

- Safety
- Roadway Pavement Condition
- Bridge Condition
- Non-Auto Share of Commute Trips
- Per Capita Vehicle Miles Traveled
- Administrative Efficiency
- Traffic Congestion and Driver Delay
- Transit Cost Efficiency

Information regarding Benchmarks can be found at:

Gray Notebook Special Excerpt: Transportation Benchmarks 2006 Report: www.wsdot.wa.gov/accountability/benchmarks/default.htm

Annual Transportation Benchmarks Report: June 30, 2006 GNB, www.wsdot.wa.gov/accountability/Archives/graynotebookJun-06.pdf

Benchmarks Implementation Report: www.wsdot.wa.gov/accountability/benchmarks/BenchmarksImplementationReport.pdf

Project Reporting on the Capital Project Delivery Program

Introduction

WSDOT prepares information for legislators, state, and local officials, interested citizens and the press on the progress of the capital delivery program, including the 2003 Transportation Funding Package, the 2005 Transportation Funding Package, and the Pre-Existing Funds Program. Much of the detailed information can be found on-line at the WSDOT website. The *Gray Notebook*, in these special *Beige Pages*, highlights each quarter's progress and reports on financial and other program management topics as well as detailed information on key projects.

The *Beige Pages* for this quarter are organized in the following manner:

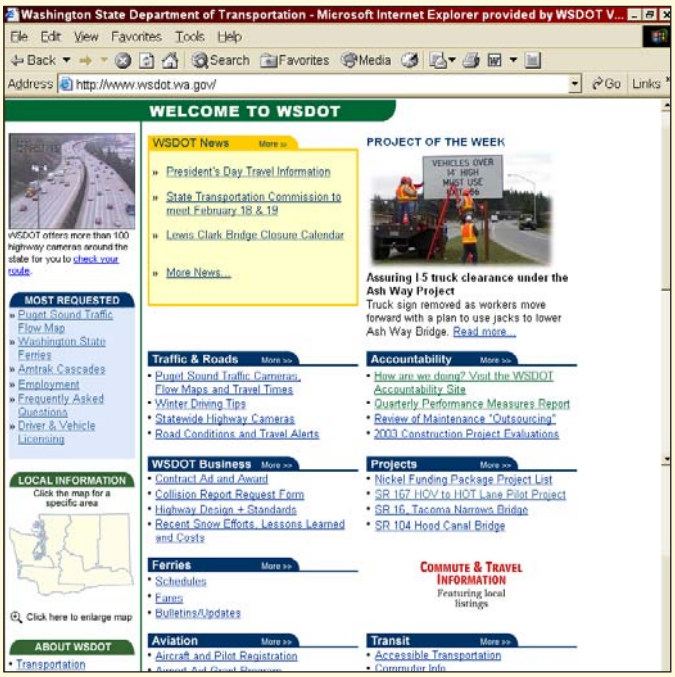
- Overview of the Three Capital Delivery Mandates
- 2003 and 2005 Transportation Funding Package Project Delivery
- Financial Information
- Pre-Existing Funds
- Special Project Updates
- Cross-Cutting Management Issues

We welcome suggestions and questions that can help us strengthen this project delivery and accountability reporting.

Overall, WSDOT's project reporting uses several different tools, including the *Gray Notebook*, web-based Project Pages, and Quarterly Project Reports (QPRs). There is a Project Page on the website for each major WSDOT project, and QPRs for Nickel funded projects in the 2003 Transportation Funding Package.

Navigation to the Home Page and the Project Pages

The Home Page (shown below) has several links that allow access to the individual Project Pages. The Accountability navigation bar provides access to the on-line version of the *Gray Notebook* which provides some project "hot links." The Projects navigation bar provides direct links to several of the state's largest projects and access to WSDOT's Projects Page. The Projects Page can also be accessed from any WSDOT web page by clicking on the "projects" tab at the top of every page. WSDOT's home page can be found at www.wsdot.wa.gov/

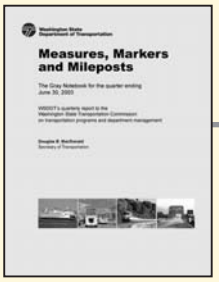


While WSDOT has developed user-friendly reports and front end applications to access project information on-line, it is important to note that the data used to generate these reports comes from antiquated legacy mainframe computer systems. Although the quality of the data is good, the time and effort needed to compile, verify and validate the data in these reports each quarter is considerable (in other words, these reports are the result of much manual input and effort, not the output of a modern project management information system).

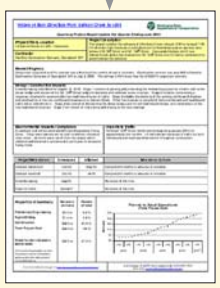
This overall issue was addressed in two recently completed reports: one from the Joint Legislative Audit Review Committee titled, "Overview of Washington State Department of Transportation Capital Project Management" and a second report, commissioned by the Transportation Performance Audit Board, titled "Review of WSDOT's Use of Performance Measurement." In each of these reports, a key recommendation was made to conduct an assessment of the effectiveness of current information systems and options for addressing any deficiencies.

Project Reporting on the Capital Project Delivery Program

Project Information Roadmap



Home Page



Gray Notebook

Project Pages

Project Pages report on all WSDOT capital delivery program projects. Project Pages provide detailed information updated regularly:

- Overall Project Vision
- Financial Table, Funding Components
- Roll-up Milestones
- Roll-up Cash Flow, Contact Information
- Maps and Links QPR
- Quarterly Project Reports

Quarterly Project Reports (QPRs) summarize quarterly activities:

- Highlights
- Milestones
- Status Description
- Problem Statement
- Risks and Challenges
- Project Costs/Cash Flow
- Contact Information

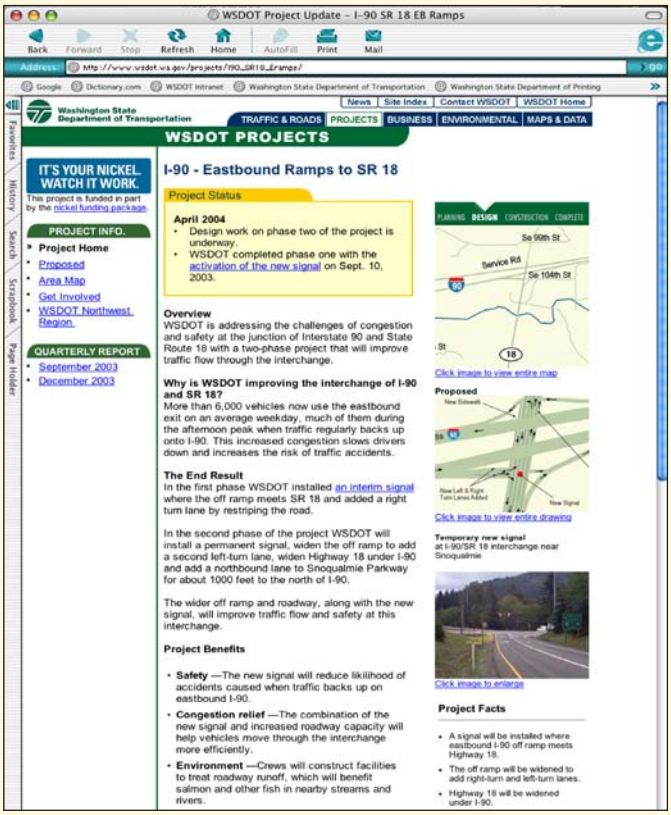
Project Pages

Project Pages contain information on all aspects of a specific project. An existing Project Page is shown below.

Project Pages provide details on overall project vision, funding components, financial tables, milestones, status description, problem discussions, risks and challenges, forecasting, maps, photos, links and more.

The Quarterly Project Reports are accessible through a link on the Project Page.

Project Pages provide a summary of the project status to date and are updated regularly to the best of WSDOT's ability. Project Pages can be found at www.wsdot.wa.gov/projects/



WSDOT'S Capital Project Delivery Programs

Executive Summary: Highway Construction Roll-Up of Performance Information

Each quarter WSDOT provides a detailed update on the delivery of the highway capital programs through the *Gray Notebook*, and via the web through the Project Pages and Quarterly Project Reports. As WSDOT's primary delivery report, the *Gray Notebook* includes the *Beige Pages* for the purpose of providing the current status of the Capital Improvement and Preservation Programs: major Pre-Existing Fund (PEF) projects, the projects funded by the 2003 5-cent gas tax (Nickel), and the 2005 9 1/2-cent gas tax (Transportation Partnership Account, TPA).

Since PEF projects are budgeted by program for improvement and preservation of the highway system, the delivery of the work included in the 809 PEF projects is reported programmatically six program categories of work. By contrast, each of the 135 Nickel and 183 TPA projects funded in the 2005-07 biennium has a line item budget and is monitored and reported at the individual project level. Program budgets for PEF, Nickel, and TPA in this edition of the *Gray Notebook* are based on the 2006 Supplemental Budget.

Performance Information *As of December 31, 2006, Dollars in Thousands*	**Nickel (2003)**	**Transportation Partnership Account (TPA, 2005)**	**Combined Nickel & TPA**	**Pre-Existing Funds**
Total Biennial Number of Projects (2005-07)	135	183	318	809
Total Biennial Program (2005-07)	$821,903	$370,479	$1,192,382	$1,277,138
Schedule, Scope and Budget Summary: Results of Completed Projects				
	See Pages 4-7	See Pages 4-7	See Pages 4-7	NA
Cumulative to Date, 2003 – December 31, 2006				
Total Number of Projects Completed	46	17	63	-
% of Projects Completed Early or On-Time	91%	88%	91%	-
% of Projects Completed Within Scope	100%	100%	100%	-
% of Projects Completed Under or On-Budget	85%	65%	79%	-
% of Projects Completed On-Time and On-Budget†	80%	53%	73%	
Current Legislative Expectation (Baseline)	$500,993	$9,393	$510,386	-
Current Estimated Cost to Complete (WSDOT)	$509,151	$10,143	$519,294	-
% of Total Program On or Under Budget	98%	93%	91%	
Biennium to Date, 2005-07				
Total Number of Projects Completed	27	17	44	268
% of Projects Completed Early or On-Time	85%	88%	86%	-
% of Projects Completed Within Scope	100%	100%	100%	-
% of Projects Completed Under or On-Budget	81%	65%	75%	-
% of Projects Completed On-Time and On-Budget	74%	53%	66%	
Current Legislative Expectation (Baseline)	$382,418	$9,393	$391,811	$490,947
Current Estimated Cost to Complete (WSDOT)	$390,703	$10,143	$400,846	$538,391
Advertisement Record: Results of Projects Under Construction or Entering into the Construction Phase				
	See Pages 8-12	See Pages 8-12	See Pages 8-12	See Pages 8-12
Biennium to Date, 2005-07				
Total Advertised	30	16	46	200
% Advertised Early or On-Time	83%	88%	85%	78%
Total Award Amounts to Date	$128,423	$29,280	$157,703	$313,960
Advertisement Schedule for Projects in the Pipeline: Results of Projects Now Being Advertised for Construction or Planned to be Advertised				
	See Pages 13-15	See Pages 13-15	See Pages 13-15	See Pages 13-15
July 1, 2006 through December 31, 2006				
Total in Pipeline	19	22	41	109
% On or Better than Schedule	47%	82%	66%	-

WSDOT'S Capital Project Delivery Programs

Executive Summary: Rail and Ferries Roll-Up of Performance Information

Beginning with this edition of the *Gray Notebook*, WSDOT will report a summary of WSDOT's Rail and Ferry System construction project delivery information funded by the Nickel (2003) and TPA (2005) accounts.

For Rail construction project delivery, a total of three Nickel projects have been delivered on-time and on-budget as of December 31, 2006 (100% on-time, 100% on-budget) for $14.650 million. To date the Ferry System has not completed any construction projects using Nickel and TPA funding. Both Rail and the Ferry system have projects entering into the construction phase and have a number of projects that are being advertised for construction or planned for advertisement.

Ferries Advertisement Record: Results of Projects Entering into the Construction Phase

	Nickel (2003)	Transportation Partnership Account (TPA, 2005)	Combined Nickel & TPA	Pre-Existing Funds
Biennium to Date, 2005-07				
Total Advertised	1	0	1	39
% Advertised Early or On-Time	0%	N/A	0%	92%
Total Award Amounts to Date	$6,435	$0	$6,435	N/A

Ferries Advertisement Schedule for Projects in the Pipeline:
Results of Projects Now Being Advertised for Construction or Planned to be Advertised

January 1, 2007 through June 30, 2007				
Total in Pipeline	1	0	1	4
% On or Better than Schedule	0%	N/A	0%	-

Rail Advertisement Record: Results of Projects Entering into the Construction Phase

	Nickel (2003)	Transportation Partnership Account (TPA, 2005)	Combined Nickel & TPA	Pre-Existing Funds
Biennium to Date, 2005-07				
Total Advertised	2	3	5	5
% Advertised Early or On-Time	0%	33%	20%	60%
Total Award Amounts to Date	$7,150	$8,530	$15,680	NA

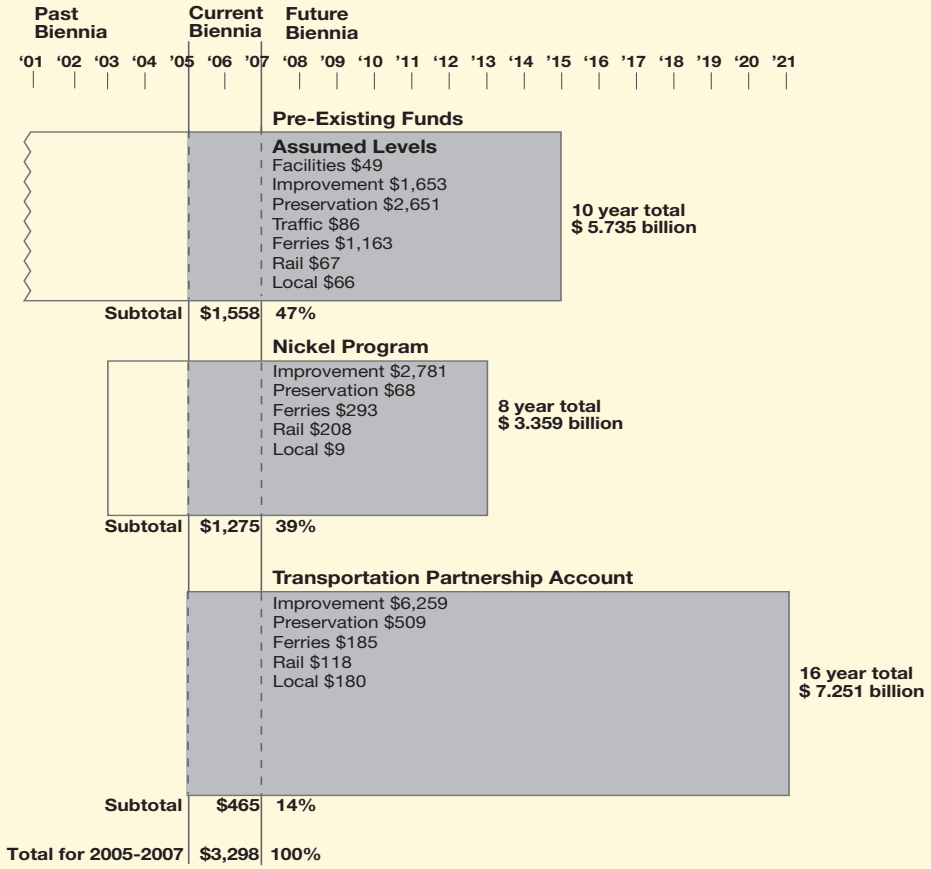
Rail Advertisement Schedule for Projects in the Pipeline:
Results of Projects Now Being Advertised for Construction or Planned to be Advertised

January 1, 2007 through June 30, 2007				
Total in Pipeline	4	2	6	5
% On or Better than Schedule	25%	0%	17%	-

WSDOT's Capital Project Delivery Programs

Overview of WSDOT's Three Capital Project Delivery Mandates

WSDOT's Capital Program: Current and Future Biennium Outlook
2006 Supplemental Budget
Dollars in Millions



2005-07 Capital Delivery Program

The Department's 2005-07 capital program focuses on project and program delivery from all fund sources. WSDOT continues to move forward with the 10-year investment plan for the 2003 Transportation Funding Package as well as beginning the 16-year investment plan associated with the 2005 Transportation Funding Package.

In the 2005-07 biennium, based on the 2006 supplemental budget, capital funds total approximately $3.3 billion. Approximately $1.275 billion will be spent on projects associated with the 2003 Funding Package (Nickel), $465 million will be invested in projects from the 2005 Funding Package (Transportation Partnership Account - TPA), and $1.558 billion will be invested from pre-existing funding sources.

2005-07 Transportation Budget, Section 603

Section 603 of the Transportation Budget authorizes the Office of Financial Management (OFM) to make funding adjustments to capital projects under certain circumstances. On September 20, 2006, OFM approved $9.6 million TPA, $18.5 million Nickel, and $12 million multimodal transfers; totaling $40.1 million as the final action of the first "Section 603" process. The Department has identified projects that were under spending this biennium, in both the TPA and the Nickel Accounts to offset the increases authorized by the transfers. The Department's request for adjustments is within the legislatively-approved budget and does not exceed the current biennial appropriation.

The funding adjustment request is necessary to correct specific project budget shortfalls that impede the ability to successfully deliver those capital projects. The biennial funding shortfalls were the result of recent construction materials cost escalation, increased preliminary engineering effort, inflation, and difficulty acquiring right-of-way.

WSDOT Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Sixty-Three Projects Completed as of December 31, 2006

Funded with Nickel and Transportation Partnership Accounts
(Dollars in Thousands)

Project Description	Fund Type*	On-Time Advertised	On-Time Completed	Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete	On Budget**	On-Time and On Budget**†
Cumulative to Date								
2003-05 Biennium Summary See the *Gray Notebook* for quarter ending September 30, 2006 for project listing	19 Nickel	4 early 15 on-time	6 early 13 on-time	19	118,575	118,448	9 under, 8 on - budget, 2 over	17 on-time and on-budget
Biennium to Date (2005-07)								
NC Regionwide - Upgrade Guardrail (Chelan, Douglas, Grant, Okanogan)	Nickel	√	Early	√	849	851	√	√
I-5/NE 175th St to NE 205th St - Add NB Lane (King)	Nickel	√	Early	√	8,915	8,915	√	√
I-5/300th St NW Vic to Anderson Rd Vic - Install Cable Barrier (Skagit, Snohomish)	TPA	Early	Early	√	1,288	1,288	√	√
I-5/2nd Street Bridge-Replace Bridge (Skagit)	Nickel	√	Early	√	14,333	14,412	√	√
I-5/SR 11 Vic to Weigh Station Vic - Install Cable Barrier (Skagit)	TPA	Early	Early	√	436	436	√	√
I-5/SR 11 to 36th St - Install Cable Barrier (Whatcom)	TPA	Early	Early	√	68	103	Over[1]	
I-5/SR 542 Vicinity to Bakerview Rd - Install Cable Barrier (Whatcom)	TPA	Early	Early	√	202	254	Over[2]	
I-5/Main St to SR 548 - Install Cable Barrier (Whatcom)	TPA	Early	Early	√	409	409	√	√
I-5/Blaine Vicinity - Median Cross Over Protection (Whatcom)	TPA	√	Early	√	245	245	√	√
I-5/Roanoke Vicinity Noise Wall (King)	Nickel	√	Late[3]	√	3,764	3,764	√	
U.S. 12/Montesano Vicinity to Elma - Install Cable Barrier (Grays Harbor)	TPA	√	Early	√	1,620	2,091	Over[4]	
U.S. 12/SR 124 to McNary Pool - Add Lanes (Walla Walla)	Nickel	√	√	√	12,299	12,198	√	√
SR 14/Riverside Dr and E Camas Slough Bridge - Upgrade Bridge Rail (Clark)	Nickel	√	√	√	340	323	Under	√
SR 16/36th St to Olympic Dr NW - Add HOV Lanes (Pierce)	Nickel	Early	Early	√	8,914	8,891	√	√

WSDOT Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Sixty-Three Projects Completed as of December 31, 2006

Funded with Nickel and Transportation Partnership Accounts
(Dollars in Thousands)

Project Description	Fund Type*	On-Time Advertised	On-Time Completed	Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete	On Budget**	On-Time and On Budget**†
SR 18/SE 304th to SR 516 - Install Cable Barrier (King)	TPA	Early	Early	√	250	250	√	√
SR 21, 23, 27, and 272 - Upgrade Guardrail (Adams, Franklin, Lincoln, Whitman)	Nickel	√	Early	√	858	785	Under	√
I-90/Silica Road to East of Adams Road - Median Cross Over Protection (Grant)	TPA	Early	Early	√	322	294	Under	√
I-90/SR 17 to Grant/Adams County Line - Median Cross Over Protection (Grant)	TPA	Early	Early	√	787	749	√	√
I-90/Potato Hill Bridge - Add Pedestrian Access (Grant)	TPA	√	Early	√	750	750	√	√
I-90/Moses Lake Area - Replace Bridges (Grant)	Nickel	√	Early	√	8,056	8,005	√	√
I-90/Pines Rd to Sullivan Rd - Add Lanes (Spokane)	Nickel	Early	√	√	17,894	17,894	√	√
I-90/Argonne Rd to Pines Rd - Add Lanes (Spokane)	Nickel	Early	√	√	18,468	18,357	√	√
U.S. 97/Ellensburg Vic to Tonasket Vic - Roadside Safety Improvement (Chelan, Douglas, Kittitas, Okanogan)	TPA	√	Early	√	1,000	1,050	Over[5]	
SR 99/SR 599 to Holden St - Install Cable Barrier (King)	TPA	Late[6]	Early	√	380	437	Over[6]	
SR 105/Smith Creek Bridges - Bridge Rail Retrofit (Pacific)	Nickel	√	√	√	514	514	√	√
SR 105/Smith Creek Bridge to Alexson Rd - Guardrail Upgrade (Pacific)	Nickel	√	√	√	314	314	√	√
SR 106/Skobob Creek - Improve Fish Passage (Mason)	Nickel	√	√	√	1,777	1,786	√	√
SR 161/Jovita Blvd to S 360th St, Stage 2 - Widen to Five Lanes (King, Pierce)	Nickel	√	Early	√	30,164	25,488	Under	√
SR 161/204th St to 176th St - Widen Roadway (Pierce)	Nickel	Late[7]	Early	√	16,789	16,240	√	√
SR 161/234th St to 204th St E - Add Lanes (Pierce)	Nickel	√	Early	√	17,231	17,234	√	√

WSDOT Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Sixty-Three Projects Completed as of December 31, 2006
Funded with Nickel and Transportation Partnership Accounts
(Dollars in Thousands)

Project Description	Fund Type*	On-Time Advertised	On-Time Completed	Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete	On Budget**	On-Time and On Budget**
SR 167/SR 410 to Pierce/King Co Line - Install Cable Barrier (King, Pierce)	TPA	Early	Late[8]	√	487	487	√	
SR 202/Jct 292nd Ave SE - Add Signal and Turn Lane (King)	Nickel	√	√	√	586	600	√	√
I-205/Mill Plain SB Off Ramp - Add Turn Lane (Clark)	TPA	Early	Early	√	633	781	Over[9]	
SR 410/Traffic Ave to 166th Ave E - Install Cable Barrier (Pierce)	TPA	Early	Late[10]	√	245	245	√	
SR 522/N Creek Vic to Bear Creek Vic - Install Cable Barrier (King)	TPA	Early	Early	√	271	274	√	√
SR 527/132nd St SE to 112th St SE - Add Lanes (Snohomish)	Nickel	√	Late[11]	√	20,933	20,962	√	
Current Quarter (Ending December 31, 2006)								
I-5/SB Ramps at SR 11/Old Fairhaven Parkway - Add Ramp Lane (Whatcom)	Nickel	√	Early	√	1,647	2,426	Over[12]	
I-5/Salmon Creek to I-205 - Widening (Clark)	Nickel	Early	Early	√	43,109	44,308	√	√
SR 9/Nooksack Rd Vicinity to Cherry St - New Alignment (Whatcom)	Nickel	√	Early	√	18,010	18,027	√	√
SR 18/Maple Valley to Issaquah/ Hobart Rd - Add Lanes (King)	Nickel	√	Late[13]	√	115,429	128,451	Over[13]	
SR 31/Metaline Falls to Canadian Border - All Weather Road (Pend Oreille)	Nickel	√	√	√	18,862	17,392	√[14]	√
SR 122/Cinebar Rd to Jerrells Rd - Guardrail Upgrade (Lewis)	Nickel	Early	Early	√	180	221	Over[15]	
SR 194/SW of Colfax - Upgrade Guardrail (Whitman)	Nickel	√	Late[16]	√	1,079	1,135	Over[16]	
SR 202/244th Ave NE Intersection- Add Signal and Turn Lane (King)	Nickel	√	Early	√	1,104	1,210	Over[17]	

WSDOT Capital Project Delivery Programs

Schedule, Scope and Budget Summary

Sixty-Three Projects Completed as of December 31, 2006

Funded with Nickel and Transportation Partnership Accounts
(Dollars in Thousands)

	% On-Time Advertised	% On-Time Completed	% Within Scope	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete	% of Projects On Budget**	% of Projects On-Time and Budget**†
Totals Current Quarter (December 31, 2006)	100%	75%	100%	$199,420	$213,170	38%	38%
8 Nickel Projects	100%	75%	100%	$199,420	$213,170	38%	38%
0 TPA Projects	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Totals Biennium to Date (2005-07)	95%	86%	100%	$391,811	$400,846	75%	66%
27 Nickel Projects	96%	85%	100%	$382,418	$390,703	81%	74%
17 TPA Projects	94%	88%	100%	$9,393	$10,143	65%	53%
Totals Cumulative to Date**	97%	91%	100%	$510,386	$519,294	79%	73%
46 Nickel Projects	98%	91%	100%	$500,993	$509,151	85%	80%
17 TPA Projects	94%	88%	100%	$9,393	$10,143	65%	53%

*As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types not just Nickel or Transportation Partnership Account funds.
**As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.
†New Measure: Reflects Draft Cabinet Strategic Action Plan Measure
Source: WSDOT Project Control and Reporting Office

Definitions

On-Time Advertised
The project was advertised within the quarter as planned based on the original Legislative expectation (2003-05 Nickel, 2005-07 TPA).
On-Time Completed
The project was operationally complete within the quarter as planned in the original Legislative expectation (2003-05 Nickel, 2005-07 TPA).
Within Scope
The project was completed within the specific functional intent of a project as last approved by the Legislature.
On-Budget
The project was within +/- five percent of the current Legislative expectation (baseline).

Section 603

Section 603 of the 2006 Supplemental Budget provides the Director of the Office of Financial Management flexibility to balance Nickel and TPA funded project cost increases and decreases between projects, and to balance cash flow between biennia near biennial lines, as long as the adjustment does not impact the overall delivery of the program and does not involve changing the scope of any funded project.

Project Details

[1]This project is over budget due to the replacement of regular cable barrier with high-tension cable barrier.
[2]This project is over budget due to the replacement of regular cable barrier with high-tension cable barrier.
[3]The noise wall panels, designed per agreement with the neighborhood, required a longer time for approval and procurement than anticipated by the design office.
[4]Increase due to extensive slope work.
[5]Increase due to materials cost escalation for guardrail items.
[6]Advertisement delayed to complete Shoreline Permitting requirements. Project is over budget due to the replacement of regular cable barrier with high-tension cable barrier.
[7]This project was the second of a two-stage project. Advertisement date was delayed to better accomodate construction work and lessen impacts to the public.
[8]This project combined and advertised as a statewide contract for efficiency which resulted in a savings.
[9]Increase in construction cost due to higher fuel and asphalt prices.
[10]This project combined and advertised as a statewide contract for efficiency.
[11]The Open to Traffic date was originally planned for March 2006. Delay due to contractor unable to complete the final layer of asphalt pavement on time.
[12]This project was completed ahead of schedule but over budget due to construction cost escalation and higher prices on asphalt and Construction materials.
[13]Heavy rain delayed the project schedule and resulted in significantly higher costs for erosion control, street sweeping, stormwater treatment, and stormwater detention ponds.
[14]The baseline budget included $1.6M in dedicated FHWA federal funding. The funding was not required and, with FHWA approval, the funding was transferred to SR 31/Pend Oreille County Bridge Project. This project's estimated cost to complete is now within 5% of the adjusted baseline.
[15]This project was completed ahead of schedule but the baseline of $180K does not show the internal funding adjustment from the statewide bucket to $221K for the actual cost to complete
[16]The operationally complete date was delayed until the harvest season was complete to allow for the free flow of the trucks. Increase in construction cost due to higher cost for placing crushed surface base coarse material used for guard rail installation.
[17]This project was completed ahead of schedule but over budget due to cost escalation and higher prices on construction materials.

WSDOT Capital Project Delivery Programs

Advertisment Record

Sixty Projects Now in Construction Phase as of December 31, 2006
Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
Cumulative to Date: Projects Underway						
I-5/Pierce Co Line to Tukwila Interchange - Add HOV Lanes (King)	Nickel	Early	Nov-04	Icon Materials, A division of CPM	May-07	35,847
I-5/SR 526 to Marine View Drive - Add HOV Lanes (Snohomish)	Nickel	Early	Oct-04	Atkinson CH2M Hill A joint venture	Jun-08	184,993
I-5/41st St Interchange - Widening and Rebuild Ramps (Snohomish)	TPA	Early	For construction efficiencies, this project was combined with the one above.			
I-5/S 48th to Pacific Avenue - Add HOV Lanes (Pierce)	Nickel	√	Mar-05	Kiewit Pacific Co.	Jun-08	72,869
SR 7/SR 507 to SR 512 - Safety Improvements (Pierce)	Nickel	√	Jun-05	Scarsella Bros., Inc.	Apr-07	13,745
SR 9/SR 522 to 228th St SE, Stages 1a and 1b - Add Lanes (Snohomish)	Nickel	√	Jan-96	Wilder Construction Company	Sep-07	17,993
SR 9/228th St SE to 212th St SE (SR 524), Stage 2 - Add Lanes (Snohomish)	Nickel	√	May-05	For construction efficiencies, this project was combined with the one above.		
SR 16/I-5 to Tacoma Narrows Bridge Add HOV Lanes (Pierce)	Nickel	√	Mar-04		Jun-07	
• Sprague I/C to Snake Lake (Pierce)	PEF		Oct-00	Mowat	Dec-03	16,301
• SR 16/Union Ave. to Jackson Ave.-HOV (Pierce)	Nickel		Nov-03	Tri-state	Nov-04	4,040
• SR 16/6th Ave. to Jackson Ave. - HOV (Pierce)	Nickel		Mar-04	Tri-state	Jun-07	47,295
SR 24/I-82 to Keys Rd - Add Lanes (Yakima)	Nickel	Early	Feb-05	Max J. Kuney Company	Dec-07	33,964
I-90/EB Ramps to SR 18 - Add Signal and Turn Lanes (King)	Nickel	√	Sep-03	KLB Construction	Oct-07	2,599
SR 104/Hood Canal Bridge - Replace E Half (Jefferson, Kitsap)	TPA	√	Feb-03	Kiewit-General, A joint venture	Jun-09	204,000
SR 240/I-182 to Richland Y - Add Lanes (Benton)	Nickel	√	Dec-04		Oct-07	
• Yakima River Bridge 24/12 (Benton)	PEF		Feb-03	Wildish Standard	Aug-05	16,123
• SR 240/I-182 to Columbia Center Blvd. (Benton)	Nickel		Dec-04	Paving Co. Icon Materi-als A division of CPM	Oct-07	30,473
SR 240/Richland Y to Columbia Center I/C - Add Lanes (Benton)	Nickel	√	For construction efficiencies, this project was combined with the one above.			

WSDOT Capital Project Delivery Programs

Advertisement Record

Sixty Projects Now in Construction Phase as of December 31, 2006
Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
U.S. 395/NSC-Francis Ave to Farwell Rd - New Alignment (Spokane)	Nickel	Late[1]	Jan-04		Mar-09	
• NSC-Farwell Road Lowering (Spokane)	Nickel		Jan-04	Max J. Kuney	Jul-05	4,976
• NSC-Gerlach to Wandermere - Grading - CN (Spokane)	Nickel		Nov-04	KLB	Sep-06	9,987
• NSC-Francis Avenue to US 2 Structures - REBID (Spokane)	Nickel		May-06	Max J. Kuney	Oct-07	17,236
Biennium to Date (2005-07)						
SR 3/SR 303 Interchange (Waaga Way) - Construct Ramp (Kitsap)	Nickel	√	Aug-05	Scarsella Bros. Inc	Oct-07	16,744
I-5/52nd Ave W to SR 526 - Roadside Safety and Ramp Improvements (Snohomish)	Nickel	√	Mar-06	Wilder Construction Company	Mar-07	5,710
I-5/SR 532 NB Interchange Ramps - Add Turn Lanes (Snohomish)	Nickel	√	Mar-06	Trimaxx Construction	Jun-07	3,769
U.S. 12/Columbia, Garfield, and Whitman Co - Upgrade Guardrail (Columbia, Garfield)	Nickel	√	Oct-05	Frank Gurney, Inc.	Mar-07	1,846
SR 14/W of Paterson - Upgrade Guardrail (Benton)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 17/N of Mesa - Ugrade Guardrail (Franklin)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 24/Vernita Bridge - Upgrade Bridge Rail (Benton, Grant)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 124/E of Pasco - Upgrade Guard-rail (Walla Walla)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 127/N of Dodge - Upgrade Guard-rail (Garfield)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 128/Clarkston Vicinity - Upgrade Guardrail (Whitman)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 260/Connell to Kahlotus - Upgrade Guardrail (Franklin)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 261/Lyon's Ferry Vicinity - Upgrade Guardrail (Columbia, Garfield)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 410/Cliffdell Vicinity - Upgrade Guardrail (Yakima)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
U.S. 730/S of Wallula - Upgrade Guardrail (Walla Walla)	Nickel	√	For construction efficiencies, this project was combined with the one above.			
SR 823/Selah Vicinity - Upgrade Guardrail (Yakima)	Nickel	√	For construction efficiencies, this project was combined with the one above.			

WSDOT Capital Project Delivery Programs

Advertisement Record

Sixty Projects Now in Construction Phase as of December 31, 2006
Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
U.S. 12/Attalia Vicinity - Add Lanes (Walla Walla)	Nickel	√	Dec-05	Apollo, Inc.	Dec-07	11,222
SR 16/NW of Tacoma Narrows to SE of Burley - Install Cable Barrier (Kitsap, Pierce)	TPA	Late[2]	May-06	Petersen Brothers, Inc.	Mar-07	3,508
SR 17/Pioneer Way to Stratford Rd - Widen to Four Lanes (Grant)	TPA	√	May-06	Central Washington Asphalt, Inc.	Jun-07	14,607
SR 99/S 284th to S 272nd St - Add HOV Lanes (King)	Nickel	√	Apr-06	Sci Infrastructure, LLC	Aug-07	8,615
SR 112/Hoko and Pysht Rivers - Erosion Control (Clallam)	TPA	Early	Aug-06	(State Forces)	Oct-07	200
SR 167/Ellingson Rd Interchange NB Off Ramp - Add Signal and Turn Lane (King)	Nickel	√	Feb-06	Signal Electric Inc	Jan-07	357
SR 167/15th St SW to 15th St NW - Add HOV Lanes (King)	Nickel	√	Dec-05	Icon Materials, A division of CPM	Dec-07	27,849
SR 270/Pullman to Idaho State Line - Add Lanes (Whitman)	Nickel	Late[3]	Mar-06	North Central Construction, Inc.	Oct-07	18,090
I-5/SR 509/SeaTac to I-5 - Complete Corridor (King)	TPA	Late[4]	Jun-06	Tri-state Construction, Inc.	Jun-09	344
SR 516/208th and 209th Ave SE - Add Turn Lanes (King)	Nickel	Late[5]	Jan-06	Road Construction NW, Inc.	Apr-07	678
SR 522/I-5 to I-405 - Multimodal Improvements (King)	TPA	Early	Jun-06		Jun-09	
• SR 522 Corridor Improvement,153RD Signal & Roadway Widening	TPA		Jun-06	Tri-state	Nov-07	4,038
SR 543/I-5 to Canadian Border - Add Lanes (Whatcom)	Nickel	Late[6]	Nov-05	Imco General Construction, Inc.	Oct-08	28,315
Quarter Ending December 31, 2006						
Pierce and Thurston Co - Roadside Safety Improvements (Pierce, Thurston)	TPA	√	Nov-06	Peterson Brothers, Inc.	Oct-07	576
U.S. 2/Dryden - Install Signal (Chelan)	Nickel	√	Oct-06	Central Washington Asphalt, Inc.	Sep-07	3,319
SR 3/SR 106 S Belfair - Install Signal (Mason)	TPA	√	Nov-06	Totem Electric of Tacoma, Inc.	Aug-07	399
I-5/SR 502 Interchange - Build Interchange (Clark)	Nickel	√	Dec-06	(Award Pending)	Jun-09	

WSDOT Capital Project Delivery Programs

Advertisement Record

Sixty Projects Now in Construction Phase as of December 31, 2006
Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

Project Description	Fund Type*	On-Time Advertised	Ad Date	Contractor	Operationally Complete Date	Award Amount
U.S. 12/Wildcat Creek to I-82 - Roadside Safety Improvements (Yakima)	TPA	√	Oct-06	Petersen Brothers Inc.	Jun-07	741
SR 410/Morse Creek to U.S. 12 - Roadside Safety Improvements (Yakima)	TPA	√	For construction efficiencies, this project was combined with the one above.			
U.S. 12/40th Ave Interchange - Interchange Improvements (Yakima)	TPA	√	Oct-06	Superior Pavign Co.	Oct-07	1,047
SR 14/Columbia River Gorge - Upgrade Guardrail (Skamania)	Nickel	Early	Nov-06	Frank Gurney, Inc.	Jun-07	316
SR 20/Thompson Road - Add Signal (Skagit)	TPA	Early	Oct-06	Rinker Materials West LLC DBA	Oct-07	1,437
SR 20/Fredonia to I-5 - Add Lanes (Skagit)	Nickel	√	Nov-06	(Award Pending)	Oct-09	
I-90/Columbia River Bridge - Upgrade Bridge Rail (Grant, Kittitas)	Nickel	Late[7]	Oct-06	Frank Gurney, Inc.	Jun-07	1,054
SR 397/Columbia River Bridge - Upgrade Bridge Rail (Franklin)	Nickel	Late[8]	For construction efficiencies, this project was combined with the one above.			
I-90/Harvard Rd Pedestrian Bridge - Construct Bridge (Spokane)	TPA	√	Dec-06	Wesslen Construction, Inc.	Jun-07	892
SR 165/Carbonado Vicinity - Upgrade Guardrail (Pierce)	Nickel	√	Oct-06	Dirt and Aggregate Interchange, Inc.	Sep-07	539
SR 169/SE 291st St Vicinity (Formerly SE 288th Street) - Add Turn Lanes (King)	TPA	√	Nov-06	Tri-State Construction, Inc.	Dec-07	1,195
SR 202/Jct SR 203 - Construct Roundabout (King)	Nickel	√	Dec-06	(Award Pending)	Nov-07	
I-405/112th Ave SE to I-90 - NB Widening (King)	TPA	Early	Oct-06	(Award Pending)	Dec-09	
I-405/I-90 to SE 8th St - Widening (King)	TPA	Early	Oct-06	(Award Pending)	Dec-09	
SR 821/Selah to Ellensburg - Roadside Safety Improvements (Kittitas, Yakima)	TPA	√	Nov-06	North Star Enterprises 1, Inc.	Jun-07	296

WSDOT Capital Project Delivery Programs

Advertisement Record

Sixty Projects Now in Construction Phase as of December 31, 2006

Nickel and Transportation Partnership Account (TPA) Projects
Dollars in Thousands

	On-Time Advertised	Award Amount
Totals Current Quarter (December 31, 2006)		11,811
8 Nickel Project	75%	5,228
11 TPA Projects	100%	6,583
Totals Biennium to Date (2005-07)	86%	157,703
30 Nickel Projects	83%	128,423
16 TPA Projects	88%	29,280
Totals Cumulative to Date (Projects Underway)	89%	870,144
42 Nickel Projects	86%	636,864
18 TPA Projects	89%	233,280

Source: WSDOT Project Control and Reporting
* As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.

Project Details:

[1]Right-of-way acquisition delay.
[2]Delayed to avoid construction conflicts with the Nickel Project SR 16/36th Ave. to Olympic within the project limits. For efficiency, this project was combined into a single contract with another median barrier project that had a later ad date.
[3]The advertisement delayed due to environmental permitting issues and the need for redesign to stay within budget after geological conditions, right-of-way cost increases, and Corps of Engineers mitigation negotiations.
[4]The project was incorrectly reported in the September 30, 2006 Gray Notebook as advertised on-time in November 2005. The actual advertisement date was June 2006. The original planned advertisement date of November 2005 was unrealistic, but overlooked when updating the project list for the 2006 Legislative Budget. Funded after November 2005.
[5]Right-of-way and environmental permitting issues.
[6]Ad date delay due to right-of-way acquisition delay.
[7]This project was combined in the same contract for cost efficiency with another bridge retro-fit project, SR 397/Bridge Rail Retrofit - Columbia River Bridge West of Kennewick, which was delayed for redesign. See note 2 for SR 397/Bridge Rail Retrofit - Columbia River Bridge West of Kennewick.
[8]The existing bridge rail required development of a unique bridge rail retrofit that would be compatible. In addition, this project was tied to I-90/Columbia River Bridge which provided economy of scale over advertising separately.

WSDOT Capital Project Delivery Programs

Projects to be Advertised

Forty-One Projects in Delivery Pipeline for December 31, 2006 through June 30, 2007

Nickel and Transportation Partnership Account (TPA) Projects Now Being Advertised for Construction or Planned to be Advertised
Dollars in Thousands

Project Description	Fund Type*	Original Planned Ad Date	Current Planned Ad Date	On Schedule	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete
U.S. 2 and SR 92 - Roadside Safety Improvements (Snohomish)	TPA	Apr-07	Apr-07	√	1,200	1,228
Adams and Franklin Co - Roadside Safety Improvements (Adams, Franklin)	TPA	Feb-07	Feb-07	√	1,000	1,000
Whitman and S Spokane Co - Roadside Safety Improvements (Spokane, Whitman)	TPA	Feb-07	Feb-07	√	1,000	1,000
U.S. 2/Fern Bluff to Sultan Startup - Stormwater Drainage Improvements (Snohomish)	TPA	May-07	May-07	√	862	1,012
U.S. 2/10th St Intersection Vic - Stormwater Drainage Improvements (Snohomish)	TPA	Apr-07	Apr-07	√	452	534
U.S. 2/Pickle Farm Road and Gunn Road - Add Turn Lanes (Snohomish)	Nickel	Mar-07	Apr-07	Delayed[1]	972	1,322
SR 3/Imperial Way to Sunnyslope - Add Lanes (Kitsap)	TPA	Nov-06	Jan-07	Delayed[2]	2,893	2,911
I-5/S Seattle NB Viaduct - Bridge Paving (King)	TPA	Feb-07	Feb-07	√	11,646	14,360
I-5/SB Viaduct, S Seattle Vicinity - Bridge Repair (King)	TPA	Feb-07	Feb-07	√	3,991	1,108
I-5/Rush Rd to 13th St - Add Lanes (Lewis)	Nickel	Jan-07	Mar-07	√	41,400	52,766
SR 9/108th Street NE (Lauck Road) - Add Turn Lanes (Snohomish)	Nickel	Jan-07	Jan-07	√	1,393	1,846
SR 9/Schloman Rd to 256th St NE - New Alignment (Snohomish)	Nickel	Nov-06	Jan-07	Delayed[3]	15,084	15,089
SR 9/252nd St NE Vicinity - Add Turn Lane (Snohomish)	Nickel	Nov-06	Jan-07	Delayed[4]	808	1,731
SR 9/268th St Intersection - Add Turn Lane (Snohomish)	Nickel	Nov-06	Jan-07	Delayed[5]	2,303	3,129
U.S. 12/Wynoochee River Bridge - Upgrade Bridge Rail (Grays Harbor)	Nickel	Mar-07	Jun-07	Delayed[6]	220	257
SR 20/Ducken Rd to Rosario Rd - Add Turn Lanes (Island, Skagit)	Nickel	Oct-06	Jan-07	Delayed[7]	6,427	8,237
SR 20/Quiet Cove Rd Vicinity to SR 20 Spur - Widening (Skagit)	Nickel	Apr-07	Apr-07	√	16,920	25,781
SR 25/Spokane River Bridge - Upgrade Bridge Rail (Lincoln, Stevens)	Nickel	May-07	May-07	√	354	369
SR 25/Columbia River Bridge - Upgrade Bridge Rail (Stevens)	Nickel	May-07	May-07	√	448	468

WSDOT Capital Project Delivery Programs

Projects to be Advertised

Forty-One Projects in Delivery Pipeline for December 31, 2006 through June 30, 2007
Nickel and Transportation Partnership Account (TPA) Projects Now Being Advertised for Construction or Planned to be Advertised
Dollars in Thousands

Project Description	Fund Type*	Original Planned Ad Date	Current Planned Ad Date	On Schedule	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete
I-90/EB Ramps to SR 202 - Construct Roundabout (King)	Nickel	Jan-07	Jan-07	√	940	1,806
I-90/Latah Creek and Lindeke St Bridges - Upgrade Bridge Rail (Spokane)	Nickel	May-07	May-07	√	737	770
U.S. 101/Mt Walker - Add Passing Lane (Jefferson)	TPA	Jan-07	Apr-07	Delayed[8]	2,500	2,436
U.S. 101/Quinault River Bridge - Upgrade Bridge Rail (Grays Harbor)	Nickel	Mar-07	Jun-07	Delayed[9]	230	268
SR 105/Johns River Bridge - Upgrade Bridge Rail (Grays Harbor)	Nickel	Mar-07	Jun-07	Delayed[10]	287	338
SR 116/SR 19 to Indian Island - Upgrade Bridge Rail (Jefferson)	Nickel	Mar-06	May-07	Delayed[11]	154	475
SR 167 HOT Lanes Pilot Project - Managed Lanes (King)	TPA	Sep-07	Mar-07	Advanced	15,384	17,796
SR 167/S 180th St to I-405 - SB Widening (King)	TPA	Sep-07	Feb-07	Advanced	50,000	27,532
SR 169/140th Way SE to SR 900 - Add Lanes (King)	TPA	Mar-07	Mar-07	√	2,818	2,818
SR 241/Rattlesnake Hills Vicinity - Roadside Safety (Benton, Yakima)	TPA	Jun-07	Jun-07	√	1,665	1,700
SR 260,263, and 278 - Upgrade Guardrail (Franklin, Spokane, Whitman)	Nickel	Jan-07	Mar-07	√	1,025	1,072
SR 401/US 101 to E of Megler Rest Area Vic - Upgrade Guardrail (Pacific)	Nickel	Apr-07	Feb-07	Advanced	130	317
I-405/SR 181 to SR 169 - Widening (King)	TPA	Apr-07	Feb-07	Advanced	137,440	163,653
I-405/I-5 to SR 181 - Widening (King)	TPA	Jan-08	Feb-07	Advanced	30,000	18,210
SR 509/SR 518 Interchange - Signalization and Channelization (King)	TPA	Jul-07	Apr-07	Advanced	10,618	11,888
SR 515/SE 182nd St to SE 176th St Vic - Construct Traffic Island (King)	TPA	Mar-07	May-07	√	1,080	1,381
SR 518/SeaTac Airport to I-5 - Eastbound Widening (King)	TPA	Apr-07	Apr-07	√	35,589	35,996
SR 520/W Lake Sammamish Parkway to SR 202, Stage 3 - Widening (King)	Nickel	Dec-06	Jan-07	Delayed[12]	102,300	102,372

WSDOT Capital Project Delivery Programs

Projects to be Advertised

Forty-One Projects in Delivery Pipeline for December 31, 2006 through June 30, 2007

Nickel and Transportation Partnership Account (TPA) Projects Now Being Advertised for Construction or Planned to be Advertised
Dollars in Thousands

Project Description	Fund Type*	Original Planned Ad Date	Current Planned Ad Date	On Schedule	Current Legislative Expectation (Baseline)	Current Estimated Cost to Complete
SR 522/University of Washington Bothell - Build Interchange (King)	TPA	Mar-06	Jan-07	Delayed[13]	30,120	39,570
SR 531/Lakewood Schools - Construct Sidewalks (Snohomish)	TPA	Apr-07	Apr-07	√	660	693
SR 542/Woburn to McLeod - Widen to Four Lanes (Whatcom)	TPA	Apr-07	May-07	√	1,000	1,000
SR 542/Boulder Creek Bridge - Replace Bridge (Whatcom)	TPA	Jan-07	Apr-07	Delayed[14]	6,054	7,264
Total (January 1, 2007, through June 30, 2007)				**66%**	**$540,104**	**$573,503**
19 Nickel Projects				47%	$192,132	$218,413
22 TPA Projects				82%	$347,972	$355,090

Data Source: WSDOT Project Control and Reporting Office
*As established by the 2005 Legislative Evaluation and Accountability Program (LEAP) committee. However, dollars shown are for all fund types, not just Nickel or Transportation Partnership Account funds.

Project Details:

[1]Ad delay to address design deviations and late addition of consultant staff to ensure timely delivery of the project.
[2]Delay is due to unresolved utilities issues.
[3]Ad date was delayed due to environmental permitting issues.
[4]Ad date was delayed due to environmental permitting issues.
[5]Ad date was delayed due to environmental permitting issues.
[6]Delay is to tie with another project for efficiency.
[7]Ad date was delayed due to environmental permitting issues
[8]Delay was caused by retaining wall design work necessitated by geotech issues, which in turn caused the delay biological assessment work. Currently on track to meet the new ad date.
[9]Ad date changed to balance with Nickel Bridge Rail retrofit allocation.
[10]Ad date changed to balance with Nickel Bridge Rail retrofit allocation.
[11]Ad delay due to DAHP (Historic Preservation) review required for this project.
[12]The advertisement for the Flyover ramp portion of this project has been delayed to January, 2007 due to stormwater and wetland design changes. The widening portion of the project will be advertised at a later date.
[13]Ad date delay due to environmental permit issues
[14]Ad date delay due to time required to analyze alternative bridge footings, which delayed environmental review and permitting process.

WSDOT's Capital Project Delivery Programs

Selected Capital Project Delivery Highlights

Highway Construction Program

Updated Since September 30, 2006

I-405/112th Ave SE to I-90 - NB Widening (King)

WSDOT advertised its request for proposals in October, three months earlier than planned for this design-build project. This project combines the Bellevue Nickel Project and the TPA Project, 112th Avenue SE to I-90, into one design-build contract. It will widen I-405 within the City of Bellevue, including lane-widening improvements and a new three-lane bridge. In February 2007 WSDOT will select the proposal reflecting the best value for the public.

I-405/SR 181 to SR 169 - Widening (King)

Springbrook Creek Wetland and Habitat Mitigation Bank

WSDOT, in partnership with the City of Renton, awarded a contract for the Springbrook Creek Wetland and Habitat Mitigation Bank project. The 130-acre Springbrook Bank provides compensatory mitigation in advance of unavoidable impacts to wetlands and other aquatic resources from future projects. Springbrook Bank is Washington's first bank with a state and local partnership agreement in an urban area. This project was developed as an Early Environmental Investment (EEI) as part of the I-405 Corridor and Congestion Relief program.

I-90/Moses Lake Area - Replace Bridges &

I-90/Potato Hill Bridge-Add Pedestrian Access (Grant)

These two projects were combined into a single $3.9 million contract to replace the existing Potato Hill Bridge to improve freight mobility along I-90 by increasing the vertical clearance under the bridge and to improve pedestrian and bicycle access across I-90 by providing new sidewalks on the bridge. Awarded to Weaver Construction on January 17, 2006, the bridge was open to traffic ahead of schedule on September 15, 2006. The larger bridge replacement project was approximately $650,000 under budget (Nickel Funds) and the bicycle/pedestrian work was completed on budget (TPA).

SR 16/36th St to Olympic Dr NW - Add HOV Lanes (Pierce) &

SR 16/I-5 to Tacoma Narrows Bridge - Add HOV Lanes (Pierce)

This $90.5 million Nickel-funded corridor widens SR 16 from the Olympic Drive interchange in Gig Harbor to the Nalley Valley Viaduct in Tacoma. To ensure efficiency in tracking and management, the corridor was divided into two separate Nickel projects, *SR 16/36th Avenue to Olympic Drive* and *SR 16/I-5 to Tacoma Narrows Bridge - Add HOV Lanes*; it will be constructed under three separate primary contracts with *SR 16/I-5 to Tacoma Narrows Bridge - Add HOV Lanes*.

The first two contracts were completed on budget, on November 17, 2004 and July 25, 2006, respectively. The third contract, *SR 16/Union Avenue to Jackson Street - HOV*, remains under construction and is 90% complete as of September 15, 2006. This last contract is projected to be operationally complete by late January 2007, still several months earlier than the planned Spring 2007 date. Construction to date includes four new bridges, two widened bridges, a tunnel, ten miles of HOV lanes (five miles in each direction), and five miles of multi-use trail between 25th Street in Tacoma and Stone Drive in Gig Harbor.

SR 16/NW of Tacoma Narrows to SE of Burley - Install Cable Barrier (Kitsap, Pierce)

Work is underway on a $2.0 million project to install a high-tension cable barrier guardrail system on two separate state highways: SR 16 between Olympic Drive NW and the SR 302 interchange (mileposts 10.89 –16.00) in Pierce County, and SR 3 between Kitsap Way and the SR 305 interchange (mileposts 38.52 –53.23) in Kitsap County. The project was awarded to Petersen Brothers on July 3, 2006, at 14.7 % over the Engineer's estimate. The work start was delayed several months to October 23, 2006, due to difficulties in materials procurement. The delay put construction activities later in the year and the field conditions required more temporary erosion control measures than anticipated.

The construction contract is currently 25% complete. The SR 16 portion of the project is complete with cable guardrail system installation and upgrades to the guardrail terminals.

SR 165/Carbonado Vicinity - Upgrade Guardrail (Pierce)

This project will replace several sections of outdated beam guardrail and cable guardrail with new beam guardrail, precast concrete barrier, and updated guardrail ends. The goal of this project is to provide a safer roadway and eliminate maintenance problems. The project was awarded on schedule to the low bidder, Dirt and Aggregate Interchange, Inc., on December 5, 2006 within 2% of the Engineer's estimate. Total project cost is within the projected budget. Work is expected to begin in April 2007 and to be completed on schedule.

SR 202/SR 520 to Sahalee Way - Widening (King)

This project will widen SR 202 from two to four lanes between East Lake Sammamish Parkway and Sahalee Way. It will construct 22 retaining walls; replace two new bridge halves; install 1.5 miles

Selected Capital Project Delivery Highlights

of bike lanes; construct a half-mile of noise walls; and constructing wet ponds and bioswales. It is one year ahead of schedule and within budget. WSDOT's portion of the underground utility work at the west end of the project is completed.

SR 240/I-182 to Richland Y - Add Lanes (Benton)

These two projects were combined into a single $30.4 million dollar contract to construct additional lanes on SR 240 between Richland and Kennewick, as well as link Interstate 182 with the U.S. Department of Energy's Hanford site, the Columbia Center commercial area, and east Kennewick's industrial zones. WSDOT coordinated with the City of Richland to successfully advertise several long closures to the public and move traffic smoothly. The contract is 75% completed and is projected to be open to traffic ahead of the Fall 2007 schedule.

SR 31/Metaline Falls to Canadian Border - All Weather Road (Pend Oreille)

This project constructs an all-weather highway to eliminate truck weight restrictions. As reported in the September 30, 2006 *Gray Notebook*, WSDOT and the contractor worked through several unforeseen construction site issues resulting in a less than 1% ($130,000) increase to the overall project's budget. Due to this successful partnership, the project was completed in October 2006, one month ahead of schedule.

SR 520/W Lake Sammamish Parkway to SR 202, Stage 3 - Widening (King)

This $13 million flyover ramp project is part of the overall $102 million SR 520 HOV widening project. In the December 2004 *Gray Notebook*, WSDOT announced its intent to advance the flyover ramp construction advertisement date to December 2006, twenty-two months ahead of the overall widening project. This will create a much-needed improvement to traffic flow at the SR 520/SR 202 interchange. The flyover ramp project advertisement has now been moved to January 2007 from December 2006 to meet current environmental standards. The change is expected to have no impact on the Operationally Complete milestone of October 2011 for the widening project.

SR 9/Nooksack Rd Vicinity to Cherry St - New Alignment (Whatcom)

On November 22, 2006, a new highway alignment from Nooksack Road to Cherry Street was opened to traffic, approximately one year ahead of schedule. This will alleviate weather-related load restrictions and reduce the number and severity of accidents. While the construction contract was completed within budget, the overall project at completion will be $1.0 million over budget.

U.S. 2/Dryden - Install Signal (Chelan)

This safety improvement project will install a traffic signal at the city of Dryden on U.S. 2/97. This project was included in a single contract along with a paving project (funded with pre-existing funds) to provide a more efficient construction and bidding process. Although the signal work was $37,000 over budget, the total contract was 15% under budget. The contract was awarded in November 2006 and is proceeding on schedule. The appropriate budget adjustments have been made.

I-405 Project Delivery Highlight

In late 2005, WSDOT began negotiations with the Burlington Northern Santa Fe Railroad (BNSF) to allow work on the Wilburton Tunnel crossing as part of improving I-405. As discussions progressed, BNSF was clear on the need to keep their railroad traffic moving at all times within their right-of-way. In order for WSDOT to widen I-405, a new Wilburton tunnel would be needed. BNSF required that WSDOT build temporary tracks at the crossing at an estimated cost of $10 million.

Through continued discussions with BNSF, another alternative emerged: provide access to the Boeing Renton plant, the primary rail freight user in the corridor, from the south. Currently, the 737-800 fuselages being shipped from Kansas cannot be shipped from the south due to width restrictions on the Cedar River Bridge. As a result, the oversized fuselages are shipped from the north and cross over the Wilburton Tunnel. This new alternative removed the need for freight access from the north. The agreement with BNSF for the Wilburton crossing includes a WSDOT contribution up to $10 million towards the cost of a new Cedar River bridge. This allows for easier road construction on I-405 and removes the need for a new Wilburton tunnel, saving at least $20 million.

In June of 2006, WSDOT re-estimated all construction projects, due to rapid and unprecedented increases in construction costs experienced in 2005. (See pp.42-43 for more information.) If an agreement had not been made with BNSF to accommodate railroad traffic rerouting via a new Cedar River bridge, it is estimated the project would be at least $20 million over budget. As of now, WSDOT expects costs to be within the approved budget.

Additionally, BNSF has applied to the Surface Transportation Board for abandonment of the ¾ mile segment of rail line at the I-405 Wilburton crossing. BNSF is also negotiating with King County over the possible sale of the rail corridor for trail use.

WSDOT's Capital Project Delivery Programs

"Watch List" Projects - Cost and Schedule Concerns

Watch List Summary

New to the Watch List	Project Type	Watch List Issue
I-405/SR 167 to SR 169 - NB Widening	Highway	Tribal negotiations
I-5/Chehalis River Flood Control - Construct Levies	Highway	Design, Third party decision
I-5/S 48th to Pacific Avenue - HOV	Highway	Cost increase
SR 16/Burley-Olalla Interchange - Build Interchange	Highway	Cost Increase
SR 161/24th to Jovita - Add Lanes SR 161, 36th Street East to Jovita Boulevard	Highway	Funding availability
SR 24/I-82 to Keys Road - Add Lanes	Highway	Environmental costs
SR 3/Imperial Way to Sunnyslope - Paving	Highway	Franchise agreement with Utilities
SR 3/SR 303 Interchange (Waaga Way) - Construct Ramp	Highway	Cost increase, Erosion control
SR 515/SE 182nd St to SE 176th St Vic - Construct Traffic Island	Highway	Design, Cost increase
SR 516/208th and 209th Ave SE - Add Turn Lanes	Highway	Cost increase, Utility & Weather delay
SR 539/Horton Road to Tenmile Road - Widen to Five Lanes	Highway	Cost increase, Schedule delays, Wetland mitigation
SR 539/Tenmile Road to SR 546 - Widening	Highway	Environmental permitting, Utility permitting, Design
SR 542/Boulder Creek Bridge - Replace Bridge	Highway	Design, Cost increase
SR 543/I-5 to Canadian Border - Add Lanes	Highway	Cost increase, Drilling
SR 9/Schloman Rd to 256th St NE - New Alignment	Highway	Budget, Environmental permitting delays
SR 9/SR 522 to 228th St SE - Widening (Stage 1), and SR 9, 228th St SE to 212th St SE (SR 524) (Stage 2) NW	Highway	Cost increases on right-of-way, Roadway excavation
U.S. 101/Lilliwaup Vicinity - Stabilize Slope	Highway	Environmental review, Endangered fish species
U.S. 101/Mt Walker - Add Passing Lane	Highway	Geotechnical issues
U.S. 395/NCS- Francis Ave to Farwell Rd - New Alignment	Highway	BNSF negotiations and scheduling
TS&W Yakima Sawmill Traffic Upgrades	Rail	Third party negotiations
Updated Since September 30, 2006	**Project Type**	**Watch List Issue**
SR 20/Ducken Rd to Rosario Rd - Add Turn Lanes	Highway	Design, Funding, Unique guardrails
SR 522/University of Washington Bothell - Build Interchange	Highway	Cost increase, Schedule delay, Environmental
SR 518 SeaTac Airport to I-5 - Eastbound Widening	Highway	Tribal negotiations, Fish passage
SR 7/SR 507 to SR 512 - Safety Improvements	Highway	Contracting complexities
U.S. 12/SR 124 Intersection - Build Interchange	Highway	Environmental documentation, Road closures
Mt. Vernon Siding Upgrade	Rail	Schedule delays, Public mitigation, Wetlands
PR & CC Cheney-Coulee-Pullman Acquisition & Upgrades	Rail	Funding, MOU on Real Estate
Stanwood Commuter Rail Station	Rail	Design, Scope increase, Cost increase
Vancouver Rail Project Inc. 39th St Bridge	Rail	Design, Cost increase
Anacortes Multimodal Terminal	Ferries	Marine construction regulatory issues
Construct Four 144-Car Replacement Auto-Passenger Ferries	Ferries	Cost increase, Labor cost increase
SR 16/ Burley-Olalla Interchange - Build Interchange	Highway	Cost increase, Wetland mitigation, Fish passage
Removed From Watch List this Quarter	**Project Type**	**Watch List Issue**
I-5/Rush Road to 13th St - Add Lanes	Highway	Right-of-way, Cost increase
I-5/SR 502 Interchange - Build Interchange	Highway	Cost increase, Inflation, Soil stabilization
I-90/EB Ramps to SR 202 - Construct Roundabout	Highway	Cost increase, Design
SR 20/Quiet Cove Rd Vicinity to SR 20 Spur - Widening	Highway	Design, Right-of-way
SR 202/Junction SR 203 Construct Roundabout	Highway	Design, Budget
SR 503/Gabriel Rd Intersection - Add Turn Lanes	Highway	Cost increase, Lowered accident potential
New Creston Livestock Feed Mill Spur Track	Rail	Funding availability
SR 116 to SR 19, Indian Island – Bridge Rail	Highway	Material Costs
SR 167, 15th Street SW to 15th NW – HOV	Highway	Environmental permitting
SR 167 HOT Lanes Pilot Project	Highway	Federal standards and funding

"Watch List" Projects - Cost and Schedule Concerns

New to the Watch List

I-405/SR 167 to SR 169 - NB Widening (King)

This project will widen I-405 from I-5 to SR 167, create one lane southbound on SR 167, and extend the southbound SR 167 HOV lane to I-405. The project is currently in negotiations with the Muckleshoot Tribe to resolve comments the tribe has made on project permits pending at the U.S. Army Corps of Engineers (USACE). If WSDOT is not able to resolve the issues with the Tribe to the Corps' satisfaction, the NEPA and season 404 permit for the projects will not be issued prior to the scheduled April advertisement date. The I-405 team is working to reach resolution by mid-January.

I-5/Chehalis River Flood Control - Construct Levies (Lewis)

At the request of Lewis County, the 2006 Legislature put $2.5 million (Chehalis River Flood Control funds) in the 2007-09 biennium as the State's contribution to this local agency project to protect I-5 and the greater community from floods.

The Governor's budget proposal released in December maintains $2.5 million in the 2007-09 biennium with an April 2008 advertisement date. However, the local agencies are currently undecided on whether to build the project. Therefore, the January 2007 advertisement date will be delayed. WSDOT is awaiting direction from the Legislature and local agencies.

I-5/S 48th to Pacific Avenue - Add HOV Lanes (Pierce)

This project prepares I-5 for future HOV lanes from 48th Street to Pacific Avenue. It also improves safety on I-5 by adding a northbound collector-distributor lane for safer merges on and off the freeway from 38th Street and SR 16 to I-705. The current construction estimate has a potential budget overrun of $773,000 due to damaged structures.

SR 16/Burley-Olalla Interchange - Build Interchange (Kitsap)

This project constructs a new interchange on SR 16 to improve safety at this high accident location. The project is being delayed to address difficulties encountered in developing wetland mitigation and resolving a barrier to fish passage. The advertisement date is being delayed to February 2008 from November 2007. Construction is expected to be completed as originally scheduled in October 2009. This Nickel project is currently funded at $23.5 million in the Governor's budget. The estimated increase to $25 million to complete the project will be addressed in the February budget update to the Legislature.

SR 161/24th to Jovita - Add Lanes (Pierce)

SR 161/36th Street East to Jovita Boulevard

There are funding shortages on this project to improve capacity and safety. While the local communities continue to gain funding for project enhancements, the core project is experiencing funding shortages for all phases of the work. The project has been proposed to be constructed in two phases. WSDOT is awaiting Legislative direction.

SR 24/I-82 to Keys Road - Add Lanes (Yakima)

Unforeseen environmental costs are impacting this project to widen SR 24 from I-82 to Riverside Road, improve the interchange, and construct a new bridge over the Yakima River to relieve congestion and improve safety. Final roadway work should be completed in the Spring of 2007, ahead of the Winter 2007 schedule. Environmental costs may increase the project's current estimated cost at completion to $52.6 million, which is $1.7 million over the original budget. WSDOT is monitoring the project to minimize additional costs.

SR 3/Imperial Way to Sunnyslope - Paving (Kitsap)

This SR 3 safety project constructs roadway widening to facilitate a two-way, left-turn lane in the vicinity of MP 31.4 to MP 32.0. Prior to construction, existing utility facilities must be relocated. WSDOT has commitments from the affected utility companies to relocate per the franchise agreement, with the exception of Qwest. This will impact construction activities. WSDOT officials are meeting with Qwest officials to reach an agreement to mitigate the impact on construction activities. The advertisement date has been delayed to mid-January 2007 from November 6, 2006.

SR 3/SR 303 Interchange (Waaga Way) - Construct Ramp (Kitsap)

This $20.2 million project provides for a Single Point Urban Interchange (SPUI) to better accommodate current and future traffic needs. Prior to November, the project was prepared for winter by implementing industry-standard permanent and temporary erosion control measures. The site preparation was inspected and accepted by Washington State Department of Ecology.

Heavy rains in the months of November and December impacted the permanent erosion control measures implemented, and

"Watch List" Projects - Cost and Schedule Concerns

additional temporary erosion control measures were required. These measures have exceeded expected planned expenditures, increasing the cost by $500,000.

SR 515/SE 182nd St to SE 176th St Vic - Construct Traffic Island (King)

This project improves safety by replacing an existing two-way, left-turn lane with a traffic island and U-turn pockets around the SE 176th Street/Carr Road intersection. The signal and illumination at this intersection will also be upgraded. This project was combined for construction efficiencies with a paving project. The design was extensively revised. The project cost estimate currently exceeds the budget by $370,000 due to escalating material costs and redesign.

SR 516/208th and 209th Ave SE - Add Turn Lanes (King)

This project constructs turn lanes and a bus pull-out on SR 516. Drainage, illumination, signing, paving and landscaping improvements are part of this project. Completion has been delayed from 2006 to 2007, and the cost of the project has increased. Utility relocation took longer than expected, and combined with heavy rains delayed construction and resulted in higher contractor's costs. WSDOT is working with the utility company to recover costs; the estimated impact is approximately $100,000.

SR 539/Horton Road to Tenmile Road - Widen to Five Lanes (Whatcom)

Cost increases and schedule delays have impacted this project which proposes to widen 4.56 miles of SR 539, reconstruct traffic signals, replace non-standard box culverts at Deer Creek, illuminate channelized intersections, and replace two bridges.

A delay related to a wetland mitigation site affected cost and schedule. Estimated cost has increased by $9 million: $4.9 million for a new wetland mitigation site, and $2.6 million for additional engineering to recombine the design package, construction bid item cost increases, and inflation. The City of Bellingham will fund the remaining $1.5 million cost increase, which includes additional costs for work the City added.

SR 539/Tenmile Road to SR 546 - Widening (Whatcom)

Utility and environmental permitting are delaying construction of this project. WSDOT will build one additional lane in each direction to reduce congestion and to improve safety. The project includes a study to determine the best alternative to improve traffic flow: either widening SR 539 to the international border, or improving SR 546 east to SR 9 at Sumas.

Recent updates during the last quarter have resulted in a $16 million cost increase: $11.9 million is for Stage 1 design and construction cost increases, $3.7 million for a new wetland mitigation site, and $400,000 for construction materials.

The project schedule is currently at risk due to delays in acquiring environmental permits and completing the NEPA re-evaluation, further delaying utility relocations which need to be completed prior to construction. WSDOT is investigating separating the utility permits from the project permits in order to expedite the start of utility relocation.

SR 542/Boulder Creek Bridge - Replace Bridge (Whatcom)

The advertisement date on this project has been delayed to April 2007 from January 2007. The project is still on schedule to begin construction in 2007. The project will replace the existing bridge with a wider and taller bridge designed to current safety standards. The environmental review and permitting process was delayed due to design investigations. The project's anticipated Operationally Complete date is December 2008. Estimated cost at completion has increased by $1.2 million, primarily due to increased costs of steel, concrete, and petroleum-based products.

SR 543/I-5 to Canadian Border - Add Lanes (Whatcom)

The estimated cost at completion has increased on this project. WSDOT will construct new lanes for a separate truck route to address congestion and safety issues on SR 543. The project remains on schedule to be Operationally Complete in Fall 2008; however, because of increased drilling costs, erosion control, and traffic control costs, the estimated cost at completion has increased by $2.2 million.

SR 9/Schloman Rd to 256th St NE - New Alignment (Snohomish)

Permitting renewal has delayed the advertisement date for this project to realign two existing curves, widen SR 9, and install safety features. The budget shortfall reported in the September 2006 *Gray Notebook* has been resolved through the Office of Financial Management.

The advertisement date has been delayed to January 2007 from December 2006, due to permitting issues associated with a gravel pit. It is anticipated the permit delay will not impact the Fall 2008 Operationally Complete date.

SR 9/SR 522 to 228th St SE, Stages 1a and 1b - Add Lanes

"Watch List" Projects - Cost and Schedule Concerns

(Snohomish)

SR 9/SR 522 to 228th St SE – Widening (Stage 1), and SR 9, 228th St SE to 212th St SE (SR 524) (Stage 2) NW

Last quarter WSDOT reported removal of this project, widening SR 9 to four or five lanes, from the Watch List. Despite ongoing mitigation efforts, groundwater and off site water issues continue to impede construction, causing cost overrun. Overruns in roadway excavation and temporary erosion control items, and previously reported right-of-way settlement increases, put the project over budget by $7.6 million. It is currently scheduled to be Operationally Complete in November 2007.

U.S. 101/Lilliwaup Vicinity - Stabilize Slope (Mason)

Review of federal environmental regulations has delayed the schedule for this project. U.S. 101 at MP 332.77 to 332.88, in the Hoodsport Vicinity, has experienced wave erosion and is at risk of instability due to tidal action and wave scouring. WSDOT proposes to correct undermined road shoulders and place a rock barrier in wave-eroded locations to protect slopes adjacent to Hood Canal.

Rock placement in the waters of Hood Canal poses a potential threat to listed threatened and endangered salmon species. The project is going through formal consultation with NOAA-Fisheries and USFWS to comply with the Endangered Species Act. This has delayed the advertisement date to April 21, 2008 from January 2, 2007. The project's Operationally Complete date will change to December 31, 2008 from November 30, 2007. The project will still be delivered within the Legislative intent and original budget.

U.S. 101/Mt Walker - Add Passing Lane (Jefferson)

Geotechnical issues have delayed advertisement of this project to March 2007 from January 2007. Construction of this northbound truck passing lane will relieve traffic congestion. This delay will not affect the Operationally Complete date of October 2007. Solutions to the geotechnical issues might increase project costs beyond the available budget. WSDOT is determining the most cost-effective solution.

U.S. 395/NSC-Francis Ave to Farwell Rd - New Alignment (Spokane)

Burlington Northern Santa Fe (BNSF) scheduling may delay the schedule of this project. This project constructs two lanes of the North Spokane Corridor (NSC) between Francis Avenue and Farwell Road, and completes the grading between U.S. 2 and Wandermere. As reported in the last *Gray Notebook*, this project has been divided into six construction contracts to increase the potential for more competitive bidding and to more successfully manage construction risk. The first contract and second contracts are completed, the third contract is underway, and the fourth and fifth contracts are scheduled for advertisement in early 2007. The sixth contract, construction of a BNSF railroad tunnel, is scheduled for advertisement in March 2007.

There is some risk that BNSF approval for the new railroad tunnel design may not be received in time to keep the tunnel construction on schedule for the March 2009 operationally complete date.

TS&W Yakima Sawmill Traffic Upgrades (Yakima)

Third party negotiations may delay this project, which upgrades the existing Toppenish Simcoe & Western line for increased traffic from the Yakama Tribe sawmill. In August 2006, WSDOT and Yakima County executed amendments to the grant allowing the private operator to provide labor and equipment at no cost, which allows the entire line to be upgraded, rather than half as originally funded. The new plan calls for grant funds to be used for the purchase of materials and administrative oversight with Columbia Basin Railroad to donate labor and equipment to perform the work.

In October 2006, WSDOT learned that the railroad and county are still negotiating for the railroad's donation to the project. The project will most likely be delayed past the end of the biennium.

Updated Since September 30, 2006

SR 20/Ducken Rd to Rosario Rd - Add Turn Lanes (Island, Skagit)

The advertisement date on this project has been delayed to January 2007 from December 2006 due to design concerns. This project improves existing guard rail and illumination, and constructs a southbound left-turn lane and a northbound right-turn lane at Ducken Road. The project is within Deception Pass State Park limits. The new guardrail will retain many of the character defining features of the old guardrail, including the log and rock-and-mortar post appearance, as defined by a Memorandum of Understanding between the Federal Highway Administration (FHWA) and the Washington State Parks and Recreation Commission.

The design budget shortfall reported last quarter has been successfully resolved. However, the advertisement date has been

"Watch List" Projects - Cost and Schedule Concerns

delayed to January 2007 from December 2006 in order to fully address design questions from the Washington State Historic Preservation Office and finalize the contract documents.

SR 518/SeaTac Airport to I-5 - Eastbound Widening (King)

This project adds a third eastbound lane from the North Airport Expressway to the I-5/I-405 Interchange to reduce traffic congestion and improve traffic flow from SeaTac Airport. WSDOT is currently in negotiations with the Muckleshoot Tribe to resolve comments the Tribe has made on project permits pending at the USACE. WSDOT must resolve the issues with the Tribe in order for USACE's to issue the NEPA document and Corps' permit (section 404) prior to the scheduled advertisement date.

The Tribe has formally requested that WSDOT remove a fish passage barrier and two culverts that convey waters WSDOT and Washington Department of Fish and Wildlife (WDFW) have determined are not fish bearing. The project is delayed and could be canceled if the cost of required mitigation overtaxes the project budget. This project is scheduled to be advertised in early April.

SR 522/University of Washington Bothell - Build Interchange (King)

In the September 2006 *Gray Notebook*, WSDOT reported a $7.0 million project cost increase as the result of cost adjustments for dewatering, roadway excavation, retaining wall, and storm water items. The contract construction schedule was increased from 410 to 470 working days, based on an independent review of the construction schedule, bringing the cost estimate to $8.7 million higher than the current Legislative appropriation.

Delays in acquiring the shoreline permit from the City of Bothell, obtaining the NEPA re-evaluation, and making final adjustments to the contract package will delay the Operationally Complete milestone to September 2009 from December 2007.

SR 7/SR 507 to SR 512 - Safety Improvements (Pierce)

Complex construction coordination delayed awarding this project, further delaying the project and increasing costs. To improve vehicle and pedestrian safety, this Nickel project constructs sidewalks, retaining walls, and street lighting, and consolidates driveway access points. The Open to Traffic date will be delayed to April 2007 from November 2006. Construction bids were much higher than estimated because of significant work added and funded by several partners. This complexity delayed awarding the project to late September 2005, and the entire Summer 2005 construction season was lost.

U.S. 12/SR 124 Intersection - Build Interchange (Walla Walla)

This project is facing potential increased costs and schedule delays due to federal permitting requirements. The project improves safety on U.S. 12 by replacing two signalized intersections - SR 124 and Humorist Road - with an interchange near SR 124 and an overpass at Humorist Road. The total cost of the project could exceed current funding by approximately $14 to $16 million, including additional inflation and escalation costs. The most substantial cost risk is driven by potential changes to the ultimate configuration of the interchange and the overpass, based on public concerns regarding access to U.S. 12 and the existing congestion on SR 124.

Potential schedule delays may arise from the need for a higher level of environmental documentation for the project and the acquisition of property from the McNary Wildlife Refuge, a process requiring approval from Congress. WSDOT has met with Congressional staff and has received a support letter from a key Refuge conservation group. Letters from additional groups will also be sought. To acquire the needed property, suitable replacement parcels have been identified for a land exchange. Appraisals and negotiations will take place within the coming months.

Rail

Mt. Vernon Siding Upgrade (Skagit)

Delays to the schedule arise from the proposed closure of Hickox Road. This project will extend the existing siding to allow full-length freight trains and Amtrak *Cascades* trains to pass. As previously reported, unknown costs for mitigating the Hickox Road closure, wetland mitigation, and rail control signals have put the project budget of $3.8 million at risk. The proposed closure of the Hickox Road at-grade crossing continues to meet resistance from residents and officials from the City of Mt. Vernon and Skagit County. In January, 2007 BNSF railway will petition the Washington Utilities Transportation Commission to close the crossing, a legal delay of four to twelve months.

PR & CC Cheney-Coulee-Pullman Acquisition & Upgrades (Grant, Lincoln, Spokane, Whitman)

Funding availability is impacting this project. The 2004 Legislature appropriated funds to purchase the CW Branch of the Palouse-Coulee City Railroad owned by Watco Companies, Inc.

"Watch List" Projects - Cost and Schedule Concerns

In September 2005, the owner withdrew the property from the sale, claiming that the scrap value of the railroad had increased substantially.

Negotiations have resulted in resumed interim operations on the CW line until June 2007. As previously reported, a due date of October 31, 2006 was set for a Memorandum of Understanding (MOU) defining the process by which the purchase will be completed and memorialize the current operating agreement.

A delay in the finalizing of the MOU has resulted in an increased cost of acquisition and interim operations. The amount of funding available for the rehabilitation may no longer be sufficient to complete the project as originally scoped. The rehabilitation plan will need to be reviewed to make appropriate adjustments to stay within the project budget.

Stanwood Commuter Rail Station (Snohomish)

Scope increase and cost increase have delayed this project to design and construct a new passenger platform and other facilities at Stanwood to be served by Amtrak *Cascades* trains. Construction is estimated to be completed by November 2007, a five-month delay.

As previously reported in the September 2006 *Gray Notebook*, BNSF Railway has notified WSDOT that an extension to the siding at Stanwood will be required before Amtrak Cascades trains can serve the station facility. These improvements to the siding are beyond the scope of a separate project currently in design. The cost of these improvements will be released in February 2007.

Vancouver Rail Project Inc. 39th Bridge (Clark)

A delayed advertisement date and increased costs have impacted this project. Construction will build mainline tracks to allow freight trains to bypass the Vancouver rail yard. A rail siding for stopping freight trains and a new vehicle overpass will also be constructed. This will free up capacity on the north-south main line and improve Amtrak *Cascades* on-time performance.

The bridge advertisement date has been rescheduled from November 2007 to March 2008, and the current cost estimate is $7 million higher than anticipated. WSDOT remains in discussion with the City of Vancouver on a number of cost saving measures.

Ferries

Anacortes Multimodal Terminal

Impacts on this project include an increase in the cost of materials and construction delays. This project will replace the existing terminal, improve safety and access for passengers and vehicles, provide connections with other modes of travel, and increase amenities and services at the terminal. As previously reported in the last *Gray Notebook*, construction of the third tie-up slip has been delayed to September 2008 from the originally planned date of September 2005. However, the project could go to construction as early as September 2007 pending resolution of regulatory issues associated with marine construction.

It is estimated the project budget will require approximately $22 million more to cover materials escalation, additional costs associated with the construction delay of the tie-up slips project, and the City of Anacortes requirements for addressing traffic impacts on SR 20.

Construct Four 144-Car Replacement Auto-Passenger Ferries

Material and labor cost increases are affecting the total budget for this project. Continuing legal action may also impact the schedule and budget. This project constructs four 144-auto Ferries using a design build contract as required by RCW 47.60.810 - 822. After substantial review, WSDOT issued its Request for Proposals (RFP) to three pre-qualified shipyards on August 2, 2006. Two shipyards (J.M. Martinac and Todd Pacific) submitted Notices of Intent to Proceed under the procurement process. Both shipyards filed RFP protests with WSDOT and were denied. J.M. Martinac's denial has been appealed to Superior Court.

Potential bidders with acceptable technical proposals will bid in June 2007, and WSDOT will award the contract in September 2007. Four diesel generator sets for each of the four Ferries have been delivered in compliance with the diesel generator contract. The manufacture of main diesel engines has started for the propulsion system contract. An increase of 8% ($26 million) in the total project budget will be required to mitigate known material and labor price increases.

WSDOT's Capital Project Delivery Programs

"Watch List" Projects - Cost and Schedule Concerns

Removed From Watch List this Quarter

I-5/Rush Road to 13th St - Add Lanes (Lewis)

The project cost increase has been resolved in the Governor's proposed 2007-2009 budget. This project will widen I-5 from two lanes in each direction to three lanes between Rush Road and 13th Street. Last quarter, WSDOT reported an $11 million increase due to inflation and increases in costs for construction materials and real estate. The corresponding increase in the 2005-07 biennium was approved through the Office of Financial Management, allowing the project to be advertised on schedule.

I-5/SR 502 Interchange - Build Interchange (Clark)

The advertisement date was successfully met. An increase in the total project cost, $13 million due to inflation, construction material, and soil stabilization, was accommodated by the Governor's proposed 2007-09 budget. This project reduces traffic congestion on I-5 between NE 179th Street and NE 219th Street by constructing a new interchange with SR 502 at 219th Street. The new interchange will provide a more direct connection between Battle Ground and I-5.

I-90/EB Ramps to SR 202 - Construct Roundabout (King)

In the September 2006 *Gray Notebook*, WSDOT reported a $600,000 construction cost increase resulting from construction material cost escalation and design refinements. The budget shortfall reported was resolved through the Office of Financial Management and the project remains on schedule for advertisement. This project constructs a two-lane roundabout at the intersection of I-90 and SR 202 in North Bend. The WSDOT project team modified the design in order to avoid impacts to an existing bridge and wetlands, and to avoid purchasing new right-of-way.

SR 20/Quiet Cove Rd Vicinity to SR 20 Spur - Widening (Skagit)

The estimated increase for construction and the funding shortfall for Stage 2 reported in the last *Gray Notebook* have been resolved. This project widens SR 20 lanes and shoulders, and constructs a new bridge over Meadow Creek for left-turn lanes and fish passage. The project also improves the road alignment, closes intersections with sharp angles, and constructs new left- and right-turn lanes. Stage 1 remains on schedule for advertisement in April 2007.

The $2.7 million design and right-of-way funding shortfall for Stage 2 reported in the last *Gray Notebook* has been resolved through the Office of Financial Management to keep the project on track for advertisement in April 2007. The estimated cost at completion increase of $6 million for construction has been included in the Governor's proposed 2007-2009 budget submitted to the Legislature.

SR 202/Junction SR 203 Construct Roundabout (King)

The budget shortfall has been resolved. This project will construct a roundabout at the intersection of SR 202 and SR 203. The budget shortfall reported in the last *Gray Notebook* was resolved through the Office of Financial Management and the project was advertised on December 26, 2006.

SR 503/Gabriel Rd Intersection - Add Turn Lane (Clark)

WSDOT recommends deletion of this project due to increased costs for right of way and lowered accident potential. This project adds a right turn lane from SR 503 onto Gabriel Road, as well as electrical lighting, new signing and striping to reduce the risk of collisions when motorists are making a right turn. However, there has been a sustained accident reduction trend at the intersection. The Governor's proposed 2007-2009 budget request deferred construction from 2007 to 2023, allowing the Legislature to determine the project direction.

New Creston Livestock Feed Mill Spur Track (Lincoln)

This project has been delayed and funding remains to be secured. This project provides rail service to a livestock feed mill (now a biodiesel plant) located on an industrial site developed by the Lincoln County Public Development Association. As previously reported, the following have all combined to delay this project: uncertainties with the purchase of the CW Branch of the Palouse-Coulee City Railroad; difficulties with the tenant that led to the Community Economic Revitalization Board (CERB) withdrawing grant funding; and cost increases of approximately $140,000. CERB will decide on funding for the project in January 2007. WSDOT will complete final engineering in the Spring of 2007 if funding is secured to construct the project.

SR 116 to SR 19, Indian Island – Bridge Rail

This safety project that installs a strengthened guardrail system was reported last quarter to report a delay in advertisement date by one quarter in order to allow time to address historic concerns associated with the bridge.

WSDOT's Capital Project Delivery Programs

"Watch List" Projects - Cost and Schedule Concerns

SR 167, 15th Street SW to 15th NW – HOV

In the September GNB WSDOT reported environmental non-compliance events during construction the past quarter. Construction was shut down for one day while work was done to bring the project back into compliance with all permit conditions. The project overall schedule was not affected by this shutdown and the project is now in environmental compliance.

SR 167 HOT Lanes Pilot Project

In the September 2006 *Gray Notebook*, WSDOT reported issues that needed to be resolved for the project to remain on schedule and on budget, with resolution of issues expected in October 2006. These issues, including federal standards and available funding have been resolved and the project is moving ahead on schedule and on budget.

WSDOT's Capital Project Delivery Programs

Project Delivery Summary Reports

Schedule Milestone Tracking for Nickel Projects

Milestone Results for all Nickel Projects with One or More Milestone Activities

Milestone	Scheduled Milestones to Date	Scheduled Milestones Achieved to Date	Scheduled Milestones not Achieved	Scheduled Milestone Achievement Rate[1]	Milestones Achieved Early[1]
Project Definition Complete					
Biennium to Date (2005-07)	19	17	2	89%	1
Cumulative to Date	132	124	3	98%	2
Begin Preliminary Engineering					
Biennium to Date (2005-07)	30	30	0	100%	0
Cumulative to Date	130	128	2	98%	0
Environmental Documentation Complete					
Biennium to Date (2005-07)	45	44	1	98%	8
Cumulative to Date	103	100	3	97%	9
Right of Way Certification					
Biennium to Date (2005-07)	28	24	4	86%	1
Cumulative to Date	53	48	5	91%	1
Advertisement Date					
Biennium to Date (2005-07)	45	36	9	80%	2
Cumulative to Date	96	86	10	90%	2
Operationally Complete					
Biennium to Date (2005-07)	23	19	4	83%	8
Cumulative to Date	42	38	4	90%	8

Data Source: WSDOT Project Control and Reporting Office

Note: Baseline milestone dates are derived from the original Legislative expectation (2005-2007 budget). Advertise Project and Operationally Complete Milestones are considered on-time if completed within the scheduled baseline calendar quarter. All other milestones are reported as on-time if they are completed within +/- 6 weeks of baseline date.

[1]Project Milestones Achieved Early were originally scheduled beyond the current quarter and are not included in this quarter's Scheduled Achievement Rate

Milestone Definitions:

Project Definition Complete
Project definition is the preliminary picture of what a project will achieve and generally how it will do so. It includes deficiencies being addressed, the purpose for a project, location, and project information to the best available level. It is not a true project scope (that requires design effort) but it does support the very first preliminary cost estimate.

Begin Preliminary Engineering
A project schedule usually has two general phases, the pre-construction phase and the construction phase. Preconstruction involves design, right of way, and environmental activities. Beginning the preliminary engineering marks the start of the project design and is usually the first capital spending activity in the delivery process.

Environmental Documentation Complete
The National Environmental Protection Act (NEPA) and the State Environmental Protection Act (SEPA) require that an appropriate level of environmental assessment be prepared for almost all WSDOT projects. Depending on the project, these can take the form of an Environmental Impact Statement (EIS) or another document of lesser scale. These assessments end in the issuance of a Record of Decision (ROD) or other summary document. This milestone is the date that WSDOT will have finished and submitted to the appropriate regulatory agencies, the documentation for the ROD and/or issuance of permits.

Right of Way Certification
Often WSDOT projects require the acquisition of right of way or property rights. The Right of Way Certification marks the point in time that right-of-way acquisition requirements are met and the process is complete for advertisement.

Advertisement Date
This is the date that WSDOT schedules to publicly advertise a project for bids from contractors. When a project is advertised, it has a completed set of plans and specifications, along with a construction cost estimate.

Operationally Complete
This is the date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

WSDOT's Capital Project Delivery Programs

Project Delivery Summary Reports

Schedule Milestone Tracking for Transportation Partnership Account (TPA) Projects

Milestone Results for all TPA Projects with One or More Milestone Activities

Milestone	Scheduled Milestones to Date	Scheduled Milestones Achieved to Date	Scheduled Milestones not Achieved	Scheduled Milestone Achievement Rate	Milestones Achieved Early[1]
Project Definition Complete					
Biennium to Date (2005-07)	112	99	13	88%	12
Cumulative to Date	150	135	15	90%	12
Begin Preliminary Engineering					
Biennium to Date (2005-07)	118	117	1	99%	10
Cumulative to Date	149	148	1	99%	10
Environmental Documentation Complete					
Biennium to Date (2005-07)	59	46	13	78%	7
Cumulative to Date	72	54	18	75%	8
Right of Way Certification					
Biennium to Date (2005-07)	25	18	7	72%	0
Cumulative to Date	29	21	8	72%	0
Advertisement Date					
Biennium to Date (2005-07)	37	28	9	76%	5
Cumulative to Date	39	30	9	77%	5
Operationally Complete					
Biennium to Date (2005-07)	6	6	0	100%	11
Cumulative to Date	6	6	0	100%	11

Data Source: WSDOT Project Control and Reporting Office

Baseline Data: Baseline milestone dates are derived from the original Legislative expectation (2005-2007 budget). Advertise Project and Operationally Complete Milestones are considered on-time if completed within the scheduled baseline calendar quarter. All other milestones are reported as on-time if they are completed within +/- 6 weeks of baseline date.

[1]Project Milestones Achieved Early were originally scheduled beyond the current quarter and are not included in this quarter's Scheduled Achievement Rate

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Milestone Definitions:

Project Definition Complete
Project definition is the preliminary picture of what a project will achieve and generally how it will do so. It includes deficiencies being addressed, the purpose for a project, location, and project information to the best available level. It is not a true project scope (that requires design effort) but it does support the very first preliminary cost estimate.

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Operationally Complete
This is the date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

Paying for the Projects: Financial Information

2003 Transportation Funding Package

2003 Transportation Funding Package Highlights

Deposited into the Transportation 2003 (Nickel) Account (established in 2003)

- 5¢ increase to the gas tax
- 15% increase in the gross weight fees on trucks

Deposited into the Multimodal Account (established in 2000)

- An additional 0.3% sales tax on new and used vehicles
- A $20 license plate number retention fee

Revenue Forecast Update

The following information incorporates the November 2006 forecast. The accompanying charts compare the current projected revenue forecast to the baseline forecast used in the budget making process when the 2003 Funding Package was adopted. The 2003 Funding Package was developed as a ten-year plan from 2003 through 2013. Due to timing issues, the 2005 Legislature moved several preservation projects into the 2013-15 biennium. Both cumulative ten-year totals and individual biennial amounts are shown.

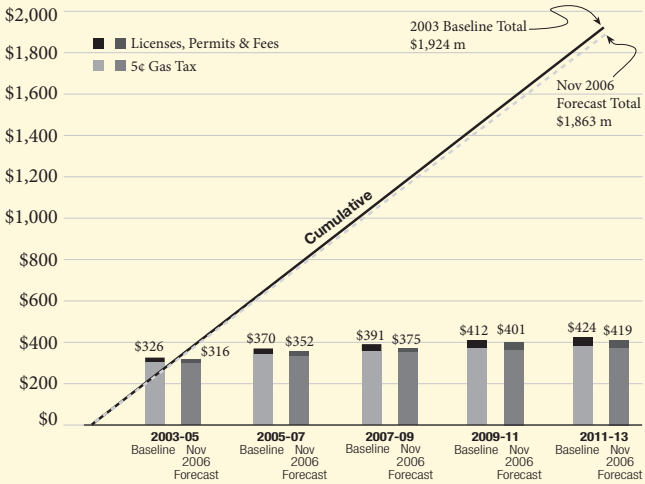
Current forecasted revenues include the most recent actual revenue collection data available as well as updated projections based on new and revised economic variables.

Transportation 2003 (Nickel) Account projections for the gas tax receipts and licenses, permits, and fees are slightly lower than the baseline forecast, causing a minor decrease in the ten-year outlook for the account (-3.3%).

Multimodal Account projections for the vehicle sales tax are slightly higher than the baseline forecast, resulting in a slight increase in the ten-year outlook (+1.6%).

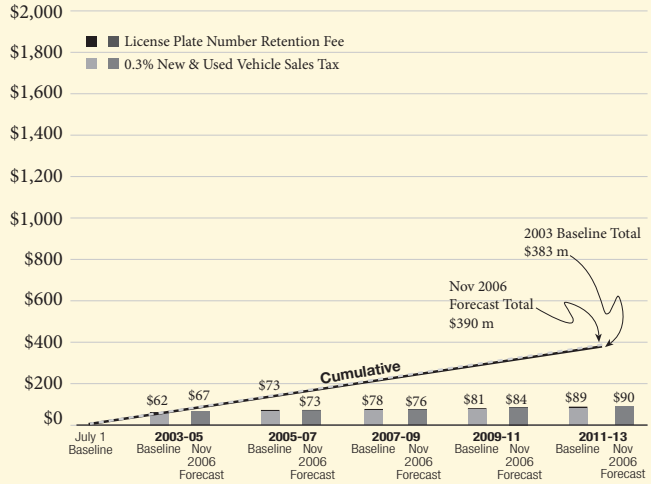
Forecasted revenues are still closely aligned with the legislative baseline projection for both accounts.

Transportation 2003 (Nickel) Account Revenue Forecast
March 2003 Legislative Baseline Compared to the November 2006 Transportation Revenue Forecast Council
Dollars in Millions



Numbers do not add due to rounding.
Data Source: Financial Planning

Multimodal Account (2003 Package) Revenue Forecast
March 2003 Legislative Baseline Compared to the November 2006 Transportation Revenue Forecast Council
Dollars in Millions



Numbers do not add due to rounding.
Data Source: Financial Planning

WSDOT's Capital Project Delivery Programs

Paying for the Projects: Financial Information

Transportation Partnership Program

2005 Transportation Package Revenue Sources

9.5¢ increase to the gas tax phased in over four years

- 3.0¢ in July 2005
- 3.0¢ in July 2006
- 2.0¢ in July 2007
- 1.5¢ in July 2008

New vehicle weight fees on passenger cars

- $10 for cars under 4,000 pounds
- $20 for cars between 4,000 and 6,000
- $30 for cars between 6,000 and 8,000

Increased combined license fees for light trucks

- $10 for trucks under 4,000 pounds
- $20 for trucks between 4,000 and 6,000 pounds
- $30 for trucks between 6,000 and 8,000 pounds
- Farm vehicles are exempt from the increase

A $75 fee for all motor homes

Fee increases to various driver's license services

- Original and renewal license application increased to $20 (previously $10)
- Identicards, Driver Permits and Agricultural Permits increased to $20 (previously $15)
- Commercial Driver License and Renewal increased to $30 (previously $20)
- License Reinstatement increased to $75 (previously $20)
- DUI Hearing increased to $200 (previously $100)

Fee increases to various license plate charges

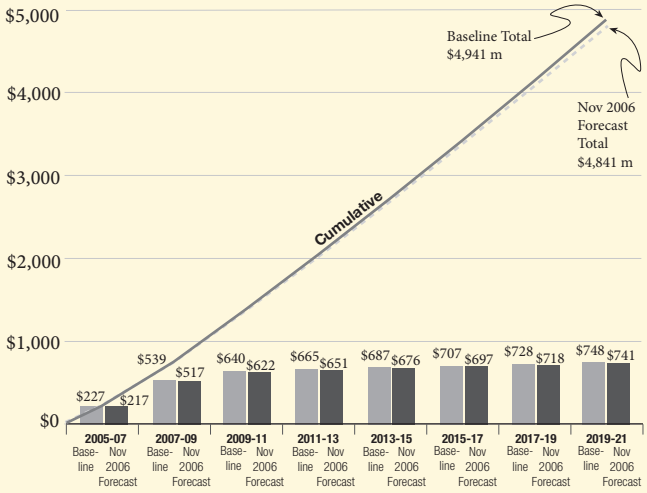
- Reflectorized Plate Fee increased to $2 per plate (previously 50¢)
- Replacement Plates increased to $10 (previously $3)

Revenue Forecast Update

The accompanying chart compares the current November 2006 revenue forecast to the "baseline" forecast used in the budget making process when the 2005 Funding Package was adopted. The 2005 Funding Package was developed as a 16-year plan extending from 2005 through 2021.

The November 2006 forecast for gas tax receipts over the 16-year period decreased slightly (-2.1%); however, forecasted revenues are still closely aligned with the legislative baseline projection.

Transportation Partnership Account
Gas Tax Revenue Forecast
March 2005 Legislative Baseline Compared to the November 2006 Transportation Revenue Forecast Council
Dollars in Millions



Forecast figures do not add due to rounding.
Data Source: Financial Planning

Bond Sales for the 2003 and 2005 Funding Packages

The 2003 and the 2005 Transportation Funding Packages are dependent on bond financing. Ultimately the gas tax component for both of these packages will be completely leveraged to pay debt service. The 2003 Transportation Funding Package contained two bond authorizations, an authorization of $2.6 billion for motor fuel tax bonds, and an authorization of $349.5 million for State General Obligation (GO) bonds over a 10-year period. The 2005 Transportation Funding Package included a $5.1 billion bond authorization to be issued over a 16-year period.

The proceeds from these gas tax bonds will be used to fund specific highway projects. The proceeds from the state GO bonds will be used to fund rail, ferry terminal, and local road projects. The table to the right displays the bond sales for the 2005-2007 biennium.

The current 2005-2007 biennial bond authorization enacted by the 2006 legislative session for the Transportation 2003 (Nickel) Account is $880.0 million and $49.6 million in State General Obligation Bonds for the Multimodal Account. Current bond sales for this biennium are $839.0 million for the Nickel Account and $16.35 million for the Multimodal Account. The differences between the appropriated amounts of $880.0 million and $49.6 million, respectively, and the actual bond sales are attributed to premiums received on prior bond sales and a reduced need of bond proceeds.

The current 2005-2007 biennial bond authorization enacted by the 2006 legislative session for the 2005 Transportation Partnership Account is $150.0 million. Current bond sales are $105.0 million for this biennium. The difference between the appropriated amount of $150.0 million and the actual bond sales are attributed to premiums received on prior bond sales and a reduced need of bond proceeds.

2003 Transportation Funding Package
Transportation 2003 (Nickel Account Bonds)
Total Authorization for 2005-07 $880,000,000
RCW 47.10.861

Date of Sale	Amount Sold	Interest Cost
August 2005	$170,000,000	4.38%
January 2006	185,000,000	4.43%
July 2006	160,000,000	4.69%
January 2007[1]	324,000,000	4.41%
Total Bond Sale	$839,000,000	
Bond Sale Premium[2]	$40,819,000	
Total Bond Proceeds	$879,819,000	

2003 Transportation Funding Package
Multimodal Transportation Account (GO Bonds)
Total Authorization for 2005-07 $49,600,000
RCW 47.10.867

Date of Sale	Amount Sold	Interest Cost
August 2005	$0	N/A
January 2006	0	N/A
July 2006	0	N/A
January 2007[1]	16,350,000	4.41%
Total Bond Sale	$16,350,000	
Bond Sale Premium[2]	$1,170,000	
Total Bond Proceeds	$17,520,000	

2005 Transportation Funding Package
Transportation Partnership Account Bonds
Total Authorization for 2005-07 $150,000,000
RCW 47.10.873

Date of Sale	Amount Sold	Interest Cost
August 2005	$0	N/A
January 2006	70,000,000	4.43%
July 2006	0	N/A
January 2007[1]	35,000,000	4.41%
Total Bond Sale	$105,000,000	
Bond Sale Premium[2]	$4,481,000	
Total Bond Proceeds	$109,481,000	

Data Source: Financial Planning
[1]The January bond sale amounts were submitted to the State Treasurer on November 6, 2006. The actual sale takes place January 23, 2007.
[2]Includes bond sale premium that was unspent in the 2003-05 biennium and premium accumulated in the first three bond sales of 2005-07, but does not include potential premium from the January 2007 bond sale.

Pre-Existing Funds Program: Programmatic Reporting

PEF Program Milestone Report

This quarter begins the first report on the progress of Pre-Existing Funds (PEF) projects by programmatic categories. The chart below shows the six programmatic categories that are being reported on and the number of projects associated with each category for this biennium. Additionally, WSDOT continues to report on six PEF projects that were selected due to size and visibility on a quarterly basis (see p. 35).

Why is the Pre-Existing Funds Program reported differently than the Nickel and TPA Program?

Unlike Nickel and Transportation Partnership Account (TPA) projects, which are fixed lists of projects set by the Legislature and funded with a line item budget for each individual project, the Pre-Existing Funds (PEF) projects are funded at the program level. Funding is aligned to commitments to address set priorities such as number of miles paved per biennium. Each biennium, new PEF projects are programmed based on prioritized needs and available funds so the list of PEF projects changes each biennium.

Because Nickel and TPA projects were defined and budgeted at the project level from the beginning, milestones and other benchmark data to monitor individual project delivery were established and are available. However, since PEF projects have been historically funded programmatically, this type of data has not been collected and is not currently available. Future programs will collect benchmark project data such as for the milestones reporting

Milestone Tracking for Pre-Existing Funds
Number of Projects with these Milestones, Biennium-to-Date
Milestone and Expenditure Achievement-to-Date
Dollars in Millions

	Number of Projects with these Milestones (2005-07 Biennium To-Date)							
	Begin Engineering		Advertised for Bids		Operationally Complete		Expenditures*	
Programmatic Categories[1]	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**
Pavement Preservation	158	163	105	94	143	139	$202	$189
Bridges (Preservation/Replacement)	47	44	35	29	36	27	$147	$129
Slope Stabilization	7	20	9	18	17	18	$41	$35
Safety (roadside, rumble strips, median cross-over, etc.)	38	45	41	37	54	53	$82	$75
Environmental Retrofit (fish passage improvement, stormwater runoff)	6	8	8	8	13	12	$14	$14
Other facilities (mobility, rest area, weigh stations, etc.)	20	31	23	14	25	19	$341	$268
Totals	276	311	221	200	288	268	$827	$710

Data Source: WSDOT Project Control and Reporting Office
*In Millions
[1]While elements of one or more categories may be included in some of the projects (such as a bridge preservation project that improves safety), every project has been assigned to one primary category for reporting purposes.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Programmatic Reporting

Advertisement Record: Two Hundred Projects Now in Construction as of December 31, 2006

Biennium to Date (2005-07)

The 2005-07 Highway Construction Program includes a commitment to advertise 313 Pre-Existing Funds (PEF) projects. PEF advertisements through the quarter ending December 31, 2006, were 200 of the planned 221, or 90% of the planned commitments for the first six quarters. Of the 221 scheduled, 25 were delayed to future quarters of this biennium, 19 were deferred to future biennia, and 3 projects were deleted.

Current Quarter (October 1 - December 31, 2006)

For the quarter there were fifty planned PEF advertisements. Twenty-four of these projects were advertised as scheduled. Thirteen of the planned advertisements were delayed to later in this biennium, eight have been deferred to a future biennium, and two were deleted. There were one advanced, six emergent, and five delayed projects advertised.

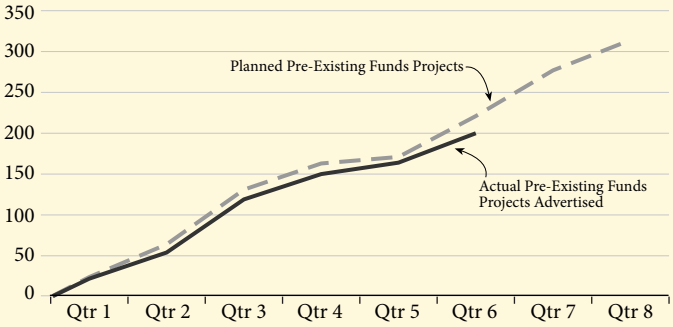
Highway Construction Program Advertisements

Pre-Existing Funds Projects

Planned vs. Actual Number of Projects Advertised

2005-2007 Biennium, Quarter 6 ending December 31, 2006

Project Count

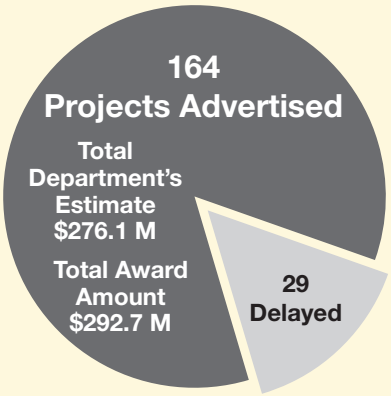


Data Source for all graphs: WSDOT Project Control and Reporting Office.

The table below summarizes the status of PEF projects advertised during the sixth quarter of the 2005-07 biennium.

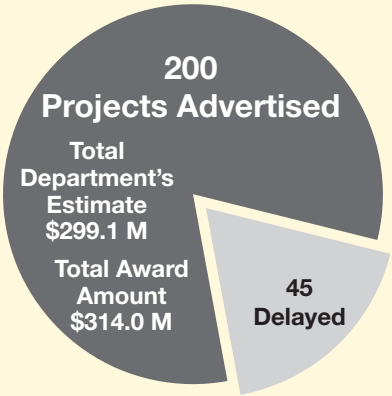
Pre-Existing Funds Projects: A Snapshot of Quarterly Progress and Total Biennial Progress to Date

End of Last Quarter
September 30, 2006



Projects Advertised	Projects Through Last Quarter	This Quarter's Progress	Biennium to Date Total
As Scheduled	121	24	145
Project Ads Early	10	1	11
Project Ads Late	18	5	23
Emergent Projects	15	6	21
Total Advertised	**164**	**36**	**200**
Projects Delayed			
Within the biennium (delayed)	17	13	25
Out of the biennium (deferred)	12	8	20
Total Delayed	**29**	**21**	**45**
Projects Deleted			
Projects Deleted	1	2	3
Total Deleted	**1**	**2**	**3**

End of This Quarter
December 31, 2006



Note: Due to WSDOT's ongoing effort to analyze and correct project data, the numbers of advertised projects will be updated to reflect small changes from quarter to quarter. Data has been updated and revised since PEF project data was last reported.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Advertisement Record

Advertisement Record: Projects Scheduled for and/or Advertised This Quarter
October 1, 2006-December 31, 2006

Project Description	On-Time Advertised	Project Description	On-Time Advertised
NC Region Sign Update 2005 - 2007 (Adams, Chelan, Douglas, Grant, Okanogan)	Advanced	I-90/Mt Baker Tunnel & Mercer Island Lid - PLC Replacement (King)	Deferred[15]
NC Region Guardrail Update - Year 2007 (Adams, Chelan, Douglas, Grant, Okanogan)	Delayed[1]	I-90/Moses Lake - Paving (Grant)	Deferred[16]
Southwest Region - Permanent Signing for 05-07 (Klickitat, Skamania)	√	I-90/Pines Rd Interchange - Signal System Rebuild (Spokane)	Delayed[17]
U.S. 2/Leavenworth to Cashmere - Paving (Chelan)	√	I-90/Sullivan Rd Interchange South - Signal System Rebuild (Spokane)	Delayed[18]
U.S. 2/Moses Coulee to SR 17 - 2007 Seal (Douglas, Grant)	√	U.S. 97/SR 10 to US 2 - Centerline Rumble Strips (Chelan, Kittitas)	Emergent[19]
U.S. 2, US 395, and US 195 Intersection Low-Cost Improvements (Lincoln, Spokane)	Delayed[2]	U.S. 97/Chelan Falls to Pateros - 2007 Seal (Chelan, Okanogan)	√
U.S. 2/Hayford Rd Signal - Signal System Rebuild (Spokane)	Delayed[3]	U.S. 97/Fort Okanogan to Okanogan - 2007 Seal (Okanogan)	√
I-5/Dearborn to Dayton Ave - Fiber Replacement (King)	Delayed[4]	U.S. 97/Oroville Vicinity - Paving (Okanogan)	√
I-5/Tumwater Blvd NB On Ram√Intersection - Safety (Thurston)	Deferred[5]	U.S. 97/S of Oroville to Canadian Border - Paving (Okanogan)	Emergent[20]
SR 9/SR 542 to Smith Creek Bridge Vicinity - Paving (Whatcom)	Deferred[6]	U.S. 97A/Wenatchee to Chelan - Centerline Rumble Strips (Chelan)	Emergent[21]
SR 17/ SR 260 Vicinity to Adams Co Line (BST) (Franklin)	Emergent[7]	U.S. 97A/Chelan to US 97 - 2007 Seal (Chelan)	√
SR 20/Sidney St Vic to Hastie Lake Rd Vic - Paving (Island)	Late[8]	U.S. 97/Fort Road Intersection Improvement (Yakima)	Deferred[22]
SR 20/Sidney St Vic to Scenic Heights - Realignment and Widening (Island)	Late[9]	U.S. 97/Satus Creek Bridge Vicinity - Paving (Yakima)	Early
SR 20/Bacon Creek Rd Vic to Damnation Creek Vic - Paving (Skagit)	Delayed[11]	SR 99/Battery Street Tunnel - Electrical/Mechanical Systems Upgrade (King)	Delayed[23]
SR 22/First Ave Intersection - Safety Improvements (Yakima)	Delayed[12]	SR 99/Evergreen Way to I-5 Vicinity - Paving (Snohomish)	Delayed[24]
SR 26/Thacker Rd West of Othello - Left Turn Lanes (Adams)	√	SR 105/Emergent Roadway Embankment Protection (Pacific)	Emergent[25]
SR 26/Othello Vicinity - 2007 Chi√Seal (Adams)	√	SR 150/Chelan to Chelan Falls - 2007 Seal (Chelan)	√
SR 28/East Wenatchee 31st to Hadley - Turn Lanes (Douglas)	Late[13]	SR 153/Methow River Bridges - Repair Decks - Stage 1 (Okanogan)	√
SR 28/East Wenatchee - Pedestrian Pads (Douglas)	√	SR 153/Methow River Br - Rail Repairs - Stage 1 (Okanogan)	√
SR 28/Crescent Bar to Quincy - Paving (Douglas, Grant)	Advanced	SR 153/Pateros to South of Methow - 2007 Seal (Okanogan)	√
I-82/I-90 to Thrall Road - Paving (Kittitas)	√	SR 172/West of Mansfield to SR 17 - 2007 Seal (Douglas)	√
I-90/Mercer Island LID - CCTV Replacement (King)	Late[14]	SR 202/SR 203 Vic to W North Bend Way Vic - Paving (King)	√

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Advertisement Record

Advertisement Record: Projects Scheduled for and/or Advertised This Quarter

October 1, 2006-December 31, 2006

Project Description	On-Time Advertised	Project Description	On-Time Advertised
SR 213/Malott to US 97 - 2007 Seal (Okanogan)	√	SR 509/Slayden Road to King Co Line - Paving (Pierce)	√
SR 231/Spokane River Bridge - Deck Rehabilitation (Lincoln, Stevens)	Late[26]	SR 513/NE 45th Street to 40th Avenue NE - Paving (King)	Delayed[30]
SR 262/Potholes Reservoir - Shoulder Widening for Pedestrians (Grant)	√	SR 539/SR 546/Badger Rd to International Boundary - Paving (Whatcom)	√
SR 290/Starr Rd Intersection - Signal Improvement (Spokane)	Delayed[27]	SR 542/Britton Rd to Cedarville Rd - Paving (Whatcom)	Deferred[31]
SR 304/Bremerton Transportation Center Access Improvement Tunnel (Kitsap)	Emergent[28]	SR 542/Cedarville Rd to Coal Cr Br Vic - Paving (Whatcom)	Deferred[32]
SR 305/Bainbridge Vic - Replace Sign Structure (Kitsap)	Advanced	SR 548/Blaine Rd to Fleet Rd - Paving (Whatcom)	√
U.S. 395/Wild Rose Rd - Intersection Improvements (Spokane)	√	SR 548/Terrell Creek - Major Drainage (Whatcom)	Delayed[33]
U.S. 395/Mantz-Rickey Road Channelization (Stevens)	Deleted[34]	SR 702/40th Ave. S./Allen Road - Safety (Pierce)	Deleted[35]
SR 410/Clay Creek - Outfall Washout Repair (King)	Deferred[29]	SR 971/Lake Chelan Area - 2007 Seal (Chelan)	√

Project Details:

[1]Advertisement date delayed to perform field review of guardrail terminals for research permit required by Colville Confederated Tribe.
[2]Advertisement delayed to reprioritize potential intersections within the corridors.
[3]Advertisement delayed to complete cultural resources survey. Archaelogical site was in the vicinity of this intersection.
[4]Ad delayed in order to combine this work with another project in the same location.
[5]Project deferred into next biennium to accommodate City of Tumwater's access point modification plan and interchange design to allow developer contirbution and address traffic conflict deficiency at the same time.
[6]Advertisement delayed as part of the new budget proposal.
[7]Emergent need project added to address pavement surface distress
[8]Delayed due to Right-of Way acquisition delays and utility relocation issues.
[9]Delayed due to Right-of Way acquisition delays and utility relocation issues.
[11]Project delayed to accommodate a Transportation Improvement Board request to add small city paving for City of Lyman to project. The advertisement was also delayed one month so that the work could be combined with another project.
[12]The advertisement date was delayed. Additional design was necessary to accommodate a lower cost solution within budget and minimize need for additional Right-of-Way acquisition.
[13]Advertisement delayed two months August 2006 to October 2006 due to more extensive negotiations than planned in executing utility agreements for irrigation and water line work and acquiring a shoreline permit. Delay will not affect Operationally Complete date.
[14]The work will be performed by State Force and DIS (Department of Information Services). Construction start is delayed four months in order to set up equipment and DIS contract.
[15]The I-90/Mt Baker Tunnel & Mercer Island Lid - Programmable Logic Controller Replacement project's advertisement date was delayed to wait resolution of technical issues on the I-90/Seattle to Mercer Island-Traffic Monitoring project.
[16]Project has been delayed to advance U.S. 2/West Stevens Pass - Paving project, which has exhibited unexpected accelerated pavement deterioration.
[17]Advertisement being delayed to combine this project with the Sullivan Road I/C PCCP Rehab project. This should result in better prices during construction by melding the work into a larger project.
[18]Advertisement being delayed to combine this project with the Sullivan Road I/C PCCP Rehab project. This should result in better prices during construction by melding the work into a larger project.
[19]Emergent need project added to address numerous crossover collisions occurring on this section of highway.
[20]Emergent need project added to address Eastern Washington Border Crossing
[21]Emergent need project added to address numerous crossover collisions occurring on this section of highway.
[22]After a thorough review of program priorities this project has been deferred to keep the program within the appropriation level. This revised schedule will also allow WSDOT to coordinate work with a county project on the crossroads.
[23]Delay due to design changes that could not be absorbed by the original schedule for this project.
[24]Delay advertisement from December 4, 2006, to January 8, 2007, to address design deviation on non-standard ramps.
[25]Embankment erosion was continuing at such a rate that WSDOT hydrologists and other experts concluded that the roadway would not survive another severe storm event.
[26]Advertisement delayed to advertise at the optimum time to attract multiple bidders to the project.
[27]Advertisement delayed to complete intersection analysis required by the design manual to determine the best solution.
[28]Emergent need project was added to improve pedestrian, bicycle, and vehicular safety and mobility within the City of Bremerton's downtown core area.
[29]Project advertisement is delayed due to difficulty obtaining concurrence of the Tribe's for scope of work and needed environmental mitigation.
[30]Advertisement delayed to allow time to review alternative methods for delivering this project within budget.
[31]Advertisement was delayed as part of the new budget proposal.
[32]Advertisement delayed as part of the new budget proposal.
[33]Delay due to permit approvals requirements and to obtain a CN permit from BNSF.
[34]The cost of the project increased significantly. During a reprioritization of intersections based on the latest traffic and cost information this project dropped to the 14th highest priority for left turn channelization within the Region. The remaining programmed funds for this project were used to fund an increase on the Wild Rose Channelization project.
[35]This project was removed from the program because the updated accident history for this location indicates that this project prioritizes much lower than was originally determined.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Individual Reporting

Six Individually Tracked PEF Projects Results through December 31, 2006

Dollars in Millions

Project Description	First Leg. Budget	Baseline: Current Leg. Approved	Scheduled Date to Begin Preliminary Engineering		Scheduled Date for Advertisement		Schedule Date to be Operationally Complete
			Date	On-Time	Date	On-Time	
U.S. 2/Ebey Is Viaduct and Ebey Sl Br (Snohomish)	$32.1 (2002)	$35.5 (2006)	Dec-98	✓	Nov-00	✓	Dec-03
• U.S. 2/50th Avenue SE Vic to SR 204 Vic - Bridge Rehabilitation (Snohomish)			Jul-06		Apr-07		Jun-09
• U.S. 2/43rd Ave SE Vic to 50th Ave SE Vic - Bridge Rehabilitation (Snohomish)			Jan-09		Aug-10		Dec-11
SR 202/SR 520 to Sahalee Way - Widening (King)	$36.9 (2001-03)	$82.1 (2006)	May-98	✓	Aug-05	Late[1]	Dec-08
SR 539/Horton Road to Tenmile Road - Widen to Five Lanes (Whatcom)	$32.0 (2001-03)	$52.6 (2006)	Oct-90	✓	Jan-07	✓	Oct-08
SR 28/E End of the George Sellar Bridge - Construct Bypass (Douglas)	$9.4 (2004)	$9.3 (2006)	Jun-04	✓	Oct-09	Late[2]	Sep-11
U.S. 101/Purdy Creek Bridge - Bridge Replacement (Mason)	$6.0 (2004)	$11.1 (2006)	Aug-04	✓	Jan-08	✓	Jan-10
SR 303/Manette Bridge Bremerton Vicinity - Bridge Replacement (Kitsap)	$25.5 (2002)	$25.8 (2006)	Sep-96	✓	Mar-10	Late[3]	Nov-13

Data Source: WSDOT Project Control and Reporting

Future Reporting: Current WSDOT Estimate of Cost at Final Completion is the critical number toward which all modern project management is pointed. Today WSDOT engineers and program managers can only back into these values as best as possible without the management information systems that allow schedule and budgets to be used as the basis for value-earned management systems. WSDOT is considering ways to use estimating techniques to approximate these values until new management information systems are installed and project data is loaded.

Baseline Data: Baseline milestone dates are derived from the 2003 Legislative Transportation Budget. Advertisement Date and Operationally Complete milestones are considered on-time if completed within the scheduled baseline calendar quarter. The Begin Preliminary Engineering milestone is reported as on-time if completed within +/- 6 weeks of baseline date.

Milestone Definitions:

Begin Preliminary Engineering
A project schedule usually has two general phases, the pre-construction phase and the construction phase. Preconstruction involves design, right-of-way, and environmental activities. The preliminary engineering marks the start of the project design and is usually the first capital spending activity in the delivery process.

Advertisement Date
This is the date that WSDOT schedules to publicly advertise a project for bids from contractors. When a project is advertised, it has a completed set of plans and specifications, along with a construction cost estimate.

Operationally Complete
This is the date when the public has free and unobstructed use of the facility. In some cases, the facility will be open, but minor work items may remain to be completed.

Project Details:

[1]This project was delayed from the original 2005 Legislative Final advertisement date to address several environmental and permit issues.
[2]The construction phase has been delayed to balance the financial plan 07-09 biennium Legislative book.
[3]Construction phase has been delayed to balance the financial plan 07-09 biennium Legislative book.

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds Program: Financial Information

Paying for the Projects: Financial Information

WSDOT submitted an expenditure plan to the Legislature for the sixth quarter of the biennium totaling approximately $827 million. As of December 31, 2006, actual expenditures totaled $708 million, a variance of approximately $119 million, or 14%, from the biennium plan. The variance as of the end of the sixth quarter for the Highway Construction Program was divided between the Improvement and Preservation programs.

The Preservation Program planned cash flow was $425 million, and actual expenditures were $377 million. This was $48 million under plan, or 11%. The under-spending was primarily due to slower than expected expenditures for several projects, including:

- *U.S. 101/Simpson Ave Bridge - Mechanical (The project was delayed due to a shortage of bridge preservation funds in the 2005-07 biennium.)*
- *SR 433/Lewis and Clark Bridge - Painting*

The Improvement Program planned cash flow was $402 million, and actual expenditures were $331 million. This was approximately $70 million under plan, or 18%. The under-spending was primarily due to slower than expected expenditures for several projects, including:

- *SR 99/Alaskan Way Viaduct and Seawall - Replacement EIS*
- *SR 518/SeaTac Airport to I-5 - Eastbound Widening*
- *I-82/South Union Gap I/C - Improvements*
- *SR 509/SR 518 Interchange - Interchange Improvements*

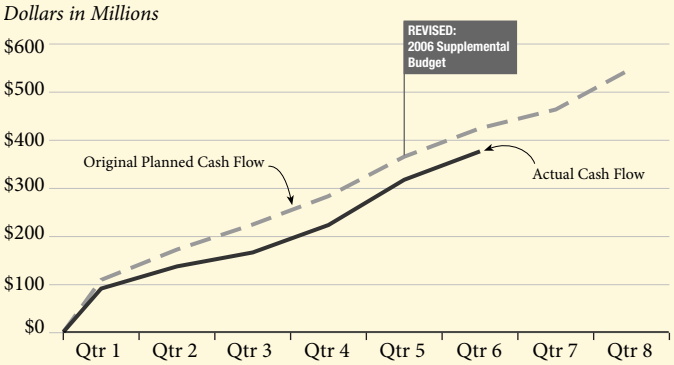
Preservation Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 6 ending December 31, 2006

Dollars in Millions



As of quarter five (July 1 - Sept. 30, 2006), Original Planned Cash Flow values have been updated based on the 2006 Supplemental Budget.

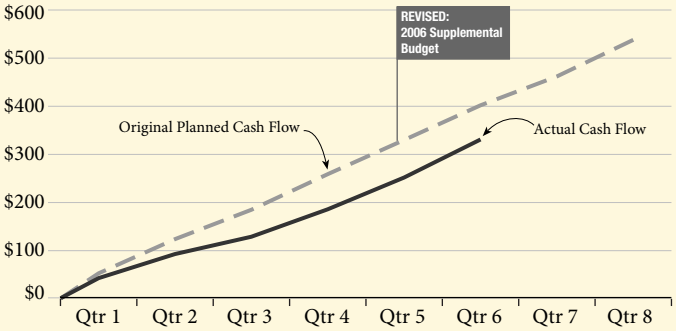
Improvement Program Cash Flow

Pre-Existing Funds

Planned vs. Actual Expenditures

2005-2007 Biennium, Quarter 6 ending December 31, 2006

Dollars in Millions



As of quarter five (July 1 - Sept. 31, 2006), Original Planned Cash Flow values have been updated based on the 2006 Supplemental Budget.

Special Report: Tacoma Narrows Bridge, Quarterly Update

Tacoma Narrows Bridge is 84.6% Complete

As of December 31, 2006, design-builder Tacoma Narrows Constructors (TNC) completed 84.6% of construction on SR 16 Tacoma Narrows Bridge project

In the fourth quarter TNC lifted 36 of the 46 deck sections into permanent position. The contractors also began the process of bolting and welding deck sections together this quarter. To support this process, movable temporary access gantries under the new bridge deck sections were installed.

TNC continued to backfill the eastern side of the east anchorage bringing it up to final grade. Finishing work for the tower's interior concrete has been a focus of the contractors this quarter. TNC also completed the placement of concrete for the lateral bearings at the towers.

Roadway/Existing Bridge Retrofit Construction

During the fourth quarter on the Tacoma side, TNC completed paving for the future eastbound lanes and moved eastbound traffic from its temporary location to its new location in the vicinity of Jackson Avenue. On the Gig Harbor side, TNC completed placing the median barrier west of the toll facility and started work on installing the signs and electronic tolling equipment for the 24th street on-ramp. TNC also constructed a 400,000 gallon above ground temporary detention pond, in the event if Pond B is at capacity and additional storage is necessary.

View of Tacoma Narrows Bridge west span with the cargo ship the *Swan* underneath, taken from the existing bridge Gig Harbor tower.

Tacoma Narrows Bridge Progress
As of December 31, 2006

	Percent Complete
Design	99.9%
Construction	83.5%
Total	84.6%

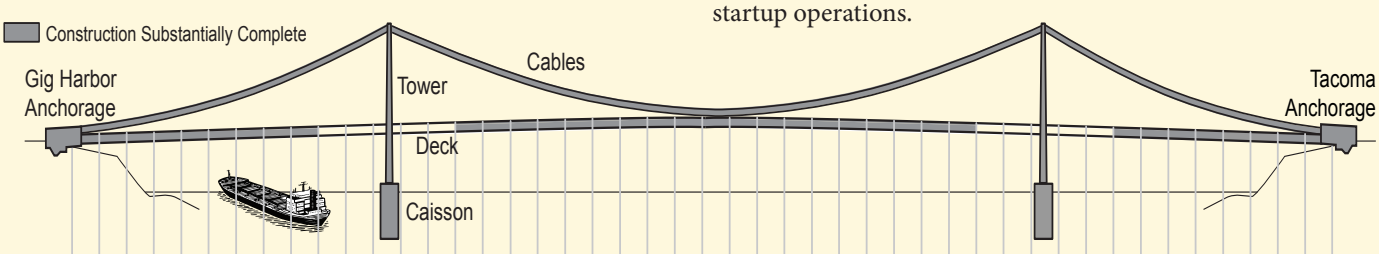
Data Source: WSDOT Engineering and Regional Operations Division

With heavy rains in November and December, the additional runoff storage proved useful while TNC spent a large amount of time keeping up with erosion control measures and handling excess water. Existing bridge seismic retrofit work progressed steadily on deck section at tower 5, with the removal of the top laterals at pier 6. Drilling of holes for dowel bars to be used with the wind tie on the existing east anchorage continued with the installing of rebar and pouring of concrete walls inside the existing east anchorage. TNC also completed grouting casings for new foundations in the existing bridge.

Toll Facility, Installation and Operations

WSDOT continued promoting the new electronic tolling system *Good to Go!* The public awareness campaign has included informational presentations at clubs, county fairs, and festivals. In addition, WSDOT has finalized the *Good To Go!* marketing plan that focuses on the new bridge opening. During the quarter, WSDOT supported and coordinated four Citizen's Advisory Committee meetings. The meetings will make recommendations in January 2007 to the Transportation Commission concerning tolls. WSDOT also initiated drafting Washington Administrative Code for toll rate setting.

WSDOT and tolling contractor, TransCore, continue to review the standard operating procedures and continue making improvements in the performance of the system. WSDOT also initiated a tolling industry peer review process to assist with startup operations.



Deck #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Ship #	1	1	1	2	2	1	2	2	3	3	3	3	3	3	2	2	2	2	2	2	1	1	1	1	1	1	1	1	2	2	2	3	3	3	3	3	3	3	3	3	2	2	1	1	1	1
Lift Seq. No.	6	10	13	18	21	4	28	31	35	45	39	36	41	43	33	29	27	24	19	17	14	9	5	1	2	8	12	15	20	23	25	30	34	44	42	37	40	46	38	32	26	22	16	11	7	3

Three Cargo Ships will deliver a total of 46 deck sections. Ship No. 1 with 16 sections. Ships No 2. and No. 3 will each carry 15 sections. Ship No. 3 (now moored in the Narrows between the west bridge tower and shoreline) is unloading the last of the deck sections. The first row (Deck) of the table indicates the deck blocks - 1 through 46. In the third row, the number tells the order in which the sections will be lifted. Note: lifting occurs in a non-linear sequence. Decks may appear to be "out of order" but this sequence is necessary to maintain equal stress on the cables.

Special Report: Hood Canal Bridge, Quarterly Update

Hood Canal Bridge Project is 33% Complete

The Hood Canal Bridge is the longest floating bridge over saltwater in the world. WSDOT is currently making improvements to this bridge by completing the Hood Canal Bridge East-Half Replacement and West-Half Retrofit Project. Once the project is finished, the entire east half of the bridge will be replaced, the full length of the bridge widened, the electrical systems upgraded, the draw span replaced, and new seismic features will be incorporated. These improvements will make the bridge wider, safer, and more affordable to maintain. As of December 31, 2006, the SR 104 Hood Canal Bridge Project is 33% complete.

Tug boat tows pontoon PB out of the graving dock in Tacoma.

Pontoon Construction 37% Complete

The first three of the new Hood Canal Bridge pontoons floated out of the Tacoma Concrete Technology graving dock on December 6, 2006. Completing these pontoons was an important project milestone leading up to the scheduled May-June 2009 bridge closure and replacement.

Fifteen feet of water filled the graving dock, lifting up the 6,000+ ton structures. Tug boats then towed the pontoons out of the graving dock and moored the pontoons in the Blair Waterway. Pontoons PA and Q were then towed out of the Blair Waterway on December 18, 2006. Pontoon PB was towed to Seattle on December 26, 2006. All three pontoons safely arrived at Pier 66 in Seattle and will remain there through the end of Summer 2007 until the second cycle of pontoons is completed.

WSDOT and Kiewit-General (K-G) began the second cycle of pontoon construction as soon as the graving dock was emptied of water. Prefabricated wood forms and pre-assembled rebar sections were set in place and the next five pontoons (named NB, NA, YD, YE and YF) began to take shape.

Anchor Construction 29% Complete

The concrete floors of all ten anchors under construction at Todd Shipyard in Seattle were completed. In addition, the lower walls on five anchors were poured. These anchors are on track to be completed by February 2007. All 20 anchors will be set on the bottom of the Hood Canal by the end of next Summer. As of December 31, 2006, anchor construction is 29% complete.

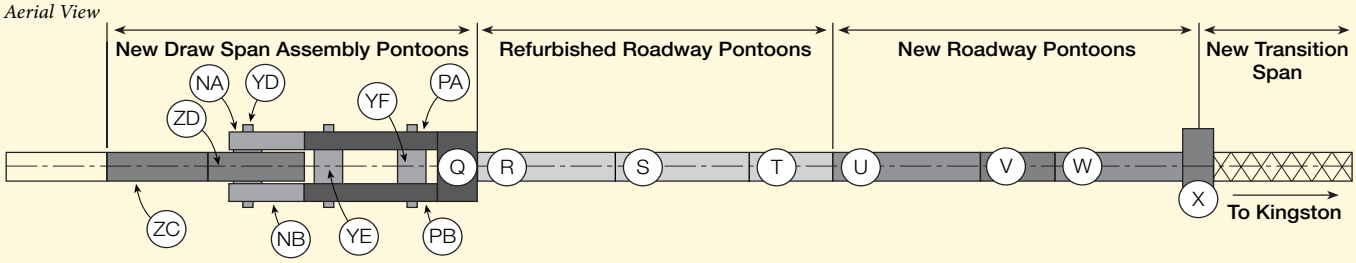
Hood Canal Bridge Site Construction 32% Complete

The West-Half leak detection system installation progressed both inside the pontoon cells and above the deck. Electrical switches have been wired in place and drilling for conduit supports under the road deck began. Recent extreme weather conditions at the bridge work site caused some work to be rescheduled. The installation of the West-Half leak detection system is 32% complete.

The East-Half approach span replacement project was completed. The benefits of this work are already being enjoyed by drivers: the new drainage system and erosion controls kept water off the road during the recent Fall 2006 heavy rain storms. In addition, the park-and-ride is being used as a central meeting point for area activities like outdoor recreation.

Schedule Diagram of Hood Canal Bridge Pontoon Construction Cycles

Aerial View



- Built in 1st Cycle (PA, PB, Q). Delivered: December 2006.
- To be Built in 3rd Cycle (ZC, ZD, V, X). Scheduled Delivery Date: April 2008.
- Retrofitting (R, S, T). Scheduled Delivery Date: April 2008.
- To be Built in 2nd Cycle (NA, NB, YD, YE, YF). Scheduled Delivery Date: August 2007.
- To be Built in 4th Cycle (U, W). Scheduled Delivery Date: September 2008.

Source: WSDOT Hood Canal Bridge Project Office

Cross-Cutting Management Issues

Right of Way

Thirty-four projects with a right-of-way phase were scheduled to be certified for July through December 2006. Fourteen baseline certification dates were rescheduled due to advertising delays. All project delays for this six month period were unrelated to the management of the Right of Way acquisition projects.

On-Time Certification

Before a project is advertised for bidding, WSDOT must certify that all rights necessary to construct the project are acquired. WSDOT's business practices regarding acquiring real estate are strictly guided by state and federal regulations such as RCW's, WAC's, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended). WSDOT's goal is to deliver 100% on-time certification for all projects.

On Time Right of Way Certification: Biannual Results

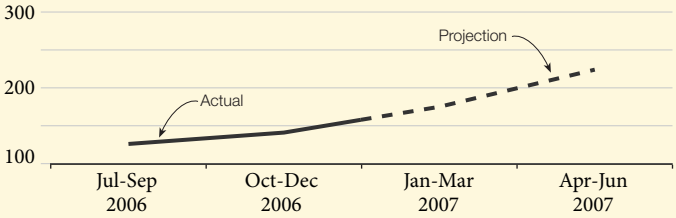
	Jan-Jun 2006	Jul-Dec 2006
Number of projects with a right of way phase	32	34
Number of projects with a right of way certification related delay	4	0
Percent of projects with a right of way phase that had an on time certification	88%	100%

Data Source: WSDOT Real Estate Services Office

Acquisition Projections

Many parcel acquisitions expected to take place in 2006 have been moved into the calendar year 2007. Based on regional projections of parcels to be acquired over the next two quarters (January through June), the forecasted monthly acquisition workload is approximately double the average monthly workload seen over the year (2006). This represents an increase from approximately 40 parcels per month to almost 80 parcels per month.

Acquisitions for all PEF, TPA and Nickel Projects
July 1, 2006 through June 30, 2007
Actuals and Projections

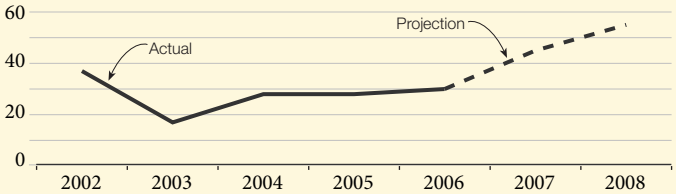


Data Source: WSDOT Real Estate Services

Right of Way Condemnation

Condemnation rates show a steady, slow upward trend as forecast in the last *Gray Notebook*, though not increasing at the rate that had been anticipated.

Condemnations for All PEF, TPA and Nickel Projects
2002-2008
Actuals and Projections



Data Source: WSDOT Real Estate Services

Right of Way Watch List Projects - Cost and Schedule Concerns

There were no projects directly delayed due to right of way processes for the first two quarters of fiscal year 2007 reported on.

Cross-Cutting Management Issues

Utilities

Utilities Roll-Up

From July 1, 2006 to December 31, 2006 15 Nickel projects and 5 TPA projects were completed. None of the 20 projects experienced delays related to utilities work.

For PEF projects, WSDOT is developing a new system for tracking completed PEF projects. See pages 31-36 for this quarter's PEF reporting.

Some WSDOT projects present challenges in coordinating construction with existing utilities. Utilities such as water, electricity, sewer, storm drains, telephones, cable, and internet locations often need to be accommodated, and sometimes even relocated. WSDOT's goal is to use active planning to avoid such conflicts and potential delays before and during construction.

When existing utilities are in the way of highway construction projects, effected utility companies are given reasonable time to design and relocate facilities. In order to deliver construction projects on time, risk levels related to utilities are assigned to individual projects in order to better prioritize WSDOT's coordination between engineers, contractors and utilities groups.

WSDOT tracks utility risks for all Nickel, TPA and PEF projects. Seventy-five projects were advertised between July and December 2006. Sixty-six projects were assigned the lowest utilities risk, Risk Level 1. The remaining nine projects include two assigned Risk Level 2 and seven at Risk Level 3 for utility concerns.

What Does a Utility Risk Mean for a Project?

When a project is given a risk assessment for utilities, it is based on the severity of existing conflict between project planning and utilities. WSDOT has requirements for procedures specifically regarding the handling of utilities situations at each given risk level

Risk Level 1

Project is assessed to have no impact on utilities, or impacted utilities will be relocated prior to a project going to bid.

Risk Level 2

A conflict between a project and existing utilities is discovered. This risk level requires engineers to continually coordinate with utilities crews and agencies in order to resolve the conflict before it goes to bid. If the work is not completed under the assigned time frame, a project's bid may be delayed.

Risk Level 3

This risk level is assigned when a project is found to have serious conflicts with utilities prior to and after a project bid. The assigned risk requires specific windows to be set within the project schedule to coordinate relocation efforts between WSDOT, contractors, and utility agencies. If utilities work is not completed within the specified windows, project delay costs may be incurred.

Utilities Risk Levels for Projects Going to Advertisement

		Projects Going to Advertisment by Reporting Period	
Level	**Description**	**Jan-Jun 2006**	**July-Dec 2006**
Level 1	Utilities have been relocated, and/or are clear of construction.	88	57
Level 2	Utility companies are actively pursuing relocation and the department has assurances the utilities will be clear by the date bids are opened.	3	2
Level 3	Utilities have not been relocated, and will not be relocated by the bid opening date that has been cited in the contract provisions. The department has assurance that the utility company will be able to meet the date stipulated on the contract.	5	7
	Total	**96**	**66**

Data Source: WSDOT Utilities Office

Cross-Cutting Management Issues

Utilities

Projects Advertised at Risk Levels Two and Three for Utilities Work (July 2006 - December 2006)

Seventy-five projects were advertised between July and December 2006. Of these, two were classified at Risk Level 2 and seven at Risk Level 3 for utility concerns.

Nickel Funded Projects

SR 9/Schloman Road to 256th & 268th Streets

Utilities were not able to relocate prior to the contractor starting work. However, work windows built into the project schedule allowed the utilities to be moved without interruption.

SR 20/Fredonia to SR 5-Stage 1

Multiple utilities need to be relocated prior to project construction starting. Utility crews conducted emergency utility work caused by the extreme winter weather, delaying the original WSDOT construction project schedule for this contract. The contractor had already begun work prior to the storms, but coordinated closely with the utilities crews to allow them the opportunity to finish their relocation construction and repairs, while remaining out of the way of WSDOT's construction activities.

Junction Preston-Fall City Road & Junction SR 203

Multiple utilities will be relocated during the project. Because of staging and traffic detours required to construct the project, the contractor has been given specific conditions for proper coordination of utility relocation along with the utilties crew's work schedule.

TPA Funded Projects

U.S. 12, Yakima- 40th Avenue Interchange Improvements

The project was advertised with one work agreement pending with Old Union Ditch. The agreement was executed three days after the project went to advertisement. The pending agreement was included in the contract.

SR 17/Pioneer Way to Stratford Road

Utility relocations were anticipated to be 85-90% complete by the project's bid opening. The relocation was completed prior to the contractor beginning work on the project.

SR 7, State Highways in Pierce and Thurston Counties

Qwest and Sprint will relocate their respective facilities on separate highways where road work will be in progress. Time has been built into the project schedule to allow the phone companies to complete their work prior to and during the construction done by the contractor.

PEF Funded Projects

SR 107, 2.5 Miles South of Montesano

Utility companies will temporarily relocate utilities in the work zone from the south side of the roadway to the north side in order to allow for the construction of a shear pile wall that involves drilling shafts. An agreement was made with the local Public Utilities District (PUD) to relocate the power lines after the project's bid opening but prior to the contractor starting work.

SR 304, Downtown Bremerton Pedestrian

Multiple overhead utilities (electrical, telecommunications and fiber optic) require relocation during this project. The first order of work will need to be realignment of a stream away from SR 304, between Lincoln Road and Little Valley Road, prior to the widening to start. This work must be accomplished to meet the scheduled window for minimal impacts to fish during the stream realignment. The utility relocation can be accomplished after this preliminary work is done by the contractor.

SR 20/Sidney Street Vicinity to Scenic Heights-

Relocation of the major waterline for the City of Oak Harbor has been completed. However, other utility relocations are required and have been coordinated in a sequence to be completed prior to the contractor starting work in the spring.

Cross-Cutting Management Issues

Highway Construction: Quarterly Update

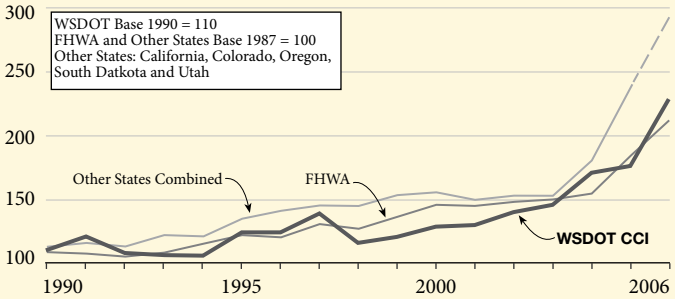
Construction Cost Trends

WSDOT prepares its construction cost estimates using historical information about market conditions drawn from recent bids. Like other state transportation departments, WSDOT must extrapolate for the future based on past records. WSDOT accumulates construction cost information and calculates a Construction Cost Index (CCI). The CCI is then compared against the experience of other states. This is plotted against the CCI of the Federal Highway Administration (FHWA) and a line representing the combined CCIs of several nearby western states: California, Colorado, Oregon, South Dakota and Utah. The graph below presents the past 16 years of CCI data for Washington State, FHWA, and the listed states.

2006 Construction Cost Index is up 30% over 2005

The average annual growth rate of the CCI held steady at about 1.5% per year from 1990 through 2001. Beginning in 2002 and continuing through 2005, the growth rate increased to 8% per year. In 2006, WSDOT's CCI increased 30% over 2005. Several factors have contributed to this increase including: increasing worldwide demand for construction materials; rising crude oil prices and other energy supply issues; and recent increases in national and international construction activity.

Construction Cost Indices Washington State, FHWA, and Other States



Data Sources: WSDOT Construction Office, Federal Highway Administration (FHWA)
Note: WSDOT 2006 Index is for the entire year; FHWA 2006 Data is for Quarters 1 & 2; Other States 2006 Data is for Quarters 1, 2 and 3 with South Dakota Data available for Quarters 1 & 2. 2003 and 2004 WSDOT CCI data points adjusted to correct for spiking bid prices on structural steel.

Calculating the Construction Cost Index

The following components (weighted as shown) are used to compute the CCI:

- Hot Mix Asphalt (48.5%)
- Structural Concrete (17.4%)
- Roadway Excavation (10.7%)
- Crushed Surfacing (7.9%)
- Structural Steel (6.9%)
- Steel Reinforcing Bar (5.4%)
- Concrete Pavement (3.2%)

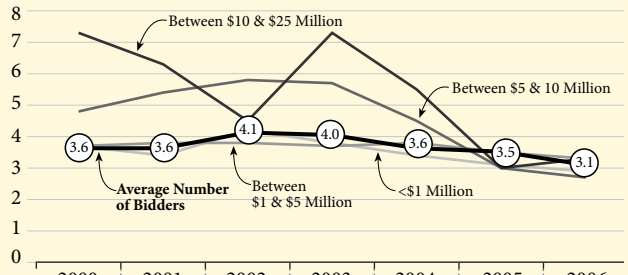
Only 52% of Projects Have Three or More Bidders

WSDOT's goal is to have three or more bidders for each highway construction project. However, large public and private construction programs in Washington, as well as at the national level, are contributing to a trend of fewer contractors submitting bids for WSDOT projects. The reduction in bidding competition is a sign that contractors have a full workload ahead of them. Unfortunately, this reduction in competition will tend to produce higher prices for WSDOT projects.

The average number of contractors bidding on each WSDOT project decreased 12% in 2006, from an average of 3.5 bidders in 2005 to an average of 3.1 bidders in 2006. The reduction in the number of bidders has been a trend since 2002, with significant downward movement occurring since 2004.

Average Number of Bidders

By Size of Contract



	2000	2001	2002	2003	2004	2005	2006
1 Bidder	7.7%	12.3%	12.6%	8.5%	13.4%	9.2%	10.3%
2 Bidders	26.1%	23.2%	22.2%	17.6%	20.4%	22.0%	37.6%
3 Bidders	23.9%	23.2%	15.6%	24.2%	22.5%	33.3%	19.7%
More than 3 Bidders	42.3%	41.2%	49.6%	49.7%	43.7%	35.5%	32.5%

Data Source: WSDOT Construction Office

Cross-Cutting Management Issues

End-of-Season Highway Construction Project Evaluations

Each spring WSDOT selects a handful of highway construction projects from each region for a year-end evaluation of the project's construction phase. The 2006 Construction Highlights Report provides the results of this self-assessment of on-time and on-budget performance. This is WSDOT's sixth annual report. With over 100 years of constructing highway projects, WSDOT has learned that there are few challenges that cannot be overcome by effective construction management. The strong partnerships that have developed between WSDOT and its contractors are a major asset in handling these challenges.

Below is a sample from the 2006 Construction Highlights Program of the many projects that were under construction. These 25 projects provide a snapshot of the variety, complexity, and size of the 2006 program. There were 185 active construction projects ranging in cost from $95,000 to $615 million (the Tacoma Narrows Bridge), totaling approximately $2 billion in ongoing construction work. The complete report, detailing how the projects were rated, can be found at www.wsdot.wa.gov/Projects/Highlights/

End-of-Season Highway Construction Project Evaluations

Rating: ✶ = lowest, ✶✶✶✶✶ = highest

Project	Design	Construction Management	Schedule	Cost	Contractor
SR 14, Leiser Road Bridge Repair	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Selby Bridge
SR 17, Mesa to Basin City Paving	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Transtate Paving Co.
I-90 - Replaces Potato Hill Bridge	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Weaver Construction
SR 112 Bear Creek Culvert	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Bruch & Bruch, Inc.
SR 202, 224th Avenue NE	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Tri-State Const. Inc.
SR 207, Wenachee River Br. Rail	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Frank Gurney, Inc.
I-90, Kachess River Bridge	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶	Concrete Barrier, Inc.
SR 531, Smokey Pt. Blvd.	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶✶	SRV Construction Inc.
I-90, East Channel Bridge Painting	✶✶✶✶✶	✶✶✶✶	✶✶✶✶✶	✶✶✶✶✶	Purcell Painting
SR 16, Wollochet Dr NW	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶	Tucci & Sons
SR 165, Carbonado to SR 410	✶✶✶✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶	Woodworth & Co.
I-5, I-205 to N. Fork Lewis River Br	✶✶✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶	Acme Concrete
I-5, East Fork Lewis River Br	✶✶✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶	KLM Construction
SR 20, Troxell Rd. Vic.	✶✶✶✶	✶✶✶✶✶	✶✶✶	✶✶✶✶✶	GG Excavation, Inc.
SR 20,etc. Eastern Reg. Chip Seal	✶✶✶✶	✶✶✶✶	✶✶✶✶✶	✶✶✶✶	Central WA Asphalt
SR 164, 158th Ave SE to High Pt.	✶✶✶✶	✶✶✶✶	✶✶✶✶	✶✶✶✶✶	Rodarte Construction
SR 31, Metaline Falls to Intn'l Brdr.	✶✶✶✶	✶✶✶✶	✶✶✶✶	✶✶✶✶	M.A. DeAtley, Inc.
U.S. 97, Wells Dam/Starr Boat	✶✶✶✶	✶✶✶✶✶	✶✶✶	✶✶✶✶	Basin Paving Co.
SR 202, SR 520 to Sahalee Way	✶✶✶✶	✶✶✶✶✶	✶✶	✶✶✶✶✶	Northwest Const.
SR 548 Portal Way Vicinity Signal	✶✶✶✶	✶✶✶✶	✶✶✶✶	✶✶✶✶	Signal Electric Inc.
I-82 Yakima to Prosser Weigh	✶✶	✶✶✶✶✶	✶✶✶✶	✶✶✶✶	Aztech Electric Inc.
U.S. 101 Brockdale Rd	✶✶✶✶✶	✶✶✶	✶✶	✶✶✶✶✶	ACE Paving Co. Inc.
SR 291 Vicinity Nine Mill Safety	✶✶✶✶	✶✶✶✶	✶✶✶	✶✶✶	Steelman - Duff
SR 516, 208th & 209th Ave.	✶✶✶✶	✶✶✶✶	✶✶	✶✶✶	Road Construction NW
SR 522 Paradise Lake Rd	✶✶	✶✶✶	✶✶	✶✶	Scarsella Brothers

Data Source: WSDOT Design Office

Cross-Cutting Management Issues

Environmental Documentation, Review, Permitting, and Compliance

Endangered Species Act Compliance

The Endangered Species Act (ESA) requires all projects with federal funds or permits to be evaluated for effects and potential impacts on federally-listed endangered and threatened species. Projects that will result in impacts to listed species undergo formal consultation with the federal services: U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration/National Marine Fisheries Service (NOAA Fisheries). Projects that result in negligible effects to species require informal consultation with USFWS and NOAA Fisheries. Projects that do not affect ESA listed species do not undergo consultation with the Services but are reviewed for ESA compliance by a biologist.

Nickel Projects

For the 2005-2007 biennium, 28 Nickel projects are left to go to advertisement. The majority of these projects (19) have completed ESA review and one is currently under review by the services. The remaining projects are expected to complete ESA review within the next quarter. Approximately half of the 2007-09 biennium Nickel projects have completed ESA review (18) and one is under informal consultation with the services. Sixteen projects will undergo ESA reviews in the future including eight informal and three formal consultations.

Transportation Partnership Account (TPA) Projects

Twenty seven TPA projects for the 2005-07 biennium have yet to go to advertisement. Five of these projects have completed informal consultation, four have completed formal consultation, one project is undergoing informal consultation at this time and eight projects have completed a 'no effect' ESA review. The remaining nine 2005-07 biennium projects do not require consultation with the services or there is insufficient information to determine if consultation will be required. There are 103 TPA projects planned for the 2007-09 biennium; 15 have completed ESA review.

PEF Projects

At this time, 144 PEF projects have yet to go to advertisement for the 2005-07 biennium. Of these projects, 84 have completed ESA review through a no-effect programmatic or a no-effect letter review, 17 have completed informal consultation and one has completed formal consultation. Two additional projects are currently under consultation with the services. The *U.S. 101/Lilliwaup Vicinity Slope Stabilization* project is undergoing informal consultation with both services and the *U.S. 101/Humptulips River Bridge Scour* project is undergoing formal consultation with USFWS. There are 193 PEF projects that will go to advertisement in the 2007-09 biennium. Forty three of these projects have completed ESA review and two are currently undergoing consultation: one informal (*I-5 Maytown/Scatter Creek*) and one formal (*SW Region Seismic Bridge Retrofits i*n Clark and Wahkiakum Counties).

ESA Compliance For All Projects

Level of Project Development	2005-07 TPA Projects	2007-09 TPA Projects	2005-07 Nickel Projects	2007-09 Nickel Projects	2005-07 PEF Projects	2007-09 PEF Projects
Projects under review at the services	1	0	1	1	2	2
Biological assessment underway	5	48	8	16	18	79
Projects which lack sufficient information to start the Biological Assessment[1]	4	40	0	7	22	69
ESA review complete[2]	17	15	19	18	102	43
Total number of Projects that have not gone to advertisement	27	103	28	42	144	193

[1]This means that WSDOT does not yet have enough information regarding design to begin ESA review.
[2]Projects that have completed ESA review include those requiring consultation (formal, informal and programmatics) with the services and those that did not require consultation (no effect reviews).
Data Source: WSDOT Environmental Services

Cross-Cutting Management Issues

Endangered Species Act Update

Several species and critical habitats underwent changes under ESA in the last quarter of 2006. Three proposed critical habitats became designated in Washington State including Kincaid's Lupine and the Canada Lynx. Each designation describes physical and biological features essential to the conservation of the species. The final designation of critical habitat for Canada Lynx did not include many of the lands described in the proposed designation and does not include lands near existing state highways. Therefore, WSDOT will not conduct consultations on Canada Lynx critical habitat. Critical habitat was designated for Kincaid's Lupine in a small area of Lewis County. As with Canada Lynx, the designation does not fall near state highways and will not require WSDOT to consult on Kincaid's Lupine critical habitat. Critical habitat for Killer Whale was also formally designated in December 2006 as described in June 30, 2006 *Gray Notebook* (p. 37). All projects within or adjacent to Puget Sound will need to address potential impacts to Killer Whale critical habitat.

Proposed De-Listing of Bald Eagles May Complicate Projects

In February 2006, USFWS re-opened the comment period on the proposal to de-list the Bald Eagle from the ESA. Accompanying the proposal to de-list the eagles was a set of draft national Bald Eagle management guidelines and a new definition of 'disturb' for the 'Bald and Golden Eagle Protection Act (BGEPA)'. Once Bald Eagles are de-listed, they will be managed under the BGEPA using the national Bald Eagle management guidelines. These guidelines suggest avoiding construction activities within 660 feet of a nest during the nesting season which extends from January 1 to August 15. Unlike ESA, the BGEPA does not allow for incidental take (where harm may occur to an affected species habitat) of eagles. When necessary, incidental take statements issued under ESA have allowed WSDOT projects to work in close proximity to a Bald Eagle nest during the nesting season. While USFWS is proposing to amend the BGEPA to allow for incidental take, it may not occur prior to the Bald Eagle's de-listing.

There are currently three WSDOT projects that have been issued incidental take statements for Bald Eagles. *SR 107/Slough Bridges 107/5 & 107/6* and *SR 704 Crossbase Highway* have yet to start construction, and one project, *SR 104/Hood Canal Bridge* is currently in construction. Another project, the *U.S. 101 Walker Creek Bridge* Replacement, is currently under review with USFWS and will receive an incidental take statement. If the Biological opinion is issued prior to de-listing, this project will have Bald Eagle incidental take coverage. There are three projects for which insufficient information is available at this time to determine if they will require incidental take for Bald Eagles.

With a healthy Bald Eagle population in Washington State including 208 Bald Eagle nests, 27 Bald Eagle roost sites and 11 Bald Eagle wintering concentration areas within 1/4 mile of state highways, amending the BGEPA to address incidental take for activities will be very important in delivering WSDOT projects.

Consultation Review Timelines Streamlined

In 2006, the number of projects undergoing formal consultation with both USFWS and NOAA Fisheries steadily increased from an average of five per month in December 2005 and January 2006 to 16 in December 2006. The number of informal consultations has remained relatively constant over the past year with small changes coinciding with new species listings or critical habitat designations. Over the last year, WSDOT began collecting data on consultation durations to begin identifying timeframes necessary to complete ESA and meet project advertisement dates. Section 7 of the ESA stipulates a 135 day review period in order to accommodate comments for a formal review (90 days) and the preperation of the biological opinion (45 days). Currently, formal consultations are averaging approximately 261 days. This is down from over 300 days six months earlier. It is anticipated that as WSDOT begins to identify problems or delays in the consultation process, consultation timelines will continue to steadily decrease.

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Worker Safety: Quarterly Update

WSDOT Workers: Recordable Injuries and Illnesses

This article discusses three reporting measures:

- Annualized recordable injury rates (see p. 47).
- Number of recordable injuries by region (see p. 48).
- Quarterly recordable injury rates (see p. 49).

Each measurement aims to keep managing and reducing injury rates.

OSHA Recordable Injury and Illness Rates: Annualized[1]

Highway, Street, and Bridge Construction Workers

For the second quarter of FY 2007, the injury rate for WSDOT Highway, Street, and Bridge Construction workers was 5.2 per 100 workers. This rate is .8 per 100 workers more than the previous quarter (and 4.5 less than the same period last year).

Ferry System Workers

The WSF injury rate for the second quarter of FY 2007 was 7.0 injuries per 100 workers. This rate is 1.3 per 100 workers more than the previous quarter (and 2.3 less than the same period last year).

Injuries by WSDOT Worker

The graph at the bottom right shows injury total by type for WSDOT maintenance, highway engineering, ferry workers, and administrative staff in the second quarter of FY 2007. The total number of injuries was 93. Of these injuries:

- Maintenance workers incurred 41 injuries, 44.1% of all WSDOT injuries for the second quarter. The most frequently injured part of the body was back (19.5%).
- Highway engineering workers had a total of 16 injuries for the second quarter, 17.2% of all WSDOT injuries this quarter. The most frequently injured part of the body was the ear (25%).
- WSDOT ferry workers incurred 32 injuries, 34.4% of all WSDOT injuries for the second quarter of FY 2007. The most frequently injured part of the body was the back (12.5%).
- WSDOT administrative staff accounted for the remaining four injuries sustained in the second quarter of FY 2007, which is 4.3% of all WSDOT injuries sustained for the second quarter of FY 2007. For the four injuries sustained, there was no commonly injured part.

The following two charts compare recordable injuries and illnesses for the second quarter of FY 2007 against WSDOTs experience in FY 2006.

Annualized Recordable Highway, Street, and Bridge Construction Worker Injuries & Illnesses: Maintenance & Engineer Workers

Fiscal Year-to-Date
OSHA-Recordable Injury Rate per 100 Workers[2]

	FY 2006[3]	FY 2007
FY Qtr 1	14.3	4.4
FY Qtr 2	9.7	5.2
FY Qtr 3	8.2	
FY Qtr 4	8.3	

2005 BLS Benchmark 6.3 (calendar year)
Data Source: WSDOT Safety Office

Annualized Recordable Inland Water Transportation Worker Injuries & Illnesses Injury Rate: Ferry System Workers

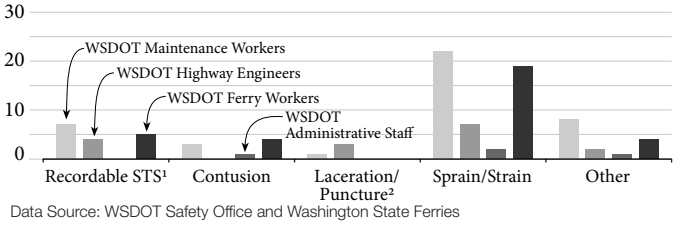
Fiscal Year-to-Date
OSHA-Recordable Injury Rate per 100 Workers[2]

	FY 2006[3]	FY 2007
FY Qtr 1	9.0	5.7
FY Qtr 2	9.3	7.0
FY Qtr 3	9.7	
FY Qtr 4	10.1	

2005 BLS Benchmark 3.9 (calendar year)
Data Source: WSDOT Safety Office

Number of Work Injuries by Type

October Through December 2006 (2nd Quarter FY 2007)



Data Source: WSDOT Safety Office and Washington State Ferries

[1]An OSHA recordable Standard Threshold Shift (STS) is if an employee's hearing test reveals that the employee experienced a work-related STS in hearing in one or both ears, and the employee's total hearing is 25 dB or more above audiometric zero (averaged at 2000, 3000 and 4000 Hz) in the same ear(s) as the STS, the case must be considered recordable.

[2]Category title changed to better define incidents.

[2]OSHA 'Recordable Injuries and Illnesses" is a standard measure that includes all related deaths and work-related illnesses and injuries which result in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid. The U.S. Bureau of Labor Statistics provides the selected 2004 national average benchmark. One worker equals 2,000 hours per year.

[3]WSDOT implemented its new data collection process in January 2006. It is likely that this enhanced focus and process will lead to recordable injury rates which are slightly higher than the 2005 recaptured data. However, WSDOT maintains its goal that all injuries can be prevented (for more information, see the March 31, 2006 *Gray Notebook*, p. 40).

Worker Safety: Quarterly Update

WSDOT Workers: Number of Recordable Injuries and Illnesses

WSDOT's Safety Initiative

On July 10 2006, WSDOT held an agency wide 'safety stand down' and rolled out *Safety Is My Job* to all employees. The purpose was to highlight new safety expectations, better safety planning, and heightened safety accountability at WSDOT. The new Executive Order established a goal to reduce all OSHA-recordable injuries and illnesses by 30% by the end of FY 2007.

WSDOT Strives to Reach Reduction Goal

The table below shows regional and ferry system accident data to date. WSDOT's goal is to show a 30% reduction from the 466 total recordable injuries that occurred in the previous fiscal year, which means to meet the goal, the department cannot exceed 326 injuries by June 30, 2007. As of December 31, 2006 a total of 162 injuries have occurred.

Number of OSHA-Recordable Injuries and Illnesses Increases

Highway Maintenance Workers

For the second quarter of FY 2007, highway maintenance workers reported 41 OSHA-recordable injuries. This was 11 more than the preceding quarter and nine more than the same period in FY 2006. There were a total of 56 missed days away from work associated with the 41 injuries.

Highway Engineering Workers

The second quarter of FY 2007, highway engineering workers reported 16 OSHA-recordable injuries. This was an increase of four compared to the previous quarter (and an increase of six compared to same period). There were a total of 24 days away from work associated with the 16 injuries.

Ferry System

The second quarter of FY 2007, ferry workers reported 32 OSHA-recordable injuries. This was an increase of ten compared to the previous quarter and a decrease of 5 from the same period in Fiscal Year 2006. There were a total of 22 days away from work associated with the 32 injuries.

Sprains and Strains continued to be the highest recordable injury

Fifty-three percent of all OSHA recordable injuries this quarter were sprains and strains. WSDOT continues to research these cases to fully understand the nature and causation of this type of injury. The results of this study will assist the department in the development of appropriate control strategies.

Number of OSHA Recordable Injuries and Illnesses by Quarter: WSDOT Regions and Ferry System

FY 2007 (July 2006 - June 2007) Target Goal: 30% Reduction in WSHA-Recordable Injuries

	Maintenance		Engineering		Adminstration				
Regions	**Q1**	**Q2**	**Q1**	**Q2**	**Q1**	**Q2**	**FY 06**	**Reduction Goal**	**FY 07 YTD Total**
Northwest	10	9	3	3	1	0	81	57	**27**
North Central	2	6	0	0	0	1	33	23	**9**
Olympic	3	14	2	4	1	0	54	38	**24**
Southwest	1	3	2	3	0	0	30	21	**8**
South Central	9	2	4	2	0	0	33	23	**17**
Eastern	3	6	0	1	1	0	56	39	**11**
Headquarters	2	1	1	3	2	3	23	16	**12**
Subtotal	30	41	12	16	5	4	310	217	**108**
Ferry System	22	32	0	0	0	0	156	109	**54**
WSDOT Total	**52**	**73**	**12**	**16**	**5**	**4**	**466**	**326**	**162**

Data Source: WSDOT Safety Office & Ferry System

Note: This table should be not be used to compare region to region, due to a different number of employees in each region.

Worker Safety: Quarterly Update

WSDOT Workers: Quarterly Injury Rates

Quarterly OSHA-Recordable Injury and Illness Rates[1]

The tables below show quarterly recordable injury rates per 100 workers (see the gray box "How WSDOT Calculates Quarterly Injury Rates" for the calculation used to develop quarterly injury rates). This is not an annualized rate and is used to compare quarter to quarter.

Highway, Street, and Bridge Construction Workers

In the second quarter of FY 2007, the quarterly injury rate for Highway, Street, and Bridge Construction workers was 1.5 injuries and illnesses per 100 workers, which was an increase from the previous quarter rate of 1.1.

Ferry System Workers

In the second quarter of FY 2007, the quarterly injury rate for Inland Water Transportation workers was 2.1 per 100 workers. This number was a decrease from the previous quarterly rate of 1.4.

[1]WSDOT reports quarterly data for injuries and illnesses by totaling all recordable injuries and illnesses reported in a quarter and multiplying by 50,000 (the normal hours worked in a quarter per 100 workers). This number is then divided by all of the man-hours worked. The resulting number represents the quarterly number of injuries and illnesses per 100 workers (see equation below).

Equation:

$$\frac{(\text{\# of injuries}) \times 50{,}000}{(\text{\# of man-hours worked})} = \text{Quarter Rate per 100 Workers}$$

Note: In the September 30, 2006 edition of the Gray Notebook the above calculation method was introduced, therefore quarterly rates presented are not comparable to Gray Notebook editions published before September 30, 2006.

Recordable Highway, Street, and Bridge Construction Worker Injuries & Illness Injury Rate: Maintenance & Engineer Workers

Quarterly OSHA-Recordable Injury Rate per 100 Workers[1] (Not Annualized)

	FY 2006	FY 2007
FY Qtr 1	3.6	1.1
FY Qtr 2	1.2	1.5
FY Qtr 3	1.3	
FY Qtr 4	2.1	

Data Source: WSDOT Safety Office

[1]OSHA 'Recordable Injuries and Illnesses" is a standard measure that includes all related deaths and work related illnesses and injuries which result in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid. The U.S. Bureau of Labor Statistics provides the selected 2004 national average benchmark. One worker equals 2,000 hours per year.

Recordable Inland Water Transportation Worker Injuries & Illness Injury Rate: Ferry System Workers

Quarterly OSHA-Recordable Injury Rate per 100 Workers[1] (Not Annualized)

	FY 2006	FY 2007
FY Qtr 1	2.2	1.4
FY Qtr 2	2.4	2.1
FY Qtr 3	2.6	
FY Qtr 4	2.8	

Data Source: WSDOT Safety Office

[1]OSHA 'Recordable Injuries and Illnesses" is a standard measure that includes all related deaths and work related illnesses and injuries which result in death, loss of consciousness, days away from work, days of restricted work, or medical treatment beyond first aid. The U.S. Bureau of Labor Statistics provides the selected 2004 national average benchmark. One worker equals 2,000 hours per year.

Workforce Level and Training: Quarterly Update

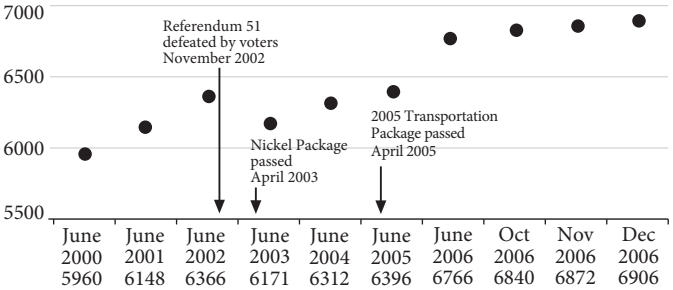
Number of Permanent Full-Time Employees at WSDOT Slightly Increases

One indicator of agency's workforce size is the number of permanent full-time employees on staff. This quarter WSDOT employed 6,906 permanent full-time employees, an increase of .4% from the prior quarter. This total of full-time employees does not account for permanent part-time, seasonal, or on-call workers. The chart to the right shows the total number of full-time employees at various points since the end of fiscal year 2000, with significant mandates identified. The total number of full-time equivalencies (FTE's) will generally exceed the number of permanent full-time employees due to seasonal and part-time workers being funded from "FTE" allotments.

WSDOT Increases the Percentage of Employees in Compliance with Mandatory Diversity Training Requirements

This quarter a total of 1,771 workers attended training required for all WSDOT employees (This number includes all individuals who attended one or more training classes this quarter.). WSDOT made progress towards compliance with the mandatory training of the Diversity Modules developed in 2002 with a 15% increase in the number of employees trained compared to the previous quarter. The attendance increased despite the lower number of classes offered (five less), the effects of inclement weather and seasonal holidays. The Diversity training programs showed an increase in compliance compared to previous quarters; Disability Awareness (5%), Sexual Harassment/Discrimination (2%), and Valuing Diversity (3%). WSDOT's Headquarters staffs improved their training compliance percentage during this quarter and no longer have the lowest percentage within WSDOT.

Number of Permanent Full-Time Employees at WSDOT



Data Source: Dept. of Personnel Data Warehouse, HRMS, WSDOT and the Ferry System Payroll.

Number of "No Shows" Increasing

The mandatory Diversity Modules continued to show a steady percentage of "No Shows" (13% or 202 total) this quarter. This is an increase with the 94 "No Shows", 9% for the preceding quarter representing a 44% increase between the two quarters. The combined classes conducted for WSDOT Headquarters, Olympic Region, Northwest Region, and the Urban Corridor staff showed the largest attendees of "No Show" problem during this quarter. Although work load issues prevent notification to the chain of command for "No Show" employees, monthly reporting to the Senior Management Team is done on the total number of "No Shows" by region.

Required Training for all WSDOT Workers

October 2006 – December 2006

Training Courses	Employees Requiring Training	Basic Training Completed to Date	Employees Needing Basic Training	Employees Needing Refresher Training	Completed Training Reporting Quarter	Total in Compliance	% in Compliance	% Change from Previous Quarter
Disability Awareness	7825	4396	3429	0	557	4396	56%	5%
Ethical Standards	7825	7459	366	1114	304	6345	81%	-2%
Security Awareness	7825	6197	1628	0	49	6197	79%	-2%
Sexual Harassment/ Discrimination	7825	5245	2580	0	392	5245	67%	2%
Valuing Diversity	7825	4638	3187	0	377	4638	59%	3%
Violence that Affects the Workplace	7825	6145	1680	0	92	6145	79%	-1%

Date Source: WSDOT Office of Human Resources, Staff Development
Note: As of December 30, 2006 OEO training was revised into three courses (Disability Awareness, Sexual Harassment/Discrimination, Valuing Diversity) in June 2002, and only these revised courses are currently reported. Refresher interval for the revised OEO training is five years.

Workforce Level and Training: Quarterly Update

Statutorily Required Training Programs: Maintenance Workers Compliance

Overall Statutorily Required Training Compliance Increases by 2%

WSDOT's goal is 90% compliance for statutorily required maintenance employee training. To deliver training and increase compliance rates, regional maintenance and safety trainers are utilizing five different approaches to increase compliance rates. These five methods are statutory required training, computer based and online training, distance learning programs, Safety Training days, and regional programs. These approaches allow maintenance employees to conveniently gain the necessary WSDOT work place training. Additional efforts are underway to convert several statutorily required courses into an e-learning format to augment instructor led training.

Training Program	Total Training Requirements	Total in Compliance	% in Compliance	Change from Last Quarter (%)	Biennium Average
Blood Bourne Pathogens[1]	568	438	77%	11%	51%
Confined Space Entry	541	448	83%	5%	76%
Electrical Safety Awareness	280	159	57%	-1%	56%
Fire Extinguisher[1]	1374	855	62%	22%	52%
Drivers Training Eversafe	1174	1013	86%	-1%	70%
First Aid[2]	1462	1236	85%	1%	83%
Hearing Conservation[1]	1338	1028	77%	-2%	78%
Lead Exposure Control[1]	84	41	49%	13%	22%
Lockout/Tag out	576	433	75%	-3%	70%
Personal Protective Equipment	1391	1152	83%	-1%	83%
Fall Protection	733	619	84%	-2%	84%
Flagging & Traffic Control[2]	1130	1031	91%	-2%	91%
Respirator Protection[1]	363	69	19%	1%	16%
Supervisor Return to Work	223	178	80%	3%	71%
Hazard Communications	1324	1110	84%	-1%	84%
Proper Lifting	1431	1033	72%	0%	70%
Railway Work Certification[1]	13	13	100%	7%	63%
Drug & Alcohol Certification	1196	1097	92%	1%	90%
Drug Free Workplace	346	306	88%	0%	87%
Forklift	1117	977	87%	-2%	89%
Hazardous Materials Awareness[1]	814	633	78%	10%	72%
Aerial Lift	166	152	92%	3%	87%
Bucket Truck	385	319	83%	-1%	82%
Excavation, Trenching & Shoring	423	359	85%	-1%	80%
Emissions Certification[3]	75	26	35%	-13%	62%
Total	**18527**	**14725**	**79%**		**77%**

Data Source: WSDOT Office of Human Resources, Staff Development

[1]Refresher Training Required Annually
[2]Refresher Training Required Every Three Years
[3]Refresher Training Required Every Five Years

Workforce Level and Training: Quarterly Update

Statutorily Required Training Programs: Maintenance Workers Compliance

Compliance by Region and for Headquarters

WSDOT tracks compliance for statutorily required training programs for its maintenance workers by individual region and for its headquarters in Olympia.

Transportation Systems Technician perform a signal revision, requiring skills performing traffic control, bucket truck operation, and electronic repairs.

Total Compliance for Required Maintenance Training: All WSDOT Regions and Headquarters

Region	% in Compliance	Change from Last Quarter (%)	Biennium Average
Northwest Region (NWR)	73%	3%	70%
North Central Region (NCR)	81%	2%	77%
Olympic Region (OR)	74%	1%	69%
Southwest Region (SWR)	91%	-1%	92%
South Central Region (SCR)	79%	0%	79%
Eastern Region (ER)	95%	7%	89%
Headquarters - Olympia (HQ)	52%	-11%	45%

Data Source: WSDOT Office of Human Resources, Staff Development

Asset Management: Pavement Assessment Annual Update

Pavement Conditions for 2005

This report is an annual update on pavement conditions. WSDOT maintains approximately 20,099 lane miles of highway, including ramps, collectors and special use lanes. WSDOT uses three major pavement types, which are described below and in more detail on p. 57. Each pavement type has an associated pavement life, rehabilitation treatment, and rehabilitation cost.

Increase in the Percentage of Pavement in Good Condition in 2005

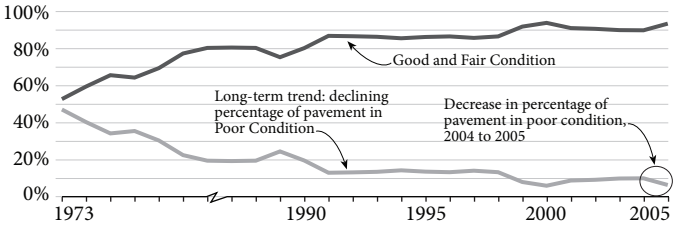
According to the 2005 pavement condition survey, the percentage of all pavements in the "good" category increased from 89.9% in 2004 to 93.5% in 2005, an overall increase of 3.6%.

The decrease in "poor" condition pavements is attributable to a reduction of 119 lane-miles of poor condition portland cement concrete (PCC) pavements, a reduction of 212 lane-miles of poor condition chip seal pavements and a reduction of 307 lane-miles of hot mix asphalt (HMA) pavements in poor condition.

Technologically Advanced Approach to Pavement Condition Data Collection

WSDOT is one of a few states to perform its pavement condition survey using an automated pavement condition vehicle on 100% of the surveyed lane. This allows WSDOT to complete an evaluation of all state highways (many states conduct sample surveys from a given mile of pavement). WSDOT's vehicle travels at highway speeds and collects data through the use of high-resolution digital imaging to determine the amount of cracking and patching, pavement roughness and rutting annually on all state highways. Cameras view the driver perspective, the right shoulder, and the pavement surface. The digital images are played back on special workstations at slow speeds and surface distresses are identified and rated by trained technicians. Quality control checks are applied throughout the rating process to verify and validate the accuracy of the distress data.

State Highway Pavement Trends, 1973-2005



Data Source: WSDOT Materials Lab

Rear view of pavement survey vehicle.

Pavement Type	Total Lane Miles[1]	Annual VMT[3] 2005 (Billions)[2]	Pavement Rating	2004	2005	2005-07 Dollars Programmed (Millions)[2]		2007-09 Dollars Programmed (Millions)[2]	
Chip Seal Pavements A chip seal is a durable surface that provides six to eight years of performance life at approximately $12,000 per lane-mile	4,314	1.1	Good	86%	91%				
	23.5%	3.6%	Poor	14%	9%	$31.3	15.1%	$32.3	9.0%
Hot Mix Asphalt Pavements Hot mix asphalt pavements surface life, between rehabilitation treatments, ranges from six to 18 years (based on actual pavement performance) at approximately $123,000 per lane mile for due miles and $156,000 for past due miles	11,645	21.7	Good	92%	95%				
	63.4%	68.6%	Poor	8%	5%	$154.2	74.5%	$198.2	78.5%
Portland Cement Concrete (PCC) Pavements WSDOT has experienced PCC pavement life ranging from 25 to 45 years with an approximate cost of $330,000 per lane mile for dowel bar retrofit and $1 million per lane mile for full replacement.	2,388	8.8	Good	85%	91%				
	13.0%	27.8%	Poor	15%	9%	$21.5	10.4%	$22.0	8.7%
			Good	15965	16617				
Total	18,347	31.6	Poor	1797	1162	$207.0		$252.5	

[1]Data Source: State highway Log Planning report 2005 - includes all lane miles
[2]Data Source: Transportation Data Office - excludes ramps, collector - distributors or frontage roads.
[3]Vehicle Miles Traveled: A measure of the amount of vehicular travel. One vehicle traveling one mile = 1 VMT

Asset Management: Pavement Assessment Annual Update

I-5 Seattle Portland Cement Concrete Pavement Performance Study Update

WSDOT, the University of Washington, Parametrix, and Nichols Consulting have joined together to investigate the performance of concrete pavements on I-5 in the Seattle area, with a report that is scheduled to be completed by Fall 2007. This study will attempt to forecast when concrete pavements on I-5 will fail and how much time WSDOT has to plan and develop reconstruction projects before the pavements deteriorate to an unacceptable level. If results of the study are available they will be published in the December 31, 2007 *Gray Notebook*.

Washington Ranks 28th in Pavement Roughness Compared with Other States

The Federal Highway Administration's annual Highway Statistics Report includes information on pavement condition reported by each of the 50 states and the District of Columbia (based on roughness only). In the table to the right is a snapshot of the ranking table of 2005 results that shows the number of miles, by state, in poor condition according to smoothness. The total miles reported include the interstate system and principal arterials owned by the state, cities, and counties, and a sampling of other functional classes. Washington state is currently ranked 28th in smooth roads. Washington was ranked 19th in 2004 and 23rd in 2004.

This data is provided for information purposes, but state-to-state comparisons are problematic because each state has a different means of data collection. It is important to keep in mind that this data does not represent all state highway pavements. In 2003, WSDOT's overall state highway condition assessment showed 3.6 % (or 194 miles) of pavements in poor condition; in 2004, there was 7.7 % (or 447 miles) and in 2005 there was 4.6 % (or 192 miles). For the 2005 rating, the number of miles in poor condition (according to smoothness alone) in Washington State actually decreased, but Washington state's ranking compared to other states fell. The FHWA publication can be viewed at www.fhwa.dot.gov/policy/ohim/hs05

Pavement Management at Lowest Life Cycle Cost (LLCC)

The basic management principles behind LLCC are rather simple: if rehabilitation is done too early, pavement life is wasted, if rehabilitation is done too late, very costly repair work may be required, especially if the underlying structure is compromised. WSDOT continually looks for ways to balance these basic principles while making adjustments to traditional paving practices.

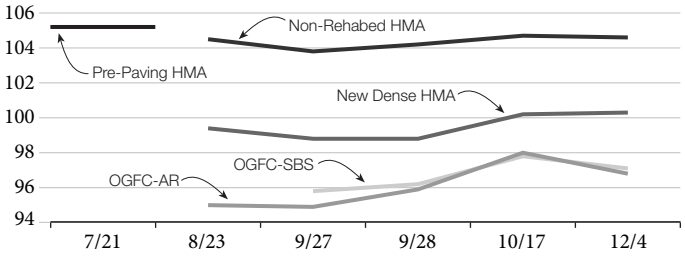
2004 National Pavement Smoothness Ranking

Rank	State	Centerline Miles Reported	# of Miles in Poor Condition	% of miles in Poor Condition
1	Georgia	11118	9	0.1%
2	Nevada	2924	20	0.7%
3	Florida	10791	126	1.2%
4	Kentucky	5671	67	1.2%
5	Utah	3724	48	1.3%
6	Minnesota	11796	201	1.7%
7	Montana	6971	131	1.9%
8	Idaho	3930	81	2.1%
9	Wyoming	4370	101	2.3%
10	South Carolina	6593	180	2.7%
11	Kansas	8887	273	3.1%
12	North Dakota	6183	190	3.1%
13	Tennessee	7850	243	3.1%
14	West Virginia	3307	130	3.9%
15	Arizona	4680	195	4.2%
27	Missouri	9907	805	8.1%
28	**Washington**	**6256**	**544**	**8.7%**
29	Wisconsin	10646	950	8.9%
47	California	20405	4105	20.1%
48	Massachusetts	3277	886	27.0%
49	New Jersey	2989	901	30.1%
50	Rhode Island	625	215	34.4%
51	District of Columbia	126	113	89.7%

WSDOT Continues to Research Quieter Pavements

As reported in the June 2006 *Gray Notebook* (pp. 65-66), WSDOT continues to research and test quieter pavement to determine whether a material exists that provides reduced noise impacts while also meeting the legislative mandate for lowest life cycle pavements. WSDOT conducts this research throughout the state by using test sections of pavement to collect data.

Tire/Pavement Noise Sound Intensity
I-5 Lynnwood, WA., July 21 - December 4, 2006
Average Sound Intensity Level, dBA



Data Source: WSDOT Materials Lab

All quieter pavement test sections will be evaluated according to pavement durability (which includes skid resistance, smoothness, cracking and studded tire damage), quality, quantity of noise reduction, and persistence of noise suppression over time. Pavement durability will be measured using highspeed lasers and cameras for measuring wear and tear. To measure the amount of noise reduction, crews will use special microphones placed on the side of the freeway as well as microphones attached inside and outside of a test vehicle.

More information on this subject can be obtained at www.wsdot.wa.gov/Projects/QuieterPavement/

Studded Tires Cause $18.2 Million in Damage to Portland Cement Concrete (PCC) Pavement

In the past, it has been difficult to assign a dollar value to the damage to pavement caused by studded tires. Due to improvements in technology it is now possible to measure the actual amount of damage caused by studded tires on PCC pavements. Measurements on PCC pavements indicate that the current damage due to studded tires is approximately $18.2 million (cost for removing studded tire wear by diamond grinding the concrete surface). Damage estimates for hot mix asphalt pavements cannot yet be determined due to software limitations. WSDOT is working so that in the near future an estimate can be made on the amount of studded tire damage on hot mix asphalt pavements.

Over the last five years, WSDOT has constructed a number of PCC pavement test sections to determine what combination of materials could be used to help offset the damage caused by studded tires. Test section approaches have included increasing the concrete strength (making the concrete surface harder would make it more resistant to studded tires), modifying the aggregate gradation (making the aggregate gradation more uniform would minimize the smaller aggregate which is more susceptible to studded tire wear), adding the Hard-Cem product (this is a product that is typically used to harden industrial floors) and modifying the surface texture (carpet drag versus tining).

Current observations indicate that there is no PCC mix that out-performs any of the other available mixes. However, the amount of studded tire wear on the tined (i.e. textured) sections is the highest of all surfaces. It is too early to draw any conclu-

Quieter Pavement Projects on Washington State Highways

State Highway	Location	Type of Pavement	Technique[1]	Construction Year
I-205	Vancouver	Portland Cement Concrete pavement	Diamond grinding	2005
I-90	Spokane	Portland Cement Concrete pavement	Carpet drag	2006
I-5	Federal Way	Portland Cement Concrete pavement	Diamond grinding, carpet drag, longitudinal tining	2006
I-5	Lynnwood	Hot mix asphalt	Open graded friction courses	2006
SR-520	East end of bridge to vicinity of I-405	Hot mix asphalt	Open graded friction courses	2007
I-405	Bellevue	Hot mix asphalt –	Open graded friction courses and a portland cement concrete pavement – whisper grinding	2008-09

[1]Techniques Descriptions: Open graded friction courses – one section will include an asphalt binder that is modified with a polymer and in the other section the asphalt binder will be modified with recycled tires; Longitudinal tining – creates shallow channels in the concrete using a rake. Longitudinal tining is different than traditional transverse tining because the channels are made in the direction of traffic flow; Diamond and whisper grinding – treatment used on existing concrete pavements. Machinery uses diamond saw blades to remove a thin layer of hardened concrete creating a texture pattern similar to corduroy; Carpet drag – drag either burlap or Astroturf™ across the wet concrete to create the required surface texture.

sions since the majority of these projects are less than five years of age. WSDOT will be monitoring these sites over the next 10 to 15 years to determine how well they hold up to the damage from studded tires.

Investigation on the Potential Impact of Increased Use of Chip Seal Pavements on Highway System Underway

In 2005, WSDOT initiated a study with the University of Washington to investigate current chip seal application practices, determine whether chip seals can be applied to higher trafficked routes (greater than current practice of routes with less than 2000 vehicles per day), and determine the statewide economic impacts in its chip seal applications if they were increased. Since the increased use of chip seals will have an impact on the performance of the state owned route system, both a structural and an economic analysis will be required. This study will include the following:

- A literature review and survey of State DOTs that focuses on chip seal applications for higher traffic levels.
- Analyses associated with structural and user cost impacts due to anticipated increases in pavement roughness.
- Combinations of chip seal and hot mix asphalt surfaces will be assessed since the best combinations for WSDOT may be a chip seal cycle (or cycles) interspersed with periodic hot mix asphalt overlays.

The expected results of this study are:

- Criteria on the use of chip seals as a lower cost alternative to hot mix asphalt overlays. Specifically, which WSDOT routes can be converted to a chip seal with assurance that the structural adequacy will not be compromised.
- Criteria that examine whether WSDOT should consider alternating chip seal and hot mix asphalt paving cycles.
- Insight into how to mitigate noise, roughness, performance, and construction issues.
- Improved manual on chip seal design and construction.

The economic analysis portion of this study is currently being finalized. The entire study should be completed by Fall 2007. The results will be shared in the December 2007 *Gray Notebook*.

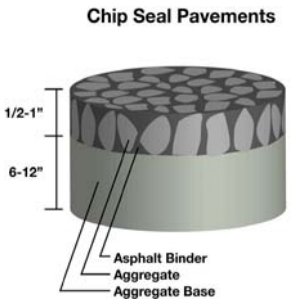
Asset Management: Pavement Assessment Annual Update

Basic Pavement Types and Ratings Summary

Pavement Types

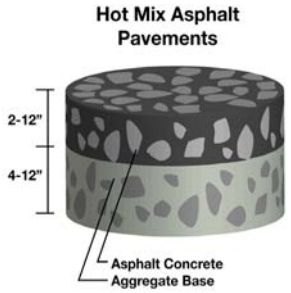
Chip Seals

Asphalt is sprayed on the road surface and covered with a layer of rock chips, creating a flexible surface. As the asphalt cools it becomes solid. Chip seals are appropriate for roads that carry fewer than 2,000 vehicles and/or 200 trucks per day. Chip seal roads are typically rural and have six to eight years of performance life. It is often cost effective to combine small projects into larger, regional projects.



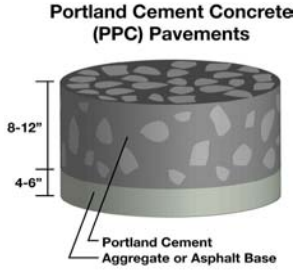
Hot Mix Asphalt (HMA)

HMA is a flexible surface, often used on roads with traffic volumes greater than 2,000 vehicles per day. In Western Washington, the average HMA pavement life is 16.5 years; in Eastern Washington it is 11.3 years due to seasonal temperatures. The state average is 14.7 years.



Portland Concrete Cement (PCC)

Existing PCC pavement life ranges from 25 to 45 years. PCC pavement is a rigid surface, typically placed on heavily traveled interstates, principal arterials, and intersections.



Pavement Ratings

WSDOT uses a combination of pavement ratings shown below to determine when pavement is due for rehabilitation, based on Lowest Life Cycle Cost (LLCC) management.

Pavement Structural Condition (PSC)

A pavement will develop structural deficiencies for two reasons: truck traffic and cold weather. The PSC is a measure based on distress, such as cracking and patching, which relates to the pavement's ability to carry loads.

Pavement Structural Condition example

PSC ranges from 100 (best condition) to 0 (worst condition). A roadway should be considered for rehabilitation when it falls within the PSC range of 40 to 60.

Rutting

Rutting is caused by heavy truck traffic or studded tire wear. Ruts deeper than 1/2 inch have the potential to hold water, increasing the risk of hydroplaning for high-speed traffic. A roadway should be rehabilitated when the rut depth is greater than 1/3 inch.

Rutting example

Roughness

The International Roughness Index (IRI) is a procedure to measure pavement ride. A full-sized van, with a laser-measuring device mounted on the front bumper, measures the roughness of the pavement. A roadway should be rehabilitated when the IRI value is between 170 and 220 inches per mile.

Roughness example

Highway Safety: Quarterly Update

Cable Median Barriers Performance: Annual Update

This report presents an update on the performance of cable median barriers and also compares the performance of cable, beam guardrail and concrete barrier systems in state highway medians. The information presented here provides an update on the findings presented in the December 31, 2005 *Gray Notebook* (p. 52). Since the last report was published, WSDOT has installed 63 additional miles of cable barrier and analyzed the collision history for 2005.

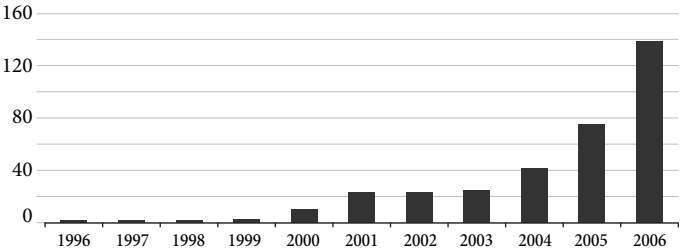
WSDOT Installed 138 Miles of Cable Median Barrier

By the end of 2006, WSDOT placed a total of 138 miles of cable barrier in highway medians. Of the 138 miles, a little more than 35 miles have been in place over six months. This period is long enough to evaluate before and after collision history and cable median barrier performance. Sections that were in place fewer than six months are not included in this study.

Cable Median Barriers Reduce the Frequency and Severity of Median Cross-Over Collisions

The primary purpose of cable median barrier is to reduce the frequency and severity of median cross-over collisions. A cross-over collisions occurs when an out-of-control vehicle enters the median and travels into the opposite-direction traffic lanes. For the 35 miles of cable median barrier evaluated, the frequency of median cross over collisions dropped from 13.3 per year to 4.3 per year after cable barrier was installed in the median. Prior to cable barrier installation, fatal injury median crossover collisions were occurring at a rate of 1.2 per year and disabling injury collisions were also occurring at a rate of 1.2 per year. After installation of cable barrier, there were no fatal collisions in these locations, and disabling median crossover collisions occurred at a rate of 0.5 per year.

Cable Median Barrier
Washington State Highways 1996-2006
Total number of miles by year



Data Source: WSDOT Design Office

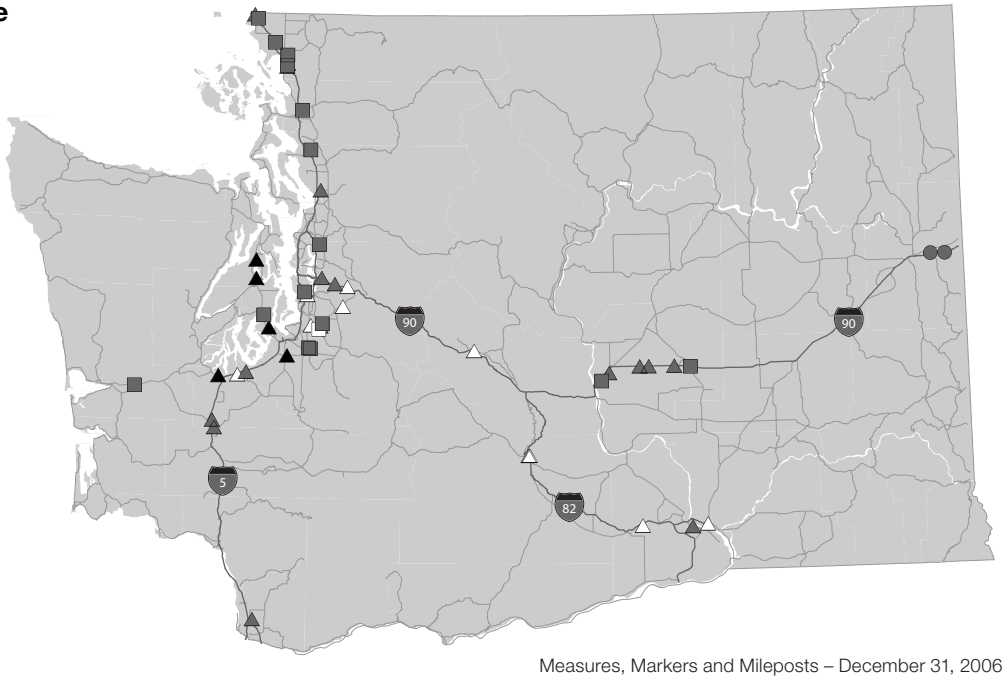
Annual Median Crossover Collisions, Before & After Cable Barrier Placement
For 35 miles of Installed Cable Median Barrier in Washington State by 1995

	Before Cable Barrier *1993 to Date of Installation*	After Cable Barrier *Date of Installation to 2005*
All Cross Median Collisions	13.3	4.3
Fatal Cross Median Collisions	1.2	0.0
Disabling Injury Cross Median Collisions	1.2	0.5

Data Source: WSDOT Design Office
Note: This data does not include the nine miles of cable median barrier on I-5 in Marysville (see p. 60)

Locations of Washington State Cable Median Barriers

- TPA, Completed
- TPA, Future
- Nickel, Completed
- PEF, Completed
- PEF, Under Construction
- PEF, Future



Cable Median Barriers Reduce Societal Costs of Collisions

Installation of cable barriers actually increased the number of reportable collisions; the number of reportable collisions increased from 50.9 per year prior to cable barrier installation to 140.7 per year after. This consequence is expected, as the presence of the barrier increases the opportunity to strike an object within the median. Previously, some out-of-control vehicles crossing the empty median would collide with other vehicles or fixed objects, while other vehicles would regain control before such an event occurred.

Although the frequency of these collisions has increased substantially, overall injuries sustained from these collisions has declined. Prior to cable barrier installation, the societal cost of median crossovers and collisions in the median was $6.9 million per year. After cable barrier installation, the societal cost of those collisions was reduced to $4.4 million per year.

96% of Vehicles that Hit the Cable Median Barrier Did Not Cross the Median

The table below illustrates the performance on cable median barriers along the 35 miles of highway evaluated. These findings are based on collisions in which the first object struck was a barrier and does not include occurrences in which a primary collision redirected the vehicle into the cable barrier. The circumstances of the primary collision have too much influence on injuries to provide reliable evaluation of injuries associated with barrier hits.

Cable Median Barriers Outperform Other Types of Barriers

Cable median barrier demonstrates a reduced potential for injuries compared to concrete median barrier and beam guardrail. This is most apparent in collisions involving a single vehicle. Although injuries are lower for cable barrier, the difference in injury frequency is not nearly as dramatic when multiple vehicles are involved. For all barrier types, the frequency of injuries increases dramatically when multiple vehicles are involved. The table bellow illustrates the number of collisions resulting in reported injuries or death as a percent of all collisions.

Performance of Different Types of Median Barriers: Percent of Collisions Reporting Injuries or Fatalities, 1999-2005

By Type of Collision and Type of Barrier

	Concrete Barrier	Beam Guardrail	Cable
Single Vehicle Collisions	38%	36%	15%
Multiple Vehicle Collisions	50%	52%	40%
All Collisions	41%	42%	18%

Note: This data does not include the nine miles of cable median barrier on I-5 in Marysville (see p. 60)

Although the percentages indicate that the advantages of cable barrier are not as significant with multi-vehicle collisions, cable still surpasses concrete barrier and beam guardrail. A deeper analysis of multi-vehicle collisions provides more insight: sometimes, single vehicles that hit any type of barrier are redirected back into traffic by the barrier system, causing a multi-vehicle collision. However, cable barriers create this situation less often then other barrier systems. Fifteen percent of all cable barrier collisions are multi-vehicle events, compared with 26% for concrete barrier and 35% for beam guardrail.

Cable Median Barrier Performance by Resulting Injury, 1999-2005

	Possible Injury	Evident Injury	Disabling Injury	Fatal	Total	No Injury	% of Total
Restrained[1], Redirected[2], or Contained in the Median[3]	17	12	3	0	223	191	96%
Cross Median[4]	1	2	2	0	10[5]	5	4%
Total	**18**	**14**	**5**	**0**	**233**	**196**	

Data Source: WSDOT Design Office
Note: This data does not include the nine miles of cable median barrier on I-5 in Marysville (see p. 60)
[1]Cables contained the vehicle, did not allow it to reach opposing traffic lane, and did not redirect into other vehicles or objects.
[2]Cables contained the vehicle but it disengaged from the barrier and struck another vehicle or object.
[3]Vehicle was contained within the median, but went under, over, or through the cables. This category includes 11 collisions in which vehicles overturned, rolling over the cable barrier.
[4]Vehicle traveled across the median, reaching the opposing traffic lane, regardless of whether it was contained by the cable or got through them.
[5]There is an additional crossover where cable barrier is the second object struck resulting in evident injury.

WSDOT has Improved Cable Median Barriers in Marysville

As discussed in the December 31, 2005 *Gray Notebook*, the cable median barrier in the Marysville area has reduced the frequency of median cross over collisions, but hasn't changed the overall severity of these collisions, unlike installations elsewhere in the state. An engineering analysis of the cable barrier in the Marysville area revealed that the placement of the cable resulted in an increased potential for vehicles to pass under the bottom cable, and lift the cables over the top of the vehicle. As a vehicle's front tire passes through the low point in the median, the front suspension compresses, allowing the front of the vehicle to slide under cables placed immediately behind the low point in the median. For more information on this study, please see the December 31, 2005 *Gray Notebook*, pp. 52-53.

To address this issue, a second run of cable barrier was installed on the other side of the median in this area to intercept the vehicles before they reach the low point. Consequently, the nine miles of cable median installed in the Marysville area along I-5 will be presented separately and is excluded from the statewide evaluation of cable barrier performance. The outcome of these changes will be presented in a future *Gray Notebook* article when more data is available.

Motorcycles Striking Cable Median Barriers

Information on types of vehicles striking the barriers is available from 2002 forward. An analysis of collisions where cable barrier was the first or second object struck reveals that 97% of the vehicles striking cable barrier are passenger cars, pickups, and van sized vehicles. These same vehicle types account for 83% of the cross median collisions. There have been an increasing number of inquiries about the consequences of motorcyclists striking cable barriers. Through calendar year 2005 there was only one recorded incident of a motorcycle collision involving cable barrier. This incident was a result of a front tire blowout which left both the driver and the passenger with minor injuries. The driver lost control, and the motorcycle went down and slid into the cable barrier. The investigating officer's report is unclear as to whether either rider ever actually made contact with the barrier. Similarly, reports from other states which have installed cable barrier have not identified this as a problem area.

WSDOT will continue to track data on motorcycles striking cable median barriers and report that data in future editions of the *Gray Notebook*. The table below provides a breakdown of vehicle types for all cable barrier collisions within the 35 mile evaluation section occurring between Jan. 1, 2002 and Dec. 31, 2005.

Future Reporting on Cable Median Barriers

During 2005 and 2006, the number of miles of cable barrier increased significantly, presenting an opportunity for an expanded evaluation of installation sites in the future.

The next report will also contain a comparison of two types of cable median barriers, low tension and high tension, and also a discussion of how WSDOT maintains the cable median barriers.

A cable median barrier restrains a semi truck on I-5 at mile post 252.

Performance of Cable Median Barriers by Type of Vehicle, 2002-2005

	Passenger Cars	Pickups, Panel Trucks, Vans (under 10,000 lb)	Truck (Flatbed, van, etc.)	Truck Tractor & Semi-Trailer	Motorcycle	Total
Restrained[1], Redirected[2], or Contained in the Median[3]	126	83	2	2	1	214
Cross Median[4]	7	2	1	1	0	11
Total	133	85	3	3	1	225

Data Source: WSDOT Design Office
Note: This data does not include the 9.08 miles of cable median barrier on I-5 in Marysville (see p. 60)
[1]Cables contained the vehicle, did not allow it to reach opposing traffic lane, and did not redirect into other vehicles or objects.
[2]Cables contained the vehicle but it disengaged from the barrier and struck another vehicle or object.
[3]Vehicle was contained within the median, but went under, over, or through the cables.
[4]Vehicle traveled across the median, reaching the opposing traffic lane, regardless of whether it was contained by the cables or got through them.

Pedestrian and Bicyclist Safety Annual Update

Pedestrian and bicycle safety is an important aspect of Washington State's highway safety program. Crashes involving pedestrians and bicyclists involved make up over 12% of all fatal crashes on Washington's highways. This is disproportionately high considering pedestrians and bicyclists make up 5% of all trips.

Washington Drops in National Rankings

Washington's ranking among other states for pedestrian and bicycle safety performance fell slightly in 2005 as measured annually by the National Highway Traffic Safety Administration. For pedestrian safety, Washington placed 12th nationally in 2004 and moved to 16th in 2005. Washington's ranking among other states for pedestrian and bicycle safety performance fell slightly in 2005 as measured annually by the National Highway Traffic Safety Administration. For pedestrian safety, Washington placed 12th nationally in 2004 and moved to 16th in 2005.

The drop in national rank is explained by an increase in fatal crashes for both bicyclists and pedestrians in 2005. From 2004 to 2005, pedestrian fatality rates changed from .93 to 1.13 and bicyclist fatality rates changed from 1.13 to 2.07. Washington saw an increase in pedestrian crashes involving both the young and the elderly during 2004 and 2005 (see discussion on p. 62).

Bicycle and Pedestrian Safety Trends Show Several Risk Factors

Driver action, pedestrian and bicyclist risk-taking behavior, and the lack of sidewalks, crosswalks, and other accommodations continue to influence bicyclist and pedestrian fatality rates. Lack of safe crossing opportunities, impairment, and at-risk population groups such as the young and aging continue to be WSDOT's focus areas for improvement. WSDOT is currently administering two grant programs focused on reducing these risk factors, the Safe Routes to Schools Program and the Pedestrian and Bicycle Safety Program, both created by the Legislature in 2005. Safe Routes has also been adopted by the federal government, based on elements of Washington's program.

WSDOT Focuses on Urban Areas

Collisions involving pedestrians and bicyclists are more frequent and severe in urban areas. Between 1999 and 2005, over 70% of pedestrian fatalities occurred in urban areas. Examination of urban area collisions shows that 74% of pedestrian collisions and 63% of bicycle collisions occur on state routes within larger cities (cities over 22,500 people). The majority of state highways within urban areas are posted at speeds over 20 miles per hour

2005 Pedestrian Fatality Rate by State, Puerto Rico, and the District of Columbia
Fatalities per 100,000 People

Rank	State	Pedestrian Fatalities	Pedestrian Fatality Rate
1	New Hampshire	5	0.38
2	Nebraska	8	0.45
3	Vermont	3	0.48
4	Idaho	9	0.63
5	Maine	9	0.68
14	Colorado	48	1.03
15	Alaska	7	1.05
16	**Washington**	71	1.13
17	Virginia	88	1.16
18	Tennessee	70	1.17
26	Oregon	48	1.32
50	New Mexico	61	3.16
51	Florida	576	3.24
52	Puerto Rico	133	3.40
	U.S. Total	**4,881**	**1.65**

Data Source: National Highway Traffic Safety Administration

2005 Bicyclist Fatality Rate by State, Puerto Rico, and the District of Columbia
Fatalities per 100,000 People

Rank	State	Bicyclist Fatalities	Bicyclist Fatality Rate
1	South Dakota	0	0
2	Vermont	0	0
3	Massachusetts	5	0.78
4	Connecticut	3	0.85
5	Rhode Island	1	0.93
23	Texas	46	2.01
24	Indiana	13	2.07
25	**Washington**	13	2.07
26	Idaho	3	2.1
27	Maine	3	2.27
39	Oregon	11	3.02
50	District of Columbia	3	5.45
51	Arizona	35	5.89
52	Florida	124	6.97
	U.S. Total	**784**	**2.64**

Data Source: National Highway Traffic Safety Administration

Pedestrian and Bicycle Safety Annual Update

and have more than two lanes in each direction. Both speed and width of the roadway pose additional risk for pedestrian crossings, particularly in an urban setting.

Many of these known risk locations on state highways inside larger cities may persist, at least into the near future, as state policy makers, WSDOT, and local agencies work toward an agreement on jurisdiction control and financial responsibility. RCW 47.24.020, defines jurisdiction and control on state highways inside cities exceeding 22,500 in population. It has been interpreted by State Attorneys to assign safety improvements, including pedestrian safety, to the responsibility of the respective city. Design authority for these locations rests with WSDOT.

Higher Speeds Result in More Severe Accidents

The relationship between vehicle travel speeds and resulting severity of pedestrian injury indicates that higher vehicle speeds are strongly associated with both a greater likelihood of pedestrian crash occurrence and more serious resulting pedestrian injury. There is an estimated 95% survival rate for pedestrians struck by a vehicles traveling at 20 miles per hour (or less). This compares with fatality rates of 40, 80, and nearly 100% for striking speeds of 30, 40, and 50 miles per hour or more, respectively.

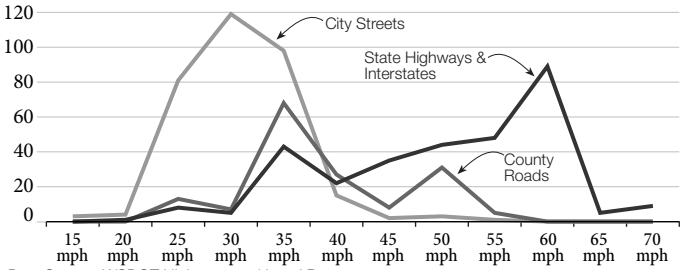
Youngest and Oldest are Most Likely to Be Killed in Bicycle and Pedestrian Accidents Involving Cars

The chart on the right shows the fatal crashes involving the age groups considered most at risk, the young (0-14) and the aging (71+). These age groups experience nearly 45% of all traffic related fatalities involving pedestrians and bicyclist. This is slightly higher than the national average.

In Washington, pedestrian injuries remain the third leading cause of injury death for children and youth. Bicycle injuries were the second leading cause of hospitalization due to injury for children five to 14 years old (per the Washington State Department of Health).

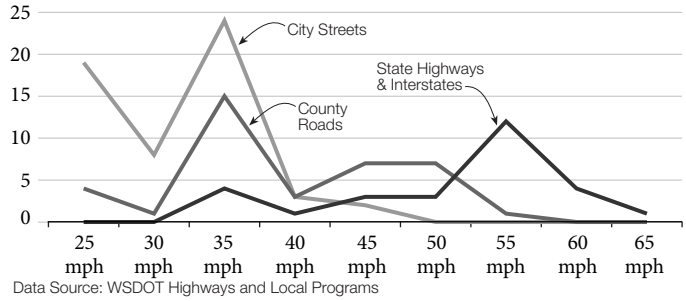
Both at risk age groups, the young and the aging, saw an increase in pedestrian and bicyclist fatalities in 2005 in Washington. Another trend of concern in Washington State pedestrian fatality statistics shows that ethnic and racial minorities appear to be disproportionately represented.

Pedestrian Fatalities by Route Class and Speed Limit
1995-2005



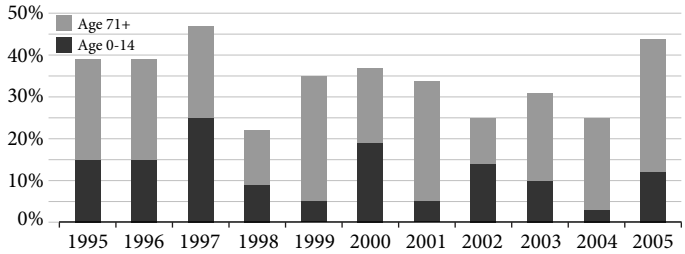
Data Source: WSDOT Highways and Local Programs

Bicycle Fatalities by Route Class and Speed Limit
1995-2005



Data Source: WSDOT Highways and Local Programs

Washington State Pedestrian and Bicycle Fatalities by At-Risk Age
1995-2005
Percent of Total Bicycle and Pedestrian Fatalities per Year



Data Source: WSDOT Highways and Local Programs

Washington State Pedestrian Fatality Rates by Race and Ethnicity, 1999-2003

Race	Percent of Pedestrian Fatalities	Percent of Total Population
Caucasian	70.3%	77.1%
African American	5.0%	3.5%
American Indian/ Alaskan Native	6.6%	1.7%
Asian/Pacific Islander	7.5%	6.4%
Hispanic[1]	10.0%	8.8%
Other/Unknown	0.6%	3.0%

Data Sources: Fatality Analysis Report System (FARS), U.S. Census
[1]Hispanic individuals might be included in more than one applicable race category.

Highway Safety: Quarterly Update

Highway Roadside Safety Initiatives: Guardrail Upgrade and Low-Cost Enhancements

In the 2003 Nickel and 2005 Transportation Partnership Account (TPA) construction programs, WSDOT placed a dedicated emphasis on improving roadside safety. The Nickel package set aside $20 million to replace existing guardrail barriers that were built to now-outdated safety standards. The TPA program has budgeted $47 million for low-cost enhancements to address locations which did not have any barriers, and that had an above-average number of high-severity run-off-the-road crashes.

WSDOT Will Replace Approximately 75 miles of Outdated Guardrail

Before the 2003 Nickel package, many roads in Washington were protected by guardrail built prior to current safety standards. Rigorous safety testing and shifts in user's vehicle types that are on the road have changed safety standards over the years. The outdated guardrail is often located on rural roads with little traffic, such as those on mountain passes or tribal reservation lands. Outdated guardrail led to a greater safety risk, since vehicles striking these guardrails were more likely to experience collisions of greater severity than if the guardrail had been up to current standards. See the above-right map for 29 projects that are completed or underway.

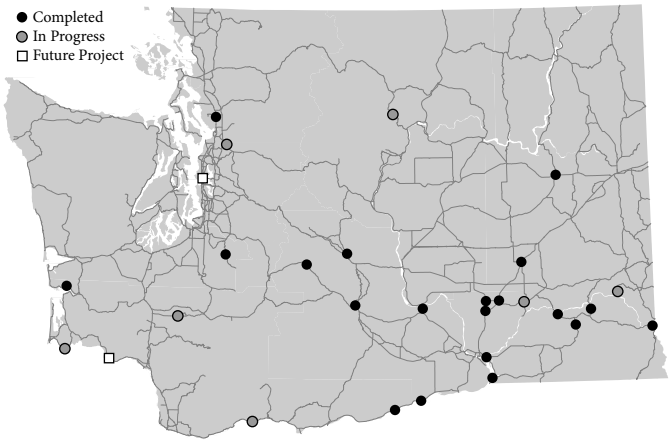
Additional 400 Miles of Highway Roadside to be Improved

Meanwhile, many additional locations around Washington State, primarily on rural two-lane roads, were identified by WSDOT as having an above-average number of severe run-off-the-road collisions. With money from the TPA package, WSDOT will be able to improve approximately 400 miles of highway with low-cost enhancements for roadside safety through 35 projects (see map to the right). Examples of lost cost enhancements might include the removal of fixed objects such as rocks or telephone poles, flattening slopes along the highway's edge, or placing barrier to prevent vehicles from entering the bodies of water or rolling over. WSDOT believes that these low-cost enhancements will reduce the frequency of high-severity collisions either by allowing vehicles time to recover or by catching out-of-control vehicles with barriers.

Future "Before and After" Performance Reporting for Special Highway Roadside Safety Initiatives

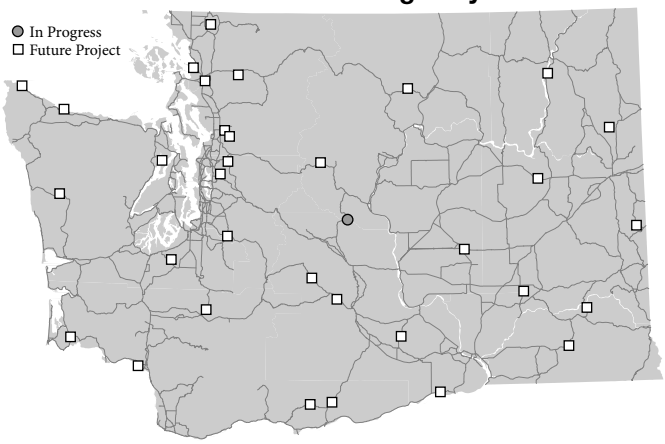
In 2008, WSDOT will begin reporting before and after data for high-severity collision rates in locations where outdated guardrail has been replaced using Nickel funding. Since many of the TPA program roadside safety projects have been finished only

2003 Nickel Program: Guardrail Replacement Projects



Data Source: WSDOT Systems Analysis and Program Development

2005 TPA Program: Low-Cost Enhancements for Highway Roadsides



Data Source: WSDOT Systems Analysis and Program Development

BEFORE: Outdated guardrail at the SR 7/SR 705 interchange with I-5 in Tacoma.

AFTER: The replacement guardrail meets current safety standards, and creates a continuous transition to the bridge rail, removing the blunt end that had existed previously.

Environmental Programs: Annual Update

Environmental Management Systems (EMS) Update

WSDOT's Environmental Management Systems (EMS) supports the department's environmental efforts and integrates them into everyday operations. This report updates established WSDOT programs that follow the EMS framework: Compliance (p. 71), Erosion Control (p. 65), Water Quality (p. 66), Stormwater (p. 67), and Wetland Monitoring (pp. 68-70).

The updates below highlight several smaller areas of EMS activity in 2006.

Construction Compliance Program Set for Evaluation

Two years have passed since the implementation of the Regional Environmental Compliance Plans statewide. In 2007, WSDOT will evaluate the plans and determine how the plans are working and what can be improved.

Maintenance Facilities Delayed in Implementing EMS

In 2005, the WSDOT Maintenance Office set a goal to develop and implement an EMS for its maintenance facilities by June 2006. This EMS covers fueling and vehicle maintenance operations, hazardous material storage/disposal, and stormwater pollution prevention planning. The documentation for the EMS was completed. However, due to resource constraints and a desire to gather 'best practices' information from Oregon's DOT, WSDOT has pushed implementation back to 2007.

WSDOT Prepares Contract Language to Meeting Environmental Requirements

WSDOT must obtain and follow federal and state environmental permits and processes in its highway delivery programs. Up to several hundred commitments can result for the largest and most complex projects. Some of these commitments are the responsibility of WSDOT itself to perform, while some require action on the part of WSDOT's third-party contractors.

WSDOT incorporates these obligations into its contracts, making contractors' requirements clear and allowing them to budget for the work. The risk of noncompliance is redouced through clarity and understanding of responsibilities once construction begins.

The challenge for 2007 and beyond is to ensure the federal and state permitting authorities provide WSDOT with the most clear and concise permit requirements for incorporation into documents.

WSDOT's Progress on Core EMS Elements

● = *Element substantially in place. WSDOT will evaluate for improvement*

◒ = *Element Partially in place. Gaps remain to be filled.*

Core EMS Element	Progress
Legal/other environmental requirements clearly outlined	●
Written procedures for work activities.	●
Training ensures work done in complying manner.	●
Roles/duties define expectations.	●
Inspection, monitoring, and correction of any problems.	◒
Documentation allows self evaluation and promotes internal and external communication.	◒
Performance compared with requirements and shared with WSDOT management and the public.	◒

Data Source: WSDOT Environmental Services Office

Adoption of Commitment Tracking System Not Meeting Goal

The Commitment Tracking System (CTS) tracks WSDOT's commitments made to resource agencies, community organizations, and interest groups. As reported in the December 31, 2005 *Gray Notebook* (p. 56), WSDOT set a goal to have all projects with an ad date of January 1, 2006 entered into CTS by the end of 2006.

WSDOT has not met this goal. With the exception of Southwest Region, which is excelling with a total of 35 out of XX projects, only a few projects from each region were entered. This performance is not satisfactory and WSDOT will work to improve the implementation of CTS statewide in 2007.

Environmental Programs: Annual Update

Erosion Control Preparedness

Highway construction crews work hard to prevent rains from damaging sites and washing soils into streams. Crews work to prevent erosion by planting grasses, building ponds, and taking other precautions to protect disturbed soils. These precautions are taken in accordance with Temporary Erosion and Sediment Control (TESC) plans that are created by WSDOT project designers and required by individual permits. Each fall, WSDOT inspects construction sites to document how thoroughly these plans are implemented, evaluate how effective plans are at preventing erosion, and identify areas for improvement.

In October 2006, WSDOT inspected 18 active projects (15 in western Washington and three in eastern Washington) with significant potential for erosion problems due to a project area's size, steepness, or proximity to sensitive waterways.

The table below contains the assessment results from 2002 through 2006. WSDOT steadily improved from 2003 through 2005. However, the level of performance dropped in 2006 for several of the recorded measures. All projects must be prepared for the wet season, and many projects this year with significant earthwork activities and erosion issues proved to be challenging. (See Environmental Compliance Assurance p.71)

Several problems contributed to a drop in preparedness for 2006. These include delayed installation of ponds, ditches and pipes, having to wait later to cover soils due to extended dry weather in October, reduced maintenance of erosion prevention measures, and less consistent use of pollutant spill containments near waterways

Environmental specialists recommended measures to better prepare for the wet season during the October 2006 visits. Many projects took steps to fix identified deficiencies prior to November. Their responsiveness allowed many projects to make it through the record setting November rainfall with relatively few problems.

Strategy for Improving Performance

Despite the good project performance in November, increased training and technical assistance must be focused on proactive erosion control. This includes preparing sites for the wet season in October before the major rains begin. Efforts to improve performance in 2007 will focus on the seven assessment measures that fell into the "Fair" and "Poor" categories in 2006.

Erosion and Sediment Control Assessment Results

	Assessment Measure	2002	2003	2004	2005	2006	Status
Excellent	Dewatering	100%	71%	100%	100%	100%	Stable[1]
Good	Delineate clearing limits	100%	100%	100%	95%[1]	94%	Stable[1]
	Access routes prevent tracking of mud onto streets	98%	69%	91%	82%	94%	Improved
	Storm drain inlet protection	74%	82%	83%	86%[1]	93%	Improved
	Manage project erosion/sediment control BMPs[3] proactively	56%	75%	80%	90%	92%	Stable[1]
	Control other pollutants from impacting water quality	N/A[2]	N/A[2]	100%	100%	89%	Decreased
Fair	Amount of disturbed soil covered with erosion control BMPs[3]	65%	45%	65%	70%[1]	74%	Stable[1]
	Control flow rates	87%	84%	100%	95%[1]	72%	Decreased
Poor	Sediment control BMPs[3] installed on time	90%	90%	100%	95%[1]	61%	Decreased
	Channels for temporary stormwater conveyance are stabilized	90%	64%	73%	87%	59%	Decreased
	Erosion control BMPs[3] installed on time (stabilize soils)	N/A[2]	N/A[2]	67%	86%	56%	Decreased
	Protect cut and fill slopes	67%	50%	89%	79%	56%	Decreased
	Maintain BMPs [3]	70%	70%	50%	67%	44%	Decreased

Data Source: WSDOT Environmental Services Office
[1]Stable performance status was achieved for all measures that remained within 5% of the previous years' rating.
[2]Two Categories were added since the 2003 annual report.
[3]BMPs = Best Management Practices.

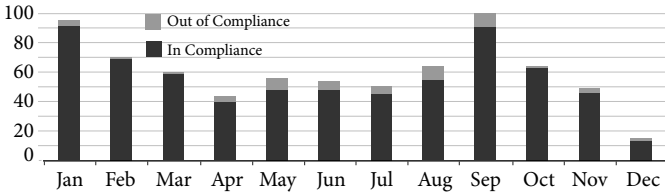
Environmental Programs: Annual Update

Water Quality

Monitoring Water Quality Impacts for Construction Sites

WSDOT policy requires at least 20% of all projects including in-water work to monitor for substantial water quality impacts. Many of these projects are also required to collect water quality data during construction to meet Department of Ecology (DOE) permit requirements. During in-water work, WSDOT inspectors will collect flowing water samples from sites where compliance with state standards is thought to be the most challenging. The following graph summarizes results comparing water quality upstream and downstream from 23 projects. Results show that 92% (673 out of 732) of the samples collected met state water quality standards for clarity.

2006 Statewide Water Quality Monitoring Results



Data Source: WSDOT Environmental Services

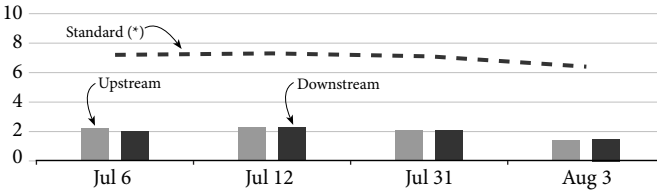
New Protocol for Water Quality Monitoring

In October 2006 a new permit condition became effective requiring all earthwork projects with greater than five acres of soil disturbance to sample water quality. These projects are required to collect water clarity samples at all locations where stormwater leaves the construction site. The new sampling methods, locations and compliance measures are different than those required of in-water work and cannot be compared with the above data. The next annual Environmental Programs update for water quality will include updated data collected to meet this new permit requirement.

Case Study – U.S. 2 Everett Bridge Seismic Retrofit

This project involved strengthening piers on the SR 20 Bridge across the Snohomish River in Everett. During construction, steel jackets were installed around existing piers and grout was added for strength. This retrofit project will protect the bridge piers from earthquake damage. Nearby, an existing pipe used to convey Snohomish River overflow into a nearby slough was removed and replaced with a natural channel. Only once during this three-month project was water quality suspected to exceed state standards. On July 5th, work in the nearby overflow channel caused dirty water to flow into the Snohomish River. WSDOT staff rushed to sample the water, but found that it was quickly diluted in the Snohomish River.

Water Quality Testing
Snohomish River, July and August 2006
Water Quality Measurement - Nephelometric Turbidity Unity (NTU's)



Data Source: WSDOT Environmental Services Office
*The state standard changes as the upstream conditions fluctuate.

Snohomish River overflow channel restored to a more natural condition.

The SR20 bridge retrofit project and the effected section of the Snohomish River.

Stormwater Treatment Facilities

In accordance with the Clean Water Act, WSDOT constructs ponds, swales, and other facilities to remove pollutants from stormwater. These facilities also control the flow-rate of stormwater, to prevent flooding and protect fish species and habitat.

WSDOT Stormwater Treatment Exceeds Department of Ecology Goals

To confirm pollutant removal effectiveness, WSDOT collected 145 samples of runoff before treatment and 141 samples after treatment at 19 locations along highways in Western Washington during the rainy seasons from 2003 to 2006. WSDOT facilities bettered treatment effectiveness goals set by the Department of Ecology (DOE) for solids and phosphorus, and removed most of the particulate metals present in stormwater (See table below).

Effectively lowering the already low contamination levels of dissolved metals remains in stormwater runoff remains a challenge. Since treatment facilities are not 100% effective, WSDOT cannot fully prevent increases in pollution if facilities only treat water coming off of new highway lanes. When adding new lanes, however, WSDOT often sizes facilities to also treat highway runoff from some or all of the existing lanes that previously had no treatment. The treatment of existing lanes in addition to the new lanes often results in a net reduction in pollutants entering into nearby waters. Stormwater treatment facility effectiveness data helps WSDOT estimate whether or not projects will reduce the amount of pollution entering into nearby waters.

Treatment Facility Effectiveness

Pollutants in pounds / year • acre, before and after treatment

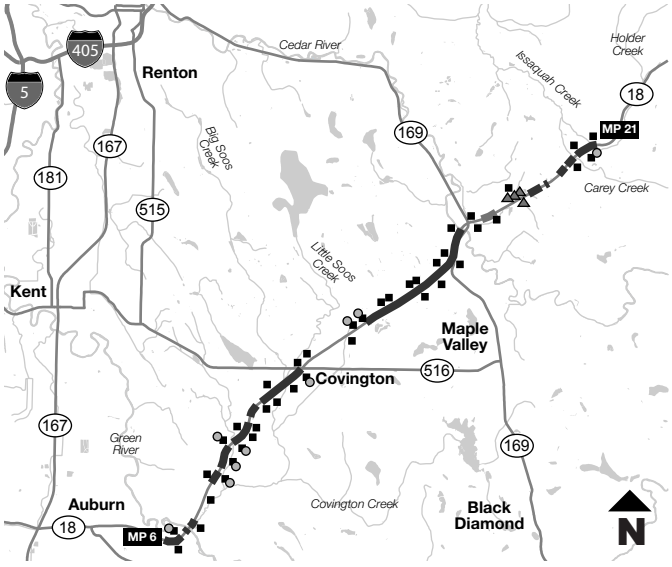
Pollutant	Pollutants in water prior to treatment	Pollutant trapped	% Pollutant trapped
Solids	825	767	93% (DOE goal 80%)
Total Phosphorus	1.19	0.86	72% (DOE goal 50%)
Total Zinc	1.14	0.89	78%
Total Copper	0.19	0.14	74%
Dissolved Zinc	0.35	0.18	51%
Dissolved Copper	0.05	0.02	40%

Data Source: WSDOT Environmental Services Office
Note: Results represent the average from monitored stormwater treatment facilities.

Case Study: SR 18 Stormwater Treatment Investment

The map below shows the extent of WSDOT's commitment to treat stormwater runoff and protect adjacent waters. Shown are 112 stormwater treatment facilities built along a 15-mile stretch of SR 18 in the past ten years to protect the Green River, the Cedar River, and several smaller streams.

State Route 18 Stormwater Treatment Facilities



Note: Stormwater treatment facilities are only shown for a select portion of State Route 18 from MP 6 to MP 21. Stormwater treatment facility locations are approximate.
[1]Bioswales are broad, gently sloping, grassy swales in which the grass filters pollutants out of the water.
[2]Ecology embankments are grass-covered filters that remove pollutants from runoff.

Ecology embankments (highlighted in the December 31, 2002 *Gray Notebook*, p. 21) are grass covered filters built into the highway shoulder to remove pollutants from runoff. Embankments are ideal for situations in which limited land is available.

Environmental Programs: Annual Update

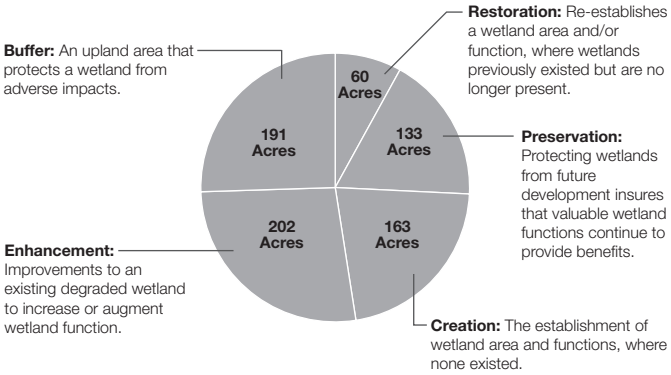
Wetland Replacement Monitoring

A wetland is an area that is transitional between aquatic and terrestrial ecosystems and is covered with water for at least part of the year. WSDOT replaces wetlands to address the state's Executive Order 89-10, that mandates that the actions of state agencies will result in no net loss of wetlands.

When transportation projects create unavoidable wetland impacts, wetlands are enhanced, restored, created, or preserved to achieve the no net loss policy and then undergo monitoring to evaluate success. WSDOT has 137 replacement wetland sites around the state, totaling 749 acres. It can take years for a site to mature and become self-sustaining based on the standards set by the U.S. Army Corps of Engineers (USACE).

Monitoring was initiated on seven new replacement wetlands in 2006, totaling 28 acres. These sites added nine acres of created wetland, ten acres of enhanced wetland, and nine acres of buffer to WSDOT's inventory of replacement acreage. (See chart below for definitions.)

WSDOT Replacement Wetlands, 1988-2006
Total Acreage of Wetland Projects
137 Sites, 749 Acres



Data Source: WSDOT Environmental Services Office

WSDOT Adopts New Performance Measures for Wetland Monitoring

Previous *Gray Notebook* reports focused on wetlands success standards, which are included in every USACE permit required under Section 404 of the Clean Water Act. These success standards are an important aspect of WSDOT permit compliance. However, these previous measures only provided guidance for management activities, and generally resulted in a limited measure of ecological function or WSDOT performance. (For a complete discussion on the reasons for the changes, please see the *Gray Notebook* for December 31, 2005, p. 61).

New Replacement Wetland Sites

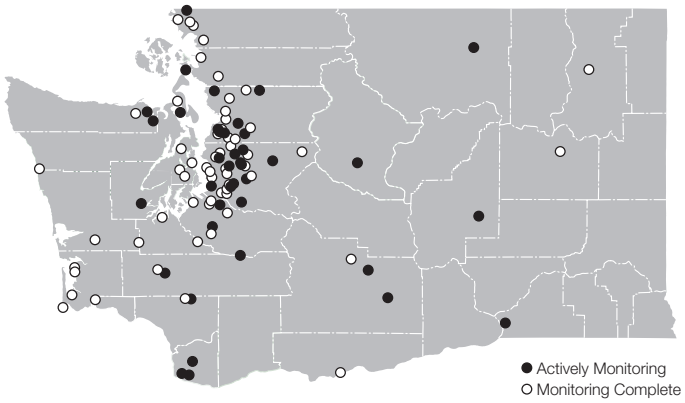
Creation

- SR 203 Novelty Hill Road/NE 124th St. Vicinity Roundabout Mitigation Site
- SR 900 Newport Way to I 90 Widening Mitigation Site
- I-90 Sunset Way Interchange Mitigation Site

Creation and Enhancement

- SR 161 234th Street to 176th Street East Mitigation Site
- SR 167 North Sumner Interchange Mitigation Site
- SR 9/SR 2 Interchange Modifications, SR 9 - 56th Street SE Vicinity and 42nd St. NE Vicinity Signalization and Channelization, and SR 9 Lake Stevens Weigh Station Additional Parking Mitigation Site
- I-90 Sunset Wall Interchange Retaining Wall 16 Mitigation Site

WSDOT Replacement Wetlands
1988-2006



Data Source: WSDOT Environmental Services Office

The following new measures will provide more meaningful reporting criteria for WSDOT: 1) percent of site management activities completed; 2) percent of acreage of wetlands achieved; 3) ratings for overall function and improvement of replacement wetlands based on Department of Ecology (DOE) standards; and 4) percent of sites submitted to USACE that were documented as complete, based on agreement with USACE.

WSDOT Completes 95% of Site Management Activities

Most available literature agrees that mitigation sites that are actively managed are more likely to be successful. WSDOT identifies and tracks completion of needed management activities to improve site performance. Activities include weed control, supplemental plantings, and soil testing. At the end

Wetland Replacement Monitoring

of 2006, WSDOT regions have completed 95% (38 out of 40) recommended management activities. The remaining two activities are scheduled for February 2007. See the table to the right for more information.

WSDOT Exceeds Total Required Wetlands Acreage

No net loss of wetland acreage and function is the foundation of WSDOT's approach to protecting wetlands as the agency improves the state's transportation system. With a variety of elements to examine, evaluating the success of mitigation activities is challenging. Success standards, vegetative characteristics, habitat value, wildlife functions and wetland acreage are some of the factors to consider. A mitigation site can be deficient, such as having higher than intended levels of non-native plant species, but still perform at an acceptable environmental level in terms of overall wetland function. Acreage is an important aspect, but in accordance with the USACE guidance, and national and state "no net loss" policies, acreage is considered on a program scale, not on a site-by-site basis.

WSDOT staff measure wetland mitigation sites twice during the 10-year monitoring period. Mid-term determinations are typically completed in the third year of monitoring. This provides an early mechanism to identify significant acreage shortfalls. Final determinations are done at the end of the monitoring period to determine the actual acreage achieved.

Site-by-Site Success is mixed

Most replacement wetlands do not develop the exact amount of wetland acreage intended. In some cases, the mitigation site is smaller than originally designed and does not meet the permit requirements set forth by the USACE. WSDOT is actively addressing the acreage shortfalls. To date, final determinations have been done at 45 replacement wetlands.

Overall, WSDOT is Exceeding Program Goals

The graph to the right shows replacement wetland acreage data from the 45 ecologically successful WSDOT mitigation sites where final delineations have been completed. These sites provide 108% of the required mitigation acreage (100.15 actual/92.88 required).

WSDOT's 2006 Site Management Activities by Region

Region	Sites	Recommended	Completed	Planned
Northwest	8	9	9	0
Southwest	8	13	11	2
Olympic	5	8	8	0
Eastern	0	0	0	0
South Central	3	4	4	0
North Central	3	6	6	0

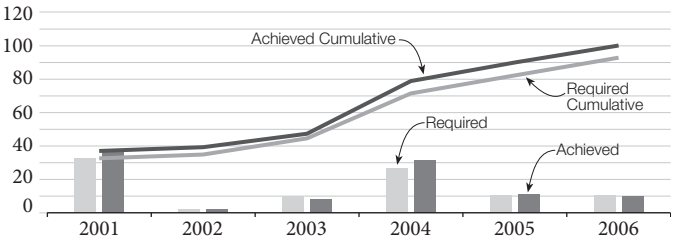
Data Source: WSDOT Environmental Services Office

Adaptive Management in Action

Adaptive management of mitigation sites means changing planned activities as knowledge is gained about current site conditions. For most sites, that means doing supplemental planting or more weed control than originally planned. Some sites have more complex problems that affect site development. To find solutions for these problems, WSDOT assembles a wetland mitigation action team (WeMat) consisting of wetland scientists, biologists, landscape architects, hydrologists, and engineers. WeMat teams have been formed to improve the conditions of the following sites:

- ***U.S. 12 SR 124 to Wallula Junction***
- ***SR 503 NE 144th St to Battleground***
- ***SR 202 Vicinity SE 8th St. to Vicinity 300th Ave SE***
- ***SR 18 Issaquah/Hobart interchange supplemental wetland mitigation***
- ***SR 530 Montague to Hazel***
- ***SR 5 Blaine Vicinity***

Wetland Mitigation Acres
2001-2006
Number of Acres Achieved



Data Source: WSDOT Environmental Services Office

Wetland Replacement Monitoring

Wetlands Functions Show Improvement at Wetlands Sites

The improvement of wetland function is an important aspect of successful mitigation. Wetland functions are defined broadly as the natural processes occurring within the wetland. WSDOT is looking for "no net loss" of wetland functions, or an improvement in the functions between the wetlands that are removed during the construction process and those wetlands that WSDOT creates, restores or enhances to replace them.

The categories of wetland functions are defined as follows:

Category I wetlands are those that 1) provide a high level of functions; or 2) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 3) are more sensitive to disturbance than most wetlands; or 4) represent a unique or rare wetland type.

Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions.

Category III wetlands are 1) wetlands with a moderate level of functions and 2) coastal wetlands that develop between sand dunes that are between 0.1 and 1 acre in size.

Category IV wetlands have the lowest levels of functions (scores less than 30 points) and are often heavily disturbed.

By comparing rating scores for affected wetlands to rating scores for mitigation sites, overall function and improvement can be reported. (See the gray box for more information on the wetlands rating system.) The table to the right reports the acres of removed wetlands and the acres of replacement wetlands with their associated ratings. Most of WSDOT's impacts have been to Category III wetlands (70%), and the agency has consistently replaced those wetlands with Category II (80%), which represents an overall improvement in function.

Site Completion Documented with 50% Success Rate

Historically, federal and state permitting agencies did not have a defined process to bring closure to a successful wetland mitigation. Recently, USACE and WSDOT worked together to identify the necessary elements for closing out a mitigation site. Elements include providing required documents for the USACE files, a statement of current site conditions, acreage achieved, and an analysis of mitigation functional replacement.

WSDOT's measure for site close outs is based on the number of close-out reports that have been submitted to USACE and the number which have received acceptance letters from the USACE. In 2006, the first year that this system was in place, WSDOT proposed 16 sites for close-out by the USACE. Eight of those, or 88%, have received acceptance letters. Six are pending additional reviews. The two other sites are providing beaver habitat, however, and the beavers have altered the site from its intended design. Both sites are tentatively scheduled to close-out in the spring.

This represents the first year for this process, and WSDOT is optimistic that it will continue. WSDOT is nominating an additional 30 sites for close-out in 2007.

Scores for Removed Wetlands and Replacement Wetlands

Number of Acres per Category

Department of Ecology Category	Removed Wetlands	Wetlands Replacing Removed Sites
Category I	0.73	0.35
Category II	15.28	70.66
Category III	40.78	17.21
Category IV	1.63	0

Data Source: WSDOT Environmental Services Office

How Does the Department of Ecology's Wetlands Rating System Work?

The Washington State Department of Ecology (DOE) created the two rating systems that WSDOT uses to monitor wetlands. One is for Western Washington and one for Eastern Washington since there are some fundamental ecological differences in the way wetlands function. Western Washington receives annual rainfalls much greater than those on the eastside, which can be as little as 6 inches of precipitation a year in the Columbia Basin.

DOE's system classifies wetlands according to their potential to provide hydrological, water quality, and habitat functions within a landscape perspective.

Environmental Programs: Annual Update

Environmental Compliance Assurance

As part of its environmental management efforts, WSDOT tracks its progress in complying with environmental requirements for its construction, maintenance, and ferry activities.

WSDOT's Formal Notifications from Regulatory Agencies Increase from Four to Ten

WSDOT self-monitors for "non-compliance events" whether or not such events are considered formal violations by the environmental regulation agencies which monitor WSDOT. In 2006, WSDOT recorded 188 non-compliance events, 62 more than in 2005. Of these events, ten corrective actions were issued from regulatory agencies. It is possible more formal violations could be issued by regulatory agencies in 2007 for events that occurred in 2006. The ten formal environmental violations issued in 2006 were an increase from the four issued in 2005.

In the past, WSDOT has only reported notifications from regulatory agencies which led to Notices of Violation (NOVs). Now, WSDOT is including all notifications in an effort to be more accurate about overall regulatory agency actions. The regulatory agencies have various formal methods of notifying WSDOT of permits violations, most commonly Notices of Violation, Orders, and Warning Letters. In order to be more accurate, WSDOT will now include all formal notifications.

81% of Non-Compliance Events Involve Water Quality

In 2006, 152 of the 188 non-compliance events involved water quality regulations, as shown in the chart. Ten involved wetlands, seven involved wildlife habitat and 19 were categorized as "other". This category consists mainly of spills and hazardous material issues. The majority of water quality related non-compliance events occur during the wettest seasons and while conducting permitted in-water work during the summer. To put the 188 non-compliance events in context, in 2006 WSDOT had 122 active construction projects, conducted 280,049 maintenance activities, and performed 166,344 ferry sailings.

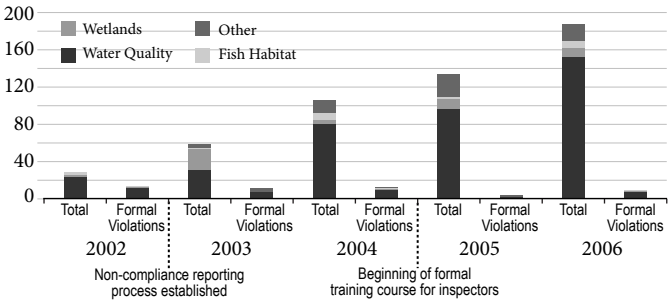
5% of Projects Lead to 65% of Total Non-Compliance

In 2006, 65% of the total non-compliance events came from only seven projects, 5% of the total. These seven projects often happen to be WSDOT's largest and most challenging projects.

These projects contributed 72% of the water quality, 60% of the wetland, 14% of the fish habitat, and 37% of the hazmat/other events. WSDOT is looking at the projects to determine how to make them more successful,. Examples of potential changes include: adjusting work levels with the seasons, assigning greater numbers of veteran staff, increasing just-in-time training, and improving project level technical assistance.

[1]A re-analysis of the 2005 data revealed that there were 126 non-compliance events, instead of the 134 reported in the December 2005 *Gray Notebook*.

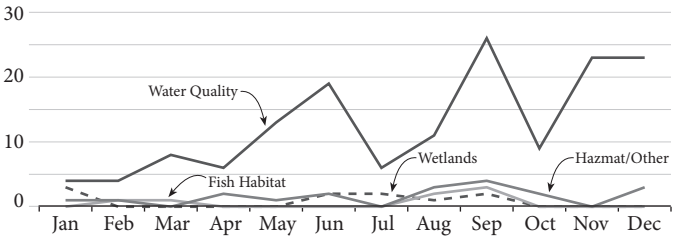
Non-Compliance Events 2002-2006



Data Source: WSDOT Environmental Services

2006 Non-Compliance Events

By Type of Event and Month



Data Source: WSDOT Environmental Services Office

Compliance Reporting Process Enhanced In 2007

WSDOT is changing its non-compliance reporting process to improve the collection, analysis, and reporting of compliance data. The new process will simplify internal WSDOT communication under the Environmental Compliance Assurance Procedures (ECAP) and allow immediate transfer of information of non-compliance events. Currently WSDOT must wait until the end of the year to review statewide compliance data. Use of the new process will allow WSDOT the ability to analyze trends throughout the year and take action as needed, ensuring that WSDOT continues to minimize the severity of non-compliance events and improve accuracy in compliance reporting. The new process will also provide standardized documentation to resource agencies.

Integrated Vegetation Management

Past articles on compliance have provided data on use of herbicides and pesticides for the management of vegetation on roadsides and wetland mitigation sites. That compliance information is now located in the Integrated Vegetation Management article on pp. 73-74.

Highway Maintenance: Annual Update

Biennial Maintenance Targets

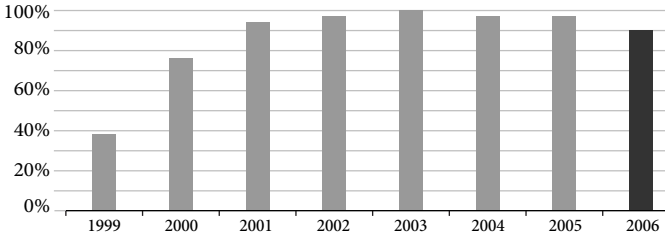
The Maintenance Accountability Process (MAP) targets and measures the performance of 33 separate highway maintenance activities. Washington's infrastructure is evaluated for MAP through site evaluations, selected by random sampling, twice a year. These evaluations allow WSDOT to determine the Level of Service (LOS) achieved for each of the 33 MAP activities. Targets are set for each year once an appropriation is approved. During 2006, 30 of 33 MAP targets were achieved.

WSDOT Maintenance Targets Achieved for 2006

Maintenance Activity	Pass	Fail
Movable & Floating Bridge Operations	✓	
Traffic Signal System Operations		✓
Snow & Ice Control Operations	✓	
Keller Ferry Operations	✓	
Urban Tunnel Systems Operations	✓	
Structural Bridge Repair	✓	
Regulatory/Warning Sign Maintenance	✓	
Slope Repairs	✓	
Intelligent Transportation Systems (ITS)		✓
Maintain Catch Basins & Inlets	✓	
Pavement Patching & Repair	✓	
Bridge Deck Repair	✓	
Guardrail Maintenance	✓	
Pavement Striping Maintenance	✓	
Raised/Depressed Pavement Markers	✓	
Control of Vegetation Obstructions	✓	
Rest Area Operations	✓	
Sweeping and Cleaning	✓	
Maintain Ditches	✓	
Highway Lighting Systems		✓
Guidepost Maintenance	✓	
Safety Patrol	✓	
Maintain Culverts	✓	
Pavement Marking Maintenance	✓	
Noxious Weed Control	✓	
Shoulder Maintenance	✓	
Guide Sign Maintenance	✓	
Maintain Detention/Retention Basins	✓	
Bridge Cleaning & Painting	✓	
Nuisance Vegetation Control	✓	
Landscape Maintenance	✓	
Crack Sealing	✓	
Litter Pickup	✓	

Data Source: WSDOT Maintenance Office

Legislatively Funded Targets
1999-2006
Percentage Achieved



Data Source: WSDOT Maintenance Office

New Preventive Maintenance Performance Measures

Many of Washington's highway features evaluated under MAP are comprised of elaborate mechanical, electrical, and hydraulic systems. It is critical to ensure these systems remain in working order. This year, new measures were developed for the following categories:

- Traffic Signals System Operations
- Intelligent Traffic Systems (ITS) (i.e. cameras, message boards, ramp meters)
- Urban Tunnels Systems Operations

30 out of 33 MAP Activity Targets Achieved in 2006

During 2006, 30 of the 33 MAP activity targets were achieved by the highway maintenance program. This equates to a 91% achievement rate (see chart above). The three activities for which targets were not attained are Traffic Signals, Intelligent Transportation Systems (ITS), and Highway Lighting. ITS is comprised of a variety of electronic devices throughout the highway system including ramp meters, variable message signs, and highway advisory radio systems. The bases for not achieving LOS targets in these categories include:

Inventory Growth:

The number of electronic devices in the highway system continues to grow while the maintenance budget and staffing levels remains steady. For example, in WSDOT's Eastern region ITS inventory grew from 67 devices to 99 devices in one year. A similar rate of growth is projected for 2007.

Electricity Costs:

The cost of electricity continues to increase substantially while the maintenance budget that pays for this remains steady. Statewide, the cost of electricity used by maintenance to power signals, ITS, and lighting is projected to increase by $1.3 million in 2007.

Preventive Maintenance:

Electronic systems require a significant amount of preventive maintenance (PM) to keep systems reliably operating. With inventory growth and inflation consuming more resources, preventative maintenance gets deferred. In addition when technicians cannot keep up with PM schedules, system malfunctions increase over time. In 2006, technicians were able to conduct only 34% of the optimal PM for signals and only 27% of the optimal PM for ITS statewide.

Integrated Vegetation Management

Integrated Vegetation Management (IVM) is the program that manages plants along a roadway's right of way for low maintenance costs and environmental rehabilitation. While most of the responsibility for this work is a component of maintenance, IVM is also dependent on how well roadsides are treated during and after highway construction projects. If roadsides areas are not well maintained and protected in the construction process, maintenance expenses over time tend to be greater due to the presence of unwanted vegetation. However, when soil is conserved and improved, and native vegetation is restored at the time of highway construction, the ongoing roadside maintenance requirements can be relatively low.

University of Washington IVM Research to Aid WSDOT

WSDOT is continuing to refine its policy and practice for implementing IVM through an ongoing research project. Following research and investigation by the University of Washington in 2005, WSDOT is conducting documented field trials on alternative methods. Thirty eight sites were selected in 2006 to monitor costs and overall results of 19 alternative approaches for a three year period. More information is available online:

www.wsdot.wa.gov/Maintenance/vegetation/research.htm

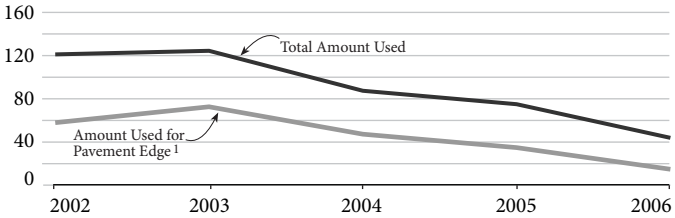
Herbicide Use Decreased by 42% from 2005

WSDOT's primary measurement of herbicide use is by pounds of active ingredient. Herbicide use has decreased for the third straight year since 2003. In 2006 the agency's statewide herbicide use for roadside maintenance decreased by 42% from 75,019 pounds in 2005 to 43,892 pounds in 2006. The majority of this reduction is a result of WSDOT's efforts in eastern Washington to minimize the amount of vegetation-free ground along the edge of pavement. As of 2003, 60% of all WSDOT herbicide use was for maintenance of vegetation at the edges of pavement. In 2006, roadside herbicide applications had decreased to 14,823 pounds from 72,630 pounds in 2003, an 80% reduction from 2003. Research has shown that alternative (i.e. IVM) treatments at pavements' edge can be effective with little or no herbicide.

In 2006, WSDOT adopted restrictions above and beyond existing federal and state legal mandates for herbicides use. This was done in response to an independently commissioned risk assessment of the application methods used on Washington State highway roadsides. These new WSDOT restrictions limit the types of herbicides allowed for use, and implement buffers in and around sensitive areas. Additional information on WSDOT's herbicide use policy is available online: www.wsdot.wa.gov/Maintenance/vegetation/herbicide_use.htm

Statewide Herbicide Use Trends 2002-2006

Pounds of Active Ingredients (In Thousands)



Data Source: WSDOT Maintenance Office

[1] Included in "Total Amount Used" line

Image of U.S. 12 east of Tri-Cities, where the roadside was constructed to establish native grass species.

WSDOT Has Zero Herbicide Use Non-Compliance Events in 2006

WSDOT also tracks compliance with laws that apply to use of herbicides for roadside maintenance. The Washington State Department of Agriculture (WSDA) conducts investigations of alleged herbicide misuse in applications throughout the state. Investigations result from both public complaints received and from random surveys of past applications in the field. For the past three years, no public complaints were registered and there have been no findings of violation through the surveys.

For more information about WSDOT's environmental compliance efforts, please see p. 71.

Integrated Vegetation Management Non-Compliance Events (Spraying)

	2003	2004	2005	2006
Number of WSDA Investigations	4	1	1	0
Number of WSDA findings of faults	2	0	0[1]	0[1]
Number of Applications records	4,091	4,179	4,333	4,081

Data Source: WSDOT Environmental Service Office
[1]One case is still open and it is not yet known if WSDA will issue a finding of fault.

Area IVM Plan Development and Implementation

The use of IVM by WSDOT maintenance crews is guided by site-specific plans. Each IVM site plan that implements IVM contains roadside management aspects and detailed guidance on how these areas will effectively be managed for roadside vegetation along selected highway corridors.

The development of the area IVM plans is an ongoing process that depends on continuous input from work crews, the public, and other affected individuals. As roadside vegetation patterns change over time, the records kept by the crews serve as reference points to learn from successes and failures of past treatments. In 2007, as initial state-wide IVM plans are completed, an annual process will be undertaken by each region in order to carry out plan refinement, solicitation of input, and crew training. More information on plan development and copies of completed plans are available on the WSDOT website at: www.wsdot.wa.gov/Maintenance/vegetation/mgmt_plans.htm

Calendar Year	Plans Scheduled for Implementation	Plans Implemented	Achievement Rate
2004	1	1	100%
2005	9	9	100%
2006	8	8	100%
2007	6	in-progress	-

Data Source: WSDOT Maintenance Office

Incident Response: Quarterly Report

The WSDOT Incident Response Program is one of the few statewide incident response programs in the nation. It works with other state and local agencies, and private industry, to identify and remove traffic incidents as quickly as possible. The program demonstrates economic and safety benefits for inter-governmental cooperation in minimizing roadway blockages.

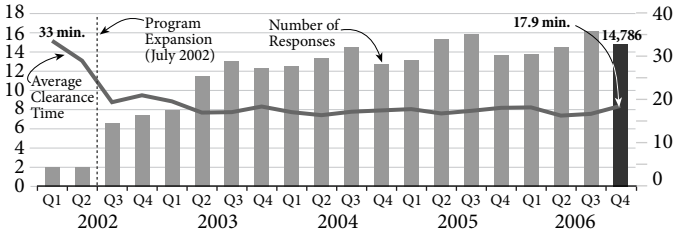
Since receiving legislative endorsement in 2002, the program has had WSDOT roadside assistance vehicles in a roving mode (rather than awaiting incident-by-incident call-out). The programswork is integrated with Washington State Patrol (WSP) troopers, private tow companies, and assistance vans sponsored by television and radio stations.

Number of Incident Responses Down Slightly and Average Clearance Time Increased Slightly Last Quarter

During the fourth quarter of 2006, the WSDOT IR Program made 14,786 responses to incidents. This is an 8.5% decrease from the third quarter's number of responses (16,167), which is consistent with the seasonal trend previously observed in the fall to early winter quarter. There was a 6.5% in the average clearance time from 16.8 minutes in the third quarter 2006 to 17.9 minutes in the fourth quarter of 2006.

Number of Responses and Overall Average Clearance Time

January 2002 - December 2006
Number in Thousands

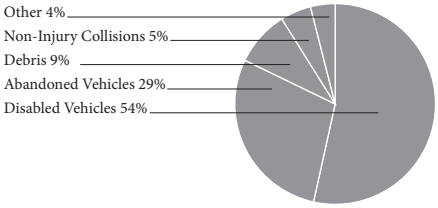


Data Source: WSDOT Incident Response Tracking System.

Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, number of responses by IRT are shown. From Q3-2003, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total. Average Clearance Time does not include "Unable-to-Locate" responses into calculation.

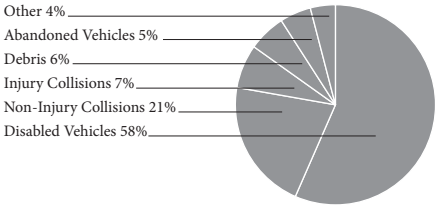
Incidents Lasting Less Than 15 Minutes (8,554)

Injury Collisions were less than 1% (not shown). There were 7 Fires and 2 Hazardous Materials involved incidents in addition to or as a result of above incidents.



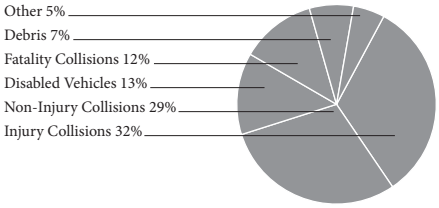
Incidents Lasting 15 to 90 Minutes (5,196)

There were 26 Fires and 9 Hazardous Materials involved incidents in addition to or as a result of above incidents.



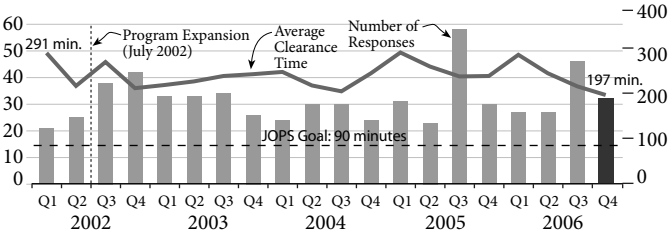
Incidents Lasting 90 Minutes and Longer (241)

There were 5 Fires and 10 Hazardous Materials involved incidents in addition to or as a result of above incidents.



IR Responses to Fatality Collisions

January 2002 - December 2006



Data Source: WSDOT Incident Response Tracking System.

Primary Reason	October	November	December
Fatality Collisions	10	8	14
Injury Collisions	172	146	133
Non-injury Collisions	505	631	428
Disabled Vehicles	2,658	2,515	2,461
Abandoned Vehicles	917	936	853
Debris on Road	446	359	274
Other	181	178	166
Supplemental Reason	**October**	**November**	**December**
Fire	15	13	14
Hazardous Materials	10	6	6
Other Contacts	194	195	187

Data Source: Washington Incident Response Tracking System

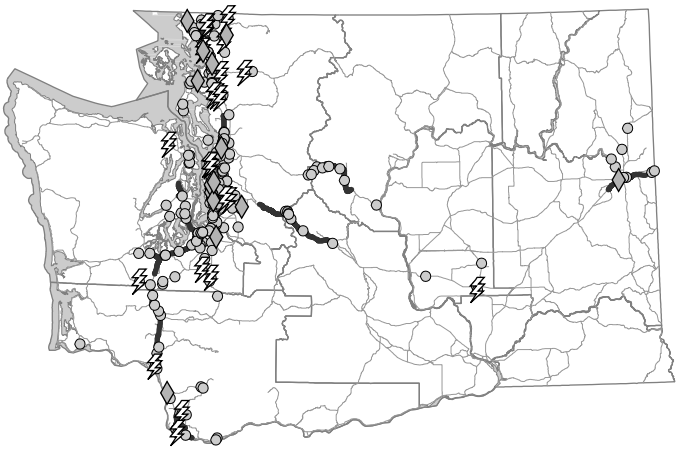
Incident Response: Quarterly Report

Incidents Lasting 90 Minutes or Longer

Incidents Lasting 90 Minutes and Longer Remain Steady In Spite of Inclement Weather During the Fourth Quarter

Incidents lasting 90 minutes or longer are especially important because of the amount of congestion and stress that they place on state highways in urban areas. During the fourth quarter, the tracking system logged 241 such incidents, one less than in the same quarter of the prior year. The locations of these incidents, principally on or close to the I-5 corridor, are shown below. An appreciable number of the incidents could be traced to the quarter's extreme weather condition. Twenty-three involved down power line or utility poles and fourteen were flooding, icing, or high winds.

Washington State Incident Response Program
90 Minutes and Over



Q4 Over 90 - With Flood, Ice or Wind Involved
Q4 Over 90 - With Power Pole Involved
Q4 Over 90 Minute Incident Responses
Incident Response Coverage Areas

Note: Core Roving areas taken from IR Roster Master_July 2006

Service Actions Taken for Non-Collision Responses[1]

	October	November	December
Traffic Control	649	583	487
Provided Fuel	396	339	358
Changed Flat Tire	299	244	258
Minor Repair	185	201	181
Pushed Vehicle	217	334	242
Towed Vehicle	43	65	46
Cleared Debris	408	353	248
Other Actions	1,698	1,514	1,353

Data Source: WSDOT Incident Tracking System
[1]Most common service actions only--exclude various miscellaneous actions taken. Multiple actions may be taken for each response

Cabinet Strategic Action Goal to Reduce Severe Incident Duration

WSDOT and WSP together are seeking to meet the Cabinet Strategic Action Plan goal of reducing by 5% the average duration of blocking incidents lasting 90 minutes or longer on selected key highway segments:

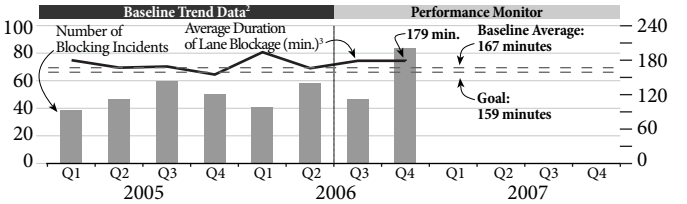
- SR 520
- SR 512
- I-205
- I-5 (Vancouver to Canadian Border)
- I-90 from Seattle to North Bend
- I-405
- SR 18 from I-5 to I-90
- SR 16 from I-5 to vicinity of Purdy

In the fourth quarter of 2006, WSDOT reresented data based only on the WSDOT Incident Tracking System (WITS) because WSP data was not available for this quarter. WSP has a parallel database for IR responses known as the Computer Aided Dispatch (CAD) system. WSDOT and the Washington State Patrol will continue to improve and coordinate data sets, with the intention of strengthening the validity of the data.

Based on WITS data, the average duration of blocking incidents lasting 90 minutes and longer within the selected key highway segments remained steady at 179 minutes, which is the same average duration that WITS reported during the prior quarter (when data was coordinated with WSP data last quarter, the average duration for blocking incidents was 193 minutes). The baseline average from which the 5% reduction goal was calculated is 167 minutes; the goal is to average 159 minutes to clear incidents lasting 90 minutes or longer. The graph below illustrates the trend in the Cabinet Strategic Action Plan measure since the first quarter of 2005.

Progress Towards Cabinet Strategic Plan Goal of Reducing Average Clearance Time for "90 Minute and Longer" Incidents (On Key Highway Segments[1])

January 2005 - June 2006 (Baseline)
Number of Blocking Incidents on Left Axis and Duration in Minutes on Right Axis



Data Source: WSDOT Incident Response Tracking System
[1]*Selected Key Highway Segments*--I-5 (Oregon to Canadian Border), I-90 to North Bend, I-405, SR 18 to I-90, SR 16 to Purdy, SR 520, SR 512, and I-205.
[2]*Baseline Data Source:* 2005--WSDOT Incident Response Tracking System; 2006--WSP-Computer Aided Dispatch System.
[3]*Duration of Blocking Lanes* is time between first recordable awareness of an incident and all travel lanes in mainline open.

Travel Information: Quarterly Update

5-1-1 Usage

WSDOT's 5-1-1 system provides users with "real time" travel and traffic information.

The total number of calls to the 5-1-1 Travel Information System was 787,313 during the fourth quarter of 2006 (October through December). This level of use was 44.4% higher than the use in the same quarter last year and 54.1% then the previous two years.

Bad weather and travel conditions added to demand on the 5-1-1 system. An average day in November and December generated approximately 12,000 calls. Weather conditions on November 26 generated over 46,000 calls.

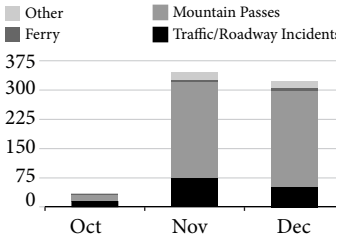
The 5-1-1 System offers callers two retrieval methods: voice/speech recognition or touch-tone. Most callers chose to use the voice system (71%) rather than the touch-tone (29%) in the fourth quarter of 2006.

Type of Information Requested

During the fourth quarter, for the stormy months of November and December 2006, most 5-1-1- calls were seeking information on mountain pass conditions.

Types of Information Requested to 5-1-1 Travel Information*

October - December 2006
In Thousands

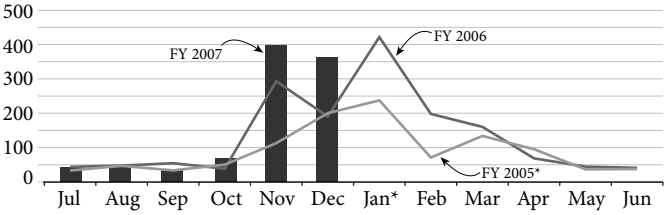


Data Source: 5-1-1 INI (Interactive Northwest Inc.) Activity Summary-Combined Report. (Available since July 2006), Traffic Operations Office

Note: * Total number of information types will not add up to the total number of calls to 5-1-1 because more than one type of information may be requested in one call, or one caller may hang up without selecting a category

5-1-1 Systems Calls

(5-1-1, 1-800-695-ROAD, 206-DOT-HWY)
Three-Year Trend: FY 2005-2007
In Thousands



Data Source: BCMS, Traffic Office.

Note: *Since January 2005, 1-800-ROAD and 206-DOT-HWY numbers connect directly to 5-1-1, and the call counts are reported in 5-1-1 call total.

Increase in the Number of Page Views on WSDOT Web Sites

In the fourth quarter of 2006, WSDOT's website averaged five million daily page views, a new site record. The volume of daily page views was 73% higher than the fourth quarter last year. Traveler interest in Winter driving conditions, especially during holiday travel periods, every year has lead to higher volumes in this quarter. This is due in large part to the poor weather of the fourth quarter of 2006.

Traveler information during this quarter experienced 94% of total site usage. This quarter was exceptionally high due to inclement weather.

WSDOT broke a daily site use record this quarter with 14 million page views to the site on November 26, 2006 (the previous record was 12 million page views on January 6, 2006). A traffic camera, the Hyak West Camera at Snoqualmie Pass, received over 1 million page views in one day for the first time.

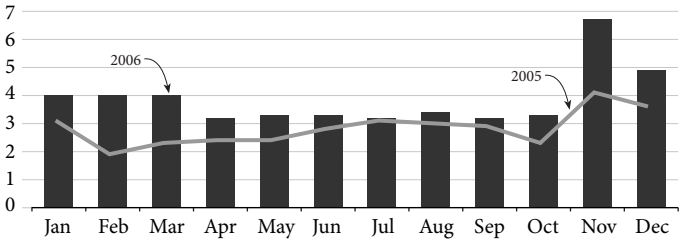
Travel Information Article Changing Reporting Cycle

WSDOT is shifting the reporting cycle to provide a clear analysis of the use of WSDOT's Travel Information resources. The travel information measure will now be reported on a bi-annual reporting cycle. The next report is scheduled for June 30, 2007.

Travel and Traffic Website Usage

Average Daily Page Views to WSDOT Cameras, Flow Maps and Travel Time Sites

January 2005 to December 2006
In Millions



Data Source: WSDOT Communication Office

Note: A page view is counted each time a visitor views a webpage on WSDOT's website. Each time a page is refreshed in a user's browser, a page view is recorded. Pages are comprised of numerous files. Every image in a page is a separate file. When visitors look at a page, they may see numerous images, graphics, pictures, etc., generating multiple hits by a user. For example, a page with 10 pictures will generate 11 hits (10 pictures and one for the html file). This is the reason WSDOT tracks page views and not hits.

Washington State Ferries: Quarterly Report

WSDOT's Ferry System system is the largest ferry system in the United States, and the third largest in the world. The ferry system is also the second largest transit system in the state carrying over 11 million vehicles and 24 million passengers yearly. It makes 20 different ports of call in Washington state and at Sydney, British Columbia. The ferry system routes act as a marine highway for commercial users, tourists and daily commuters on Puget Sound. The system, which includes 11 classes of vessels, is one of the safest and most reliable ferry systems in the world.

Seasonal Weather Affects Trip Reliability for Quarter

In the second quarter of FY 2007, there were 41,759 scheduled trips. Of these trips, 307 were cancelled 65 were made up. The resulting total of completed trips was 41,517 (41,759-307+65=41,517 net). The reliability index on the following page shows system-wide reliability averages. Using this index, the ferry system is currently canceling an average of 2.3 ferry trips during the course of a year for a commuter who travels 200 days per year and makes 400 trips annually. In the third quarter, the average reliability statistic was 1.0 missed trips (140 actual trips canceled) for a decline of 130% during this quarter. During the same quarter last year, the average reliability was 1.6 canceled trips (166 actual trips canceled), a 43% decrease in performance.

For the reporting quarter, all of the routes in the ferry system were plagued with worse-than-expected inclement weather. Therefore, the number of canceled trips was higher then a year ago. The ferry system also continues to have cancellation problems with the Port Townsend-Keystone route. There were 84 cancelations this quarter compared with 50 last quarter (68% increase), and the route's cancellations accounted for roughly 33% of all cancellations within the system. The on-time reliability of the route for this quarter was 85.3% and had the highest average delay at 5.4 minutes over scheduled (on-time) departures. The Port Townsend-Keystone route was one of two routes that did not achieve an on-time average of 90% or higher this quarter (the other route was the San Juan's International route). WSDOT continues to study alternatives and in-harbor options (for Keystone) for this route to improve performance.

On-Time Departures Improve, Average Delay Increases

This quarter, on-time trip performance totaled 37,912 trips as measured by the automated on-time monitoring system. A trip sailing 'on-time' is defined as any vessel that leaves the dock within 10 minutes of the route's assigned departure time. The remaining trips are considered delayed (late). Approximately 94% of trips sailed on-time, which is a 7.5% increase in performance from the preceding quarter. In the fourth quarter of 2006, the average delay was 34% lower (3.3 minutes) than the preceding quarter (4.9 minutes).

The table below compares on-time performance across the system for the fourth quarters of 2005 and 2006. Compared with this time last year, the percentage of on-time trips increased from a year ago, from 93% in 2005 to 93.6% in 2006. However, for trips that did not sail on-time, the delay increased from 3.1 minutes in 2005 to 3.3 minutes in 2006. This means although more trips are sailing on-time, trips that are late average a longer delay time compared with last year.

Ferries On Time Performance for October -December 2005 & 2006

	Fourth Quarter 2005			Fourth Quarter 2006		
Route	**Number of Actual Trips**	**Percent of Trips within 10 Minutes of Schedule**	**Average Delay from Scheduled Sailing Time (Minutes)**	**Number of Actual Trips**	**Percent of Trips Within 10 Minutes of Schedule**	**Average Delay from Scheduled Sailing Time (Minutes)**
San Juan Domestic	6,645	89.0%	1.9	6,434	89.9%	3.7
International Route	155	89.0%	2.0	173	84.4%	5.4
Edmonds - Kingston	4,477	92.0%	3.7	4,530	92.5%	3.7
Pass-Only Seattle-Vashon	366	97.0%	2.4	96	99.0%	2.0
Fauntleroy-Vashon-Southworth	10,281	91.0%	3.7	10,139	93.5%	3.4
Keystone-Port Townsend	1,827	89.0%	4.1	1,804	85.3%	5.4
Mukilteo-Clinton	6,595	98.0%	2.1	6,501	97.9%	2.4
Pt. Defiance-Tahlequah	3,099	95.0%	3.1	3,048	95.5%	3.2
Seattle-Bainbridge Island	4,122	92.0%	4.2	4,092	96.0%	2.3
Seattle-Bremerton[1]	2,559	97.0%	3.0	1,095	97.1%	3.3
Total	**40,126**	**93.0%**	**3.1**	**37,912**	**93.6%**	**3.3**

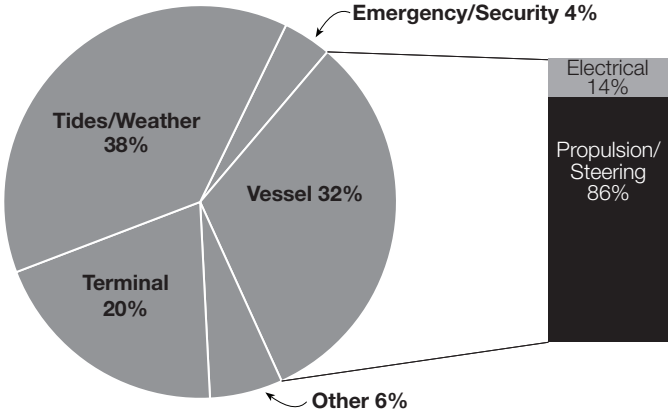
Data Source: WSDOT Ferry System

[1] There was an error in the automated tacking system that missed 1,500 actual ferry trips. Please see 'Improving Automated Tracking' on p. 78

Washington State Ferries: Quarterly Report

Reasons for Trip Cancellations

Second Quarter, Fiscal Year 2007



Data Source: WSDOT Ferry System.

Improving Automated Tracking

The Ferry System utilizes an electronic system to record when a vessel leaves its dock in order to track on-time performance. Recently, a software glitch failed to load approximately 1,500 sailings into the ferry systems Automated Operations Support System (AOSS) for the Bremerton-Seattle route. WSF has corrected the problem and will report all trips next quarter.

Reliability Index

Average annual missed trips per commuter

FY 2001	1.6
FY 2002	2.3
FY 2003	1.7
FY 2004	2.2
FY 2005	1.5
FY 2006	1.2
FY 2007 Q1	1.0
FY 2007 Q2	2.3

Data Source: WSDOT Ferry System

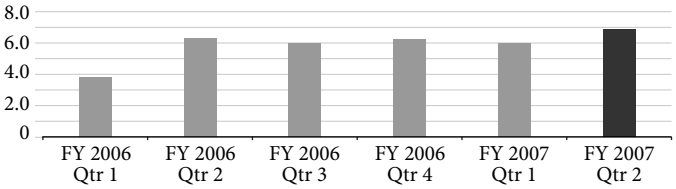
A ferry on the Seattle to Bremerton route with the city of Seattle in the background.

Number of Complaints Down but Average Worsens

In the fourth quarter of 2006, WSDOT's Ferry System completed 41,517 trips and carried 5.5 million riders. There were 381 complaints this quarter, this averaged to 6.9 complaints per 100,000 customers, a 15% increase in the rate of complaints from the previous quarter and a 10% increase in the rate of complaints from the same period last year.

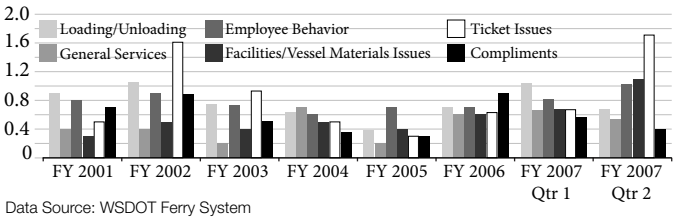
The total of 381 complaints about 20 issues this quarter compares favorably to the 436 complaints (for 20 categories) last quarter. The Ferries System experienced 94 complaints about ticketing issues, or 1.71 complaints per 100,000 customers. Ticketing complaints were up 156% over the preceding quarter and up 185% over the same period last year. Ticket issue complaints at Anacortes and in the San Juan Islands (53 total) accounted for 55% of all complaints in this category. Most of these complaints were related to the roll-out of the new electronic fare collection system on this route structure during this quarter. Customers complained most about the fact that the new system does not allow riders to share a single "frequent user" pass. In addition, WSF had 56 complaints about employee behavior, or 1.02 complaints on average per 100,000 customers. The complaints averages for employee behavior were up 26% over the preceding quarter and up 67% over the same period last year. Each complaint in this category results in a meeting between the employee and his or her supervisor to determine if corrective actions are needed.

Average Number of Complaints per 100,000 Customers



Data Source: WSDOT Ferry System

Common Complaints Per 100,000 Customers



Data Source: WSDOT Ferry System

Washington State Ferries: Quarterly Report

Ferries Life Cycle Preservation Performance

The Ferry System planned to replace or refurbish 76 Category One systems and 82 Category Two systems during the 2005-07 biennium. Through the end of the second quarter of FY 2007, 33 Category One systems and 30 Category Two systems have either been refurbished or replaced.

As of December 31, 2006, a total of $129.9 million has been spent for the 2005-07 biennium on capital investments. The total expenditures planned through December 31, 2006 were $151.5 million. Currently, the Ferry System is $21.6 million under its planned expenditures. The Governor's budget request includes adjustments for project delays.

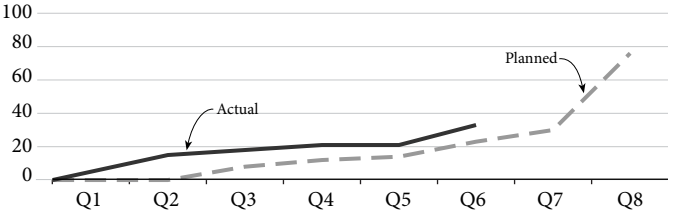
The Governor's budget addresses backlogs in the systems that are past due, as well as on-going deterioration of remaining systems. It measures the impacts and investments by life cycle ratings. Based on the level of investment improvements authorized by the 2005 Legislature, the life cycle rating of Category One terminal and vessel systems is projected to increase from 80% to 81% from the beginning to the end of the biennium. Category Two system life-cycles are projected to increase from 51% to 52% this biennium.

Explanation of Key Terms

- **Systems Preserved** - This measure focuses on performance of work planned and work delivered. The work measured is the number of terminal and vessel systems refurbished or replaced.
- **Life Cycle Rating** - A life cycle rating is a percentage calculated by dividing the number of system structures weighted by their costs that are within their life cycle by the total inventory of systems weighted by costs. This measure focuses on program performance. It reflects the favorable impact of the organization's work achieved, offset by the unfavorable impacts of deferred preservation backlogs and on-going deterioration of the infrastructure.
- In January 2001, the Legislature's Joint Task Force on Ferries recommended that WSDOT work toward the objective of achieving a life cycle rating for Category One systems between 90% and 100%, and for Category Two systems between 60% and 80%. The Task Force set FY 2011 as the target year for achieving this objective.
- **Category One** systems are those designated by regulatory agencies as "vital" to the protection of people, the environment, and infrastructure. Included are those vessel and terminal systems necessary to start, keep in motion, stop, land, and unload a vessel.
- **Category Two** systems are all other terminal and vessel systems.

Category One Terminal and Vessel Preservation Performance

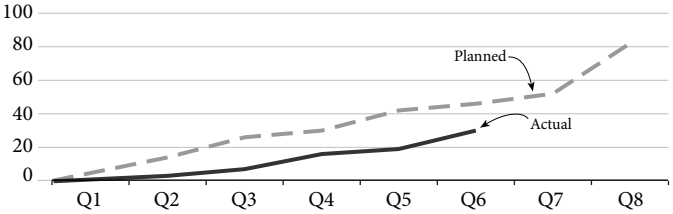
Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
Sixth Quarter, 2005-2007 Biennium



Data Source: WSDOT Ferry System

Category Two Terminal and Vessel Preservation Performance

Cumulative Planned Projects vs. Actual Systems/Structures Preserved
Change in Life Cycle Cost Rating
Sixth Quarter, 2005-2007 Biennium



Data Source: WSDOT Ferry System

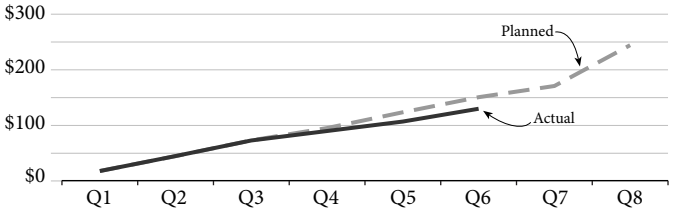
Capital Expenditure Performance

WSDOT makes capital investments in the Ferry System through the Washington State Ferry Construction Program. This program preserves existing terminals and builds new ferry terminals and vessels. The resulting infrastructure gives the Ferry System the physical capability to deliver responsible and reliable marine transportation services to riders.

Construction Program Expenditures

Washington State Ferry System

Through Sixth Quarter, 2005-2007 Biennium
Cumulative Dollars in Millions
Authorized vs. Actual



Data Source: WSDOT Ferry System

Washington State Ferries: Quarterly Report

Vessel Construction Biennium-To-Date

Biennium-to-date vessel construction activities are under spending the plan by $9.3 million. Variances from the plan by vessel in excess of $750,000 include the following: New Auto Ferry Construction ($7.8 million under plan), Elwha ($1.5 million under plan), Hyak ($1.5 million over plan), Rhododendron ($0.8 million under plan).

Terminal Construction Biennium-To-Date

Biennium-to-date terminal construction activities are under planned spending by $11.4 million. Variances from the plan by terminal in excess of $750,000 include the following: Mukilteo ($4.1 million under plan), Seattle ($2.3 million under plan)

Emergency Repair Biennium-To-Date

Emergency repair activities are under spending the biennium-to-date plan by $1.0 million.

Ridership and Revenues Improve Beyond Predictions

Ridership for the fiscal year to date is roughly 1% higher than anticipated (124,622 passengers). In fact ridership has been increasing for the first year since the Motor Vehicle Excise Tax (MVET) was repealed by I-695 in 1999. At the time, MVET was a significant source of funding for the ferry system, and its loss created reductions in service across Puget Sound.

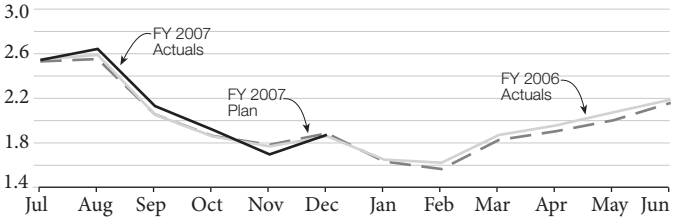
As compared to the same period last year, ridership is actually down 1% , or 42,187 passengers.

Fiscal year to date, the ferry system has taken in $79.1 million in farebox revenues. This represents an 8% increase ($5.6 million) over the same period last year. Revenues received are almost precisely on target with the original plan. WSF has taken in $48,000 more than planned for the first six months of the fiscal year (2007).

WSDOT's Ferry System is optimistic about the positive trends in both ridership and revenue from the past two quarters and looks forward to the progress in the remainder of the fiscal year.

Ridership by Month

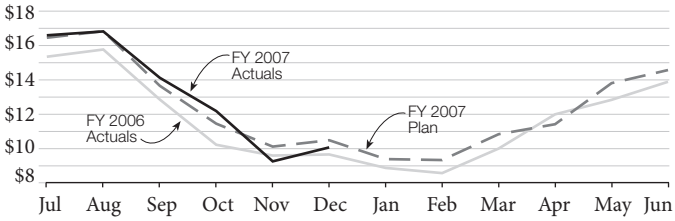
In Millions



Data Source: WSDOT Ferry System

Farebox Revenues by Month

Dollars in Millions



Data Source: WSDOT Ferry System

WSDOT Ferry System Audit Looks To Improve Performance & Accountability

The Joint Transportation Committee's report on Ferry Financing was completed in December 2006. The report included several recommendations to revise/improve WSF's life-cycle approach to terminal preservation. The WSDOT response:

We suggest a better outcome would be for policy-makers to resolve that WSF's terminal should benefit from a truly contemporary asset management system. A modern asset management system for facilities takes into account a variety of factors to produce a balanced, cost-effective and reliable program for facilities updating and re-investment. Such systems are now widely used in forward-looking organizations that obtain targeted advice in this subject matter from the combined disciplines of engineering and finance. Today, strong facilities asset management programs typically involve:

- *System inventories and detailed condition assessment by qualified facilities professionals.*
- *Reliability, criticality and redundancy assessments to identify appropriate points of intervention and the necessary condition requirements for support of the critical customer service business mission (e.g., "run-to-failure" analysis and "reliability centered maintenance" systems).*
- *Warranty protection and management programs for vendor-supplied elements.*
- *Risk assessment for life safety and system safety protection and regulatory compliance including environmental standards.*
- *Life cycle costing and evaluation integrated with the foregoing considerations.*

The Department will be working through these and other issues raised by the study in the coming months as we strive for increased transparency and a better understanding of the ferry programs by decision makers.

Rail: Quarterly Update

State-Supported Amtrak *Cascades*

In 1993, the Washington State Legislature instructed WSDOT to work with Amtrak to improve intercity passenger rail service between Portland, Seattle, and Vancouver, BC. To achieve this, the legislature began providing WSDOT with state funds for rail line construction projects, train equipment, station improvements, and to contract with Amtrak to operate passenger trains on behalf of the state.

Washington is one of 13 states that provide operating funds to Amtrak for intercity passenger rail service. Amtrak *Cascades* train operations, which span the 466-mile rail corridor through Washington connecting Eugene, Oregon and Vancouver BC, are jointly funded by Amtrak and the states of Washington and Oregon. Amtrak provides operating funds for one daily round trip train between Seattle and Portland. The state of Oregon provides operating funds for two daily round trip trains between Portland and Eugene. The state of Washington, through WSDOT, provides operating funds for two daily round trip trains between Seattle and Portland, one daily round trip train between Bellingham and Portland, and one daily round trip train between Seattle and Vancouver, BC. Most of the Amtrak *Cascades* performance measures featured in the *Gray Notebook* focus on the trains funded by the state of Washington.

No Growth in 2006

Ridership on all Amtrak *Cascades* trains, including trains financially supported by Amtrak and Oregon, was 629,996 in 2006. This ridership total was 1.1% lower than the ridership total for 2005. For the first time since the state of Washington began investing in intercity passenger rail service, annual ridership failed to surpass the total for the preceding year. This occurred despite the addition of a new daily round trip train between Seattle and Portland in July 2006.

Factors contributing to ridership decline include numerous service cancellations in January, February, November, and December 2006 due to mudslides and weather-related events, fewer seats in service due to train repairs, and poor on-time performance. However, the ridership picture is not uniformly bleak across the year. After mid year, when new daily Amtrak *Cascades* service was added in July 2006, monthly ridership on Washington state supported trains increased by an average of 3.5% when compared to the final six months of 2005. WSDOT hopes ridership pick-up will continue through 2007, but in order for this to happen, some service patterns noted in 2006, especially poor on-time performance, must be corrected.

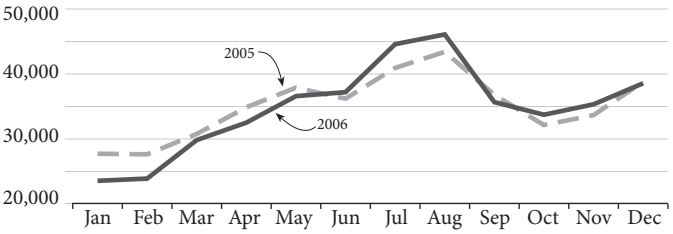
On-Time Performance Declines by 15% in 2006

In 2006, only 45% of all state-supported Amtrak *Cascades* trains reached final destinations within ten minutes of the arrival time printed on the schedule. This compares to a 60% on-time average in 2005.

Factors that contributed to this poor on-time performance include: severe rail traffic congestion on the BNSF Railway's main line used by Amtrak *Cascades*; Amtrak locomotive mechanical problems; and reduced track speeds imposed in locations impacted by weather-related events, and where track construction and repairs were taking place.

State Supported Amtrak *Cascades* Monthly Ridership

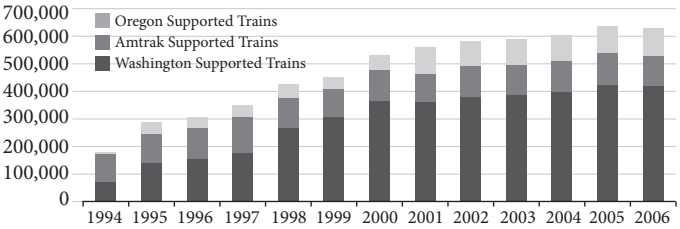
Number of Passengers



Data Source: Amtrak and WSDOT Rail Office.

Amtrak *Cascades* Annual Ridership
1994-2006

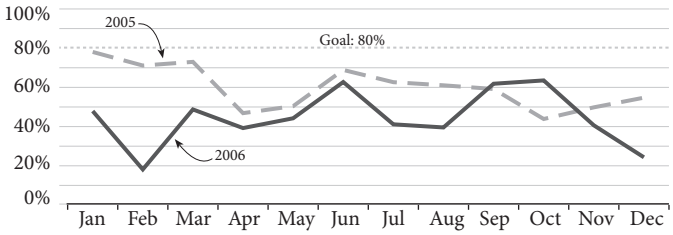
Number of Passengers



Data Source: Amtrak and WSDOT Rail Office.

State Supported Amtrak *Cascades* On-Time Performance

Percent on Time



Data Source: Amtrak and WSDOT Rail Office.

Note: The on-time performance goal for Amtrak *Cascades* is 80% or better. A train is considered on-time if it arrives at its final destination within 10 minutes or less of the scheduled arrival time.

Amtrak, the BNSF Railway, and WSDOT are attempting to take steps to improve Amtrak *Cascades* on-time performance. In 2006, nearly all Amtrak *Cascades* locomotives were overhauled in an effort to reduce delays caused by locomotive mechanical problems. In Fall 2006, BNSF Railway management began to modify some operating practices, resulting in a marked improvement in Amtrak *Cascades* on-time performance in the months of September and October. In November and December, however, Amtrak *Cascades* on-time performance declined significantly due to weather-related events and rail line congestion caused by the backlog of freight trains, and speed restrictions in rail line construction and repair zones.

The long range plan to strengthen Amtrak *Cascades* operating performance lies in the state's ongoing investment in rail line improvements. Nearly all of the construction projects WSDOT will fund in 2007 are intended to reduce rail line delays in the coming years. However, while projects are constructed, trains speeds will be lowered in construction zones. Therefore construction-related delays will persist through 2007.

Farebox Recovery Improves in 2006

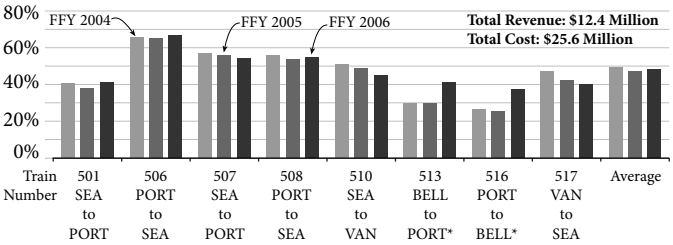
Farebox recovery measures the percentage of total operating costs offset by operating revenues. This measure helps reveal how well the trains are performing financially, the level of public subsidy that is required to keep the trains in operation, and highlights areas where WSDOT and Amtrak should take action to improve ridership, revenues, and reduce costs where possible.

In FFY (Federal Fiscal Year) 2006, state-supported Amtrak *Cascades* trains had a farebox recovery of 48.4%. This is slightly better than the 47.3% farebox recovery in FFY 2005. State-supported Amtrak *Cascades* operating costs totaled $25.6 million in FFY 2006, which was 6.6% higher than in FFY 2005. This increase was primarily driven by additional costs associated with the new daily round trip train that began operations in July 2006. Operating revenues totaled $12.4 million, which was 8.9% higher than in the preceding year. This revenue increase can be attributed to aggressive fare management by Amtrak.

Total taxpayer subsidies for Washington state-supported Amtrak *Cascades* trains were $13.2 million in FFY 2006. This figure includes maintenance costs for the three state-owned train sets used in Amtrak *Cascades* daily operations. This is slightly higher than the $12.6 million in operating subsidies provided in FFY 2005.

In 2007, WSDOT and Amtrak intend to slightly increase fares, apply limited marketing funds to better promote the service in major markets, and use more online promotions to increase ridership, revenues, and farebox recovery.

State-Supported Amtrak *Cascades* Farebox Recovery
FFY 2004-2006



* Trains 513 and 516 traveled between Seattle and Bellingham until July 1, 2006.

Note: The Farebox Recovery Performance Measure is calculated on a Federal Fiscal Year (FFY), which starts in October and ends in September. WSDOT uses this timeframe so it corresponds with the same 12-month period used in the annual contract between WSDOT and Amtrak.

Data Source: Amtrak and WSDOT Rail Office.

An Amtrak *Cascades* train passes through Thurston County after a Winter snowfall.

State-Supported Washington *Grain Train*

WSDOT and the Port of Walla Walla own 89 grain cars that help Washington farms move grain to market. Currently, 29 cars are positioned on the Columbia Basin Railroad that extends from Moses Lake to Connell. Trains consisting of 26 cars transport grain to coastal ports once or twice per month. The remaining cars are used interchangeably on the Pleasant Valley (PV) Hooper Branch of the Palouse River and Coulee City Railroad (PCC) (Hooper, Colfax, Thornton areas) and on the Blue Mountain Line (Dayton, Prescott, Walla Walla areas). Both lines are currently operated by the Great Northwest Railroad, which is a subsidiary of Watco Companies. Most of the grain from these lines is transported to Wallula then transloaded to a barge for travel to the Portland area. Occasionally, a trainload of barley is shipped by rail to a coastal port. Although grain is being shipped on the Pullman to Lewiston (P&L) Branch of the PCC (Marshall, Oakesdale, Pullman area), publicly-owned *Grain Train* grain cars are not currently used there.

WSDOT Acquires Palouse River Coulee City Railroad

On Febuary 8, 2007, Governor Chris Gregoire signed a Memorandum of Understanding with Watco Companies, Inc. for the purchase of the CW line of the Palouse River Coulee City (PCC) Railroad. The PCC Railroad is comprised of three branches: The P & L branch from Marshall to Pullman, the PV Hooper branch from Hooper to Thornton and Pullman, and the CW line from Coulee City to Cheney and Spokane. The 300+-mile freight rail system is the second largest system in the state, providing local rail service to over 70 rail-dependent companies, and serves hundreds of local farmers.

Benefits to Washington from this purchase include lower shipping costs due to the competitive opportunities offered, additional jobs within the rail-dependent industries and a platform for possible future growth along these rail corridors.

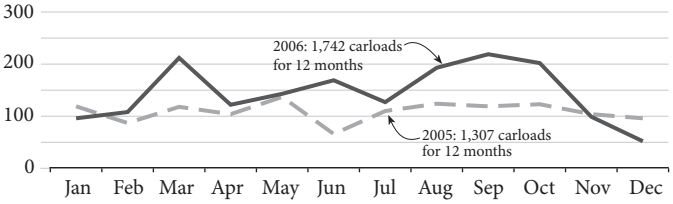
Watco will continue to operate all three branches until May 31, 2007.

Grain Train Cars Use Remains Strong

Use of the grain cars remains strong. Carloads for the fourth quarter of 2006 increased over the already strong mark set in the 2005 fourth quarter. In the fourth quarter of 2006, 353 carloads were shipped compared to 323 in the fourth quarter of 2005, an increase of 9.3%. An even stronger upward trend can be seen for the year as a whole. In total for 2006, 1,742 carloads were shipped compared to 1,307 carloads in 2005, a 33.3% increase. WSDOT will evaluate car usage and need, to make operational shifts to maximize the use of the grain train cars and the benefit to Washington grain growers.

Washington Grain Train Carloads

Carloads per month 2006 vs. 2005



Data Source: WSDOT Rail Office

Note: The Washington Grain Train is a financially self-sustaining transportation program that supports the state's agricultural community while helping short line railroads maintain a sufficient customer base for long-term financial viability.

Highlights of Program Activities

Project Starts, Completions, or Updates

Every quarter, WSDOT's projects seek to improve, maintain and repair public transportation infrastructures. To give a picture of the scope and scale of project activity in the last fiscal quarter, WSDOT presents this highlights section.

Some of the highlights this quarter involve emergency repairs to roads from seasonal weather effects, while others show the progress and/or completion of scheduled projects.

I-5 Everett

As part of the Interstate 5 Everett Freeway Expansion project, crews began building a new, 13-acre storm water treatment facility and combination wetland mitigation site near the Snohomish River, located in Everett's Lowell neighborhood near an existing river front trail. This project is the first of its kind in the state that will capture stormwater from 280 acres of pavement, medians, and slopes for three miles of I-5. Meandering ponds will use plants to slow water flow and absorb pollutants before the water is slowly released back into the Snohomish River, improving habitat for salmon and other species.

Crews install drainage pipe for a 13-acre stormwater treatment facility as part of the I-5 Everett Freeway Expansion project.

I-5 Lynnwood

On October 6, crews finished paving the final stretch of southbound I-5 between Everett and Lynnwood. Crews ground down and repaved eight and one-half miles of southbound I-5 from SR 526 in Everett to 52nd Avenue West in Lynnwood. Crews also laid down a 1.8 mile test section of "quiet pavement" between Swamp Creek and 44th Avenue West in Lynnwood. "Quiet pavement" helps reduce the amount of tire-on-road noise levels. Over the next five years, WSDOT engineers will study this section of roadway to see if "quiet pavement" can stand up to conditions in the Pacific Northwest.

I-5 Vancouver

Crews wrapped up WSDOT's largest Nickel-funded project in Southwest Washington. On October 2, motorists driving on I-5 through Vancouver took advantage of a widened interstate – from two to three lanes in each direction – plus an auxiliary lane. Additionally, the NE 129th Street overpass and the Salmon Creek/NE 117th Street bridges were replaced with structures that meet current design, safety, and seismic standards.

I-90 Snoqualmie Pass

In November, WSDOT and contractor crews put the finishing touches on the three slope stabilization project just east of Snoqualmie Pass. Back in November 2005, WSDOT and contracting crews closed two lanes of I-90 for five weeks to remove loose rock and stabilize the slope. That work wrapped up mid-December. After work began on that area, Governor Gregoire asked for review of all unstable slopes across Snoqualmie Pass and I-90. In January 2006, WSDOT geologists delivered the slope assessment report to Governor Gregoire. In the report, WSDOT identified I-90's Midway Curves on Easton Hill (milepost 66) as three of the most vulnerable areas on which remedial should be implemented. Stabilization work has now been completed on milepost 66.

****SR 4 Stella***

Heavy rains during the week of November 6 worsened the condition of an unstable slope on SR 4 near Stella in Cowlitz County. Debris and rock fell to the road on this stretch of SR 4, leaving even more unstable rock and debris on the slope above the highway. Through an emergency contract, crews began repairs to stabilize the slope above SR 4 on November 16. This project removed approximately 1,000 cubic yards, (100 dump truck loads) of rock and debris. In addition, crews flattened the slope and hung cable net to catch debris from any future slides from falling onto the roadway. The project was completed in early December.

Workers clear debris and flatten the slope above SR 4 in Cowlitz County.

****SR 14 North Bonneville***

Emergency slope repairs to SR 14 just west of North Bonneville began on November 27. The slope where Woodard Creek meets SR 14 (milepost 34.25) has been eroding. This project reinforced the slope to remove and protect the stability of the shoulder.

* Denotes emergency repair projects resulting from November storms.

Crews placed six-foot boulders and rock next to the shoulder to reinforce the roadway. This project was completed in December.

SR 9 Sumas

WSDOT and its contractor made improvements on SR 9 between the cities of Nooksack and Sumas. The contractor built three miles of new roadway between East Badger Road and Front Street in Sumas. The result is a wider, straighter highway without 90-degree turns, and a roadway that is better aligned with the border crossing in Sumas. Truckers rely on SR 9 to move goods and services across the border because it is one of only two 24-hour commercial border crossings in Whatcom County. Crews opened the new roadway on November 22, one year ahead of their Fall 2008 deadline.

SR 16 Fircrest

WSDOT opened new SR 16 ramps at Center Street on December 21, marking another milestone in improving safety and relieving congestion on Pierce County freeways. The new Center Street interchange near Cheney Stadium provides a safer connection to Fircrest, as well as increased mobility along the SR 16 corridor. The new ramps are longer and allow traffic to get up to speed before merging with SR 16 traffic. The improved ramps are part of the SR 16 Union to Jackson project, designed to increase capacity and provide HOV lanes.

SR 18 Maple Valley

WSDOT opened a new eastbound lane on SR 18 between Maple Valley and Issaquah Hobart Road on Thursday, October 26. Adding the new lane more than doubles the capacity of eastbound SR 18 at this section. Traffic engineers expect to see an increase in throughput of up to 100 vehicles per hour on this stretch of road during peak times.

SR 105 Washaway Beach

WSDOT and contractor crews worked this fall to finish the SR 105 Emergency Embankment project in an area that became unstable in December 2005. High tides eroded the bank along the westbound lane of SR 105. Over time, SR 105 in the vicinity of milepost 20 has been eroding due to powerful currents, waves, and storms. Last winter, maintenance crews temporarily stabilized the roadway, until a longer-term emergency repair project was put in place. The project repaired 100 feet and constructed an additional 500 feet of support for the unstable embankment. Crews hauled and placed approximately 16,000 tons of rocks and timber in the affected area, providing support against future hard weather. Work on this project began on October 20 and ended on November 16.

Crews reinforce the SR 105 highway embankment at Washaway Beach in Pacific County. Tons of rock and timber were placed after high tides eroded the shore.

SR 107 Montesano

On October 24, WSDOT's contractor, Wilder Construction, began hillside stabilization on SR 107 between Montesano and Cosmopolis. Work will repair the damage done in December 2005 when the roadway gave way and slid toward the Chehalis River after heavy rains. Workers will build a barrier that will stabilize the hillside and protect the highway from the type of destruction that occurred last winter. Work will continue through January 2007.

SR 167 Auburn

WSDOT opened the new northbound HOV lane on SR 167 between SR 18 and 15th Street NW on October 12. Crews reached this milestone about six months earlier than the scheduled Spring 2007 opening date. This was possible because there was enough road space to allow shoulder work to continue while keeping all three lanes open to traffic

****U.S. 2 Leavenworth***

Crews completed repair of a riverbank washout along U.S. 2 in the Tumwater Canyon. The river undermined the highway during high water flows in November. In coordination with Leavenworth businesses, the work to rebuild the riverbank was done with a complete closure of the highway for four days (December 4 – 8). Dates were selected to avoid major weekend impacts on visitors to Leavenworth's Christmas Lighting Festival. The closure detoured passenger vehicles 30 miles and sent large trucks to other passes.

U.S. 2 Stevens Pass

Work to improve fish passage under U.S. 2 at Mill Creek by removing a culvert and installing a bottomless-arch was completed during October. The project improves fish migration

* Denotes emergency repair projects resulting from November storms.

and increases culvert capacity to accommodate water runoff from a 100-year storm. A traffic detour at the site ended on October 5.

Crews restored the riverbank of the Wenatchee river after high water flows eroded the U.S. 2 highway shoulder in November.

Ferries

Ferries Introduce New Fare Collection System at Anacortes

Washington State Ferries (WSF) introduced its new electronic fare collection system to Anacortes/San Juan Island ferry customers on October 24. Frequent-user ticket books were replaced with a bar-coded, multi-ride card that is read by an electronic scanner. The card carries the same amount of rides and the same discount as the frequent user books as well as the same 90-day expiration date. With the introduction of *Wave2Go*, single full fare tickets will be available for pre-purchase up to seven days in advance, a first for WSF.

New "Dolphins" Coming to Lopez Terminal

Work began this fall to replace two floating "dolphins" at the Lopez Ferry Terminal. Dolphins are used as a guide to berth vessels in to the ferry slips. They can be constructed of timber, steel, or concrete. The existing dolphins were installed in the early 1980s and have performed beyond their useful service life.

The replacement structures consist of a fixed steel dolphin and a floating concrete dolphin held in place by ground anchors that are socketed and grouted into the rock. The floating dolphin is positioned using a series of chains and ship-like anchors. Both dolphins are designed to withstand large vessel impacts that can frequently occur on the exposed northern side of Lopez Island. This $4.3 million project was funded by the 2003 Legislature as a "Nickel" project. General Construction, an established Washington-based marine contractor and a division of Kiewit.

WSF Offers Expanded, Fee-Based Wi-Fi Service on Ferries

In late November, WSF and vendor Parsons Transportation Group began offering ferry customers an enhanced, fee-based Wi-Fi service. The improved service will include better Internet connectivity on the vessels and the ability to connect while waiting at a terminal. The Edmonds/Kingston and Seattle/Bainbridge routes started the new Wi-Fi service in late November, followed by Mukilteo/Clinton and Seattle/Bremerton in December. The rest of the routes will come online in early 2007. The previous Wi-Fi service was provided since 2005 for free by Mobilisa under a federal grant to test connectivity over water and was used by almost 8,000 ferry riders on three routes and five vessels. The project has been considered a success and is being transitioned into a permanently operational, fee-based system; Parsons is responsible for the capital infrastructure and the operation and management of the system. To transition to a fee structure, Parsons developed three pricing plans to address customer needs, including monthly, daily, and one-time use fees.

Improved Motorist/Project Information

WSDOT Receives $900,000 FHWA Value Pricing Grant for Toll Communications

FHWA awarded WSDOT $935,000 - full funding of the original 2006 Value Pricing Grant application, "Advancing Public Awareness & Acceptance of Pricing and Toll Projects from a User's Perspective." The project will be conducted in partnership with the Puget Sound Regional Council to support public awareness and acceptance of value pricing and associated operational toll concepts.

Real-Time Info on the Go; WSDOT Offers New Tools for Drivers

Commuters and people 'on-the-go' now have even more real-time traffic information at their fingertips. WSDOT unveiled three new tools to help drivers make informed travel choices:

- Traffic and travel information on your cell phone or personal digital assistant (PDA): Drivers will now be able to access

Workers build the steel framework for a new floating "Dolphin" at Lopez Ferry Terminal that will be used to guide ferries into the terminal.

* Denotes emergency repair projects resulting from November storms.

the popular Seattle-area traffic flow map, ferry schedules, mountain pass reports, and current route travel times from their PDAs or cell phones.
- HOV travel times on the Web: Drivers will be able to see and compare HOV and general purpose lane travel times.
- Electronic highway message signs on the Web: Drivers will be able to visit WSDOT's Web site and view messages that currently appear on electronic highway signs.

New I-5 Tacoma Freeway Camera to Aid Motorists

On November 8, crews installed a new I-5 traffic camera at 56th Street in Tacoma. The 56th Street camera fills a gap between 38th and 72nd streets. Motorists will get an additional view of I-5, while WSDOT gets one more tool to monitor traffic flow and more efficiently respond to incidents on the freeway. More than 100 Puget Sound area traffic cameras – 24 in the Tacoma area – are available to motorists on the WSDOT Web site at www.wsdot.wa.gov/traffic/

Public Transit & Rail

WSDOT Signs Contracts and Grants for Transit and Rail Projects

The week of September 14, 2006 WSDOT signed more than $25 million in contracts and grants for public transportation, passenger rail, and freight rail projects across the state. The largest amounts were directed to the following projects and communities:
- $9.7 million for regional mobility grants, as follows: $2.7 million to the city of Lakewood for a commuter rail station; $600,000 to Vancouver for a C-Tran park-and-ride facility; $4.6 million to Community Transit in Snohomish County for commuter bus expansion and commuter parking; and $1.8 million to King County Metro for transit access.
- $3.5 million to purchase a total of 159 vanpool vehicles—117 vanpools in King County, 10 vanpools in Benton/Franklin Counties, 25 in Thurston County, five in Grays Harbor County, and two in Mason County.
- $1.8 million for the Snohomish Riverfront rail improvement project.
- $300,000 to add new bus service between Warden and Othello in Grant County.
- $123,000 for the Point Defiance By-Pass rail improvement project.
- $20,000 for King Street Station track improvements.

New Rail Connection at Blakeslee Junction near Centralia Moving Forward

A project adding a new rail connection at Blakeslee Junction and improving the rail junction in Centralia has acquired the necessary approvals for the first phase of construction to move forward. The $7.4 million project will improve train speeds for rail traffic running from the Burlington Northern Main Line to the Port of Grays Harbor. The slow speed of these trains in Centralia causes traffic delays on the BNSF Main Line for other freight and passenger trains and creates congestion on city streets in Centralia.

Several options for improving rail congestion on the mainline were considered. The agreed upon option makes upgrades to the existing route used by trains carrying grain for the Port of Grays Harbor. In addition to making speed improvements at Blakeslee Junction, it also provides for a connection to Tacoma Rail at Blakeslee Junction. The project is scheduled to start in April 2007 and be completed in 2009.

Aviation

Aviation Announces Availability of Airport Grants

On November 6, WSDOT Aviation offered a third round of Local Airport Aid Grant Program awards during the 2005-07 biennium. This third round of grants has approximately $200,000 available for any projects eligible under WSDOT's grant program. To maximize the limited funds, airport sponsors are encouraged to apply for smaller amounts to be used for such things as maintenance, security, and runway safety projects. WSDOT accepted airport aid grant applications through the close of business December 18, 2006. After reviewing and prioritizing applications, WSDOT announced the grant awards on January 8, 2007. WSDOT's Local Airport Aid Grant Program is funded through aviation fuel and aircraft registration fees.

Announcements and Events

Washington Scenic Highways Secure Federal Grant Funds

The Federal Highway Administration selected 11 improvement projects from across Washington to receive approximately $685,000 in grants from the National Scenic Byways Program. The Washington byways receiving funding include:
- Pacific Coast Scenic Byway – $142,000 for the development of the SR 109 Pacific Coast Scenic Byway Corridor Management Plan
- North Cascades Scenic Byway – $100,000 for safety improvements

- Chinook Scenic Byway (Mather Memorial Highway) – $100,000 for the rehabilitation of the historic Naches Depot and provide trail, pedestrian, and shuttle services
- Whidbey Island Scenic Byway – $98,100 for three gateway and several logo signs within the scenic byway
- International Selkirk Loop – $25,000, Coulee Corridor Scenic Byway – $25,000, U.S. 2 Stevens Pass Greenway – $24,800 for the implementation of their respective corridor management plans
- Okanogan Trails Scenic Byway – $63,000 to provide two gateway signs, logo signs, a map, and website
- U.S. 12 Snake River Bridge to Walla Walla Scenic Byway – $50,000 for planning of the Frenchtown/St. Rose interpretive overlook and protection of the St. Rose Cemetery
- Palouse Scenic Byway – $32,732 for several interpretive panels along the byway
- Strait of Juan de Fuca Highway – $25,000 for the implementation of corridor management plan.

WSDOT Awarded Grant to Help Improve Air Quality

Diesel emissions and air pollution in the Puget Sound region will be reduced as a result of a $1.5 million federal grant awarded to the WSDOT through the Puget Sound Regional Council (PSRC). WSDOT was selected to receive a federal Congestion Mitigation Air Quality grant for its project to reduce air emissions by retrofitting various types of equipment and vehicles operating in Snohomish, King, and Pierce counties.

WSDOT's project has two components: one will replace incandescent lights on arrow boards with light emitting diode (LED) light technology, and the other installs filtering devices on vehicles to remove diesel particles from vehicle exhaust. This project improves air quality in urban centers by reducing emissions from maintenance vehicles operating within the Puget Sound region. Improved air quality is a core element of the PSRC's regional plan, Puget Sound Clean Air Agency's mission, and WSDOT's long-range transportation plan. WSDOT will be able to move forward with this project after all of PSRC's regional projects are approved by the state next month as part of its Transportation Improvement Plan (TIP). Reimbursement funds for expenditures made toward the grant are expected to be available by January 2007.

Gray Notebook
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Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternate formats by calling the Washington State Department of Transportation at (360) 705-7097. Persons who are deaf or hard of hearing may call access Washington State Telecommunications Relay Service by dialing 7-1-1 and asking to be connected to (360) 705-7097.

Civil Rights Act of 1964, Title VI Statement to Public

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, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

Other WSDOT Information Available

The Washington State Department of Transportation has a vast amount of traveler information available. Current traffic and weather information is available by dialing 5-1-1 from most phones. This automated telephone system provides information on:

Puget Sound traffic conditions
Statewide construction impacts
Statewide incident information
Mountain pass conditions
Weather information
State ferry system information, and
Phone numbers for transit, passenger rail, airlines and travel information systems in adjacent states and for British Columbia.

For additional information about highway traffic flow and cameras, ferry routes and schedules, Amtrak *Cascades* rail, and other transportation operations, as well as WSDOT programs and projects, visit
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