Washington State Department of Transportation

The Gray Notebook

WSDOT's quarterly performance report on transportation systems, programs, and department management

Paula J. Hammond, P. E.
Secretary of Transportation

GNB 39

Quarter ending September 30, 2010

published
November 16, 2010

In this edition

www.wsdot.wa.gov/accountability

Executive Summary

Performance highlights in this edition of the *Gray Notebook*

Since 2001, WSDOT has employed the quarterly *Gray Notebook* (also called the *GNB*) as one of the agency's primary accountability reporting tools. The *GNB* contains quarterly, semi-annual, and annual updates on a range of agency activities, programs, and capital project delivery.

Reports for the quarter ending September 30, 2010

This edition of the *Gray Notebook* presents information on WSDOT's performance for the quarter ending September 30, 2010, as well as five annual and three semi-annual reports. Selected highlights from this edition include:

- **Statewide, travel delay on state highways dropped 21% in 2009 compared to 2007.** Economic conditions combined with the completion of 36 additional congestion relief projects helped reduce congestion on state highways in 2009. For the high demand commute routes in the central Puget Sound region, the duration of congested periods improved on 34 of the 38 routes, and the average peak travel time improved on 31. (*2010 Annual Congestion Report*; pp. 8-12. The full *Congestion Report* is available on line at www.wsdot.wa.gov/Accountability/Congestion/2010.htm)
- **WSDOT accepted delivery of the first 64-car ferry, the *Chetzemoka*, from Todd Pacific Shipyard on September 15, 2010.** Construction continues on the other two ferries in this contract, the *Salish* and the *Kennewick*. (*New Ferry Construction Special Report*; p. 60)
- **Air quality in ten of the 11 areas monitored by the Environmental Protection Agency met requirements set in the National Ambient Air Quality standards.** Starting in 2011, WSDOT will use new EPA software to monitor vehicle emissions and evaluate compliance with federal and state standards. (*Air Quality Annual Report*; pp. 24-25)
- **Four years into a five-year testing program, WSDOT's analysis shows that "quieter pavements" produce little improvement in noise reduction.** WSDOT has placed test sections of noise abatement panels on the Ship Canal Bridge in a pilot project that will be evaluated over the next three years. (*Noise Quality Annual Report*; pp. 26-28)
- **Amtrak *Cascades* ticket revenues in the third quarter of 2010 are up 38.5% compared to the same period in 2009.** Ridership for the same period increased 7.1%, as the service carried almost 168,000 passengers. (*Passenger Rail Quarterly Update*; pp. 21-22)
- **WSDOT has purchased 29 additional Grain Train cars to help meet demand for transporting the state's grain harvests.** (*Freight Rail Semi-annual Update*; pp. 30-32)
- **This edition of the Gray Notebook features the first Annual Tolling Report.** WSDOT will be developing ongoing reporting covering stewardship and mobility-improvement aspects of its tolled roads and bridges. (*Tolling Annual Report*; pp. 76-78)
- **As of September 30, 2010, WSDOT has delivered a total of 285 Nickel and Transportation Partnership Account (TPA) projects valued at $3.77 billion**, on target with the funding provided in the 2010 Supplemental Transportation Budget. At quarter end, September 30, 2010, WSDOT had completed 11 projects, 49 projects were under construction, and an additional 23 projects were scheduled to be advertised by March 31, 2011. 89% of all Nickel and TPA projects combined were completed early or on time and 94% were under or on budget. (See the *Beige Pages* for a quarterly report of WSDOT's *Capital Project Delivery Program;* pp. 39-48)
- **More than 200 American Recovery and Reinvestment Act (Recovery Act) highway projects were awarded to contractors by the end of September, including 157 that have been completed.** The *Special Report* includes September employment data on how Washington's Recovery Act projects are creating and preserving jobs. (pp. 34-38)

On this quarter's cover (from top):

A WSDOT worker installs rebar in the I-405 Bellevue Braids construction zone.

The SR 167 HOT lanes demonstrate both new technology and new highway operational strategies.

An aerial view of the I-5/196th St SW interchange in Lynnwood.

Noise study panels are placed on the east side of the I-5 Ship Canal Bridge.

The No. 1 end of the new MV Salish, *under construction at Todd Shipyard.*

Table of Contents

In this issue

6 :: The annual **Intelligent Transportation Systems** report discusses inventory, 'Smarter Highways' equipment, and the maintenance backlog.

8 :: WSDOT's annual report **Measuring Delay and Congestion** appears in this Gray Notebook as a special executive summary. The entire Congestion Report is available online at www.wsdot.wa.gov/accountability/congestion.

17 :: The quarterly update on **Washington State Ferries** introduces quarterly reporting on ridership and farebox revenue.

24 :: WSDOT's efforts at monitoring and reducing emissions is addressed in the **Air Quality Annual Report**.

26 :: Results of quieter pavement tests and WSDOT's ongoing efforts to reduce noise from the transportation system are covered in the **Noise Quality Annual Report**.

30 :: The semi-annual update on **Freight Rail** covers utilization data for Grain Train and produce cars.

76 :: The first *Gray Notebook* **Tolling Annual Report** examines tolling operations performance as well as revenues for the Tacoma Narrows Bridge and HOT lanes.

Table of Tables & Graphs

Table of Tables & Graphs

Navigating the WSDOT Information Stream

Linking performance measures to strategic goals

The *Gray Notebook* is the basis for WSDOT performance reporting that links performance measures for the strategic plan, legislative, and executive policy directions, as well as federal reporting requirements.

Statewide transportation policy goals

In 2007, the Governor and Legislature enacted a law establishing five policy goals for transportation agencies in Washington State (Chapter 516, Laws of 2007).

The five statewide transportation policy goals are:

- **Safety:** To provide for and improve the safety and security of transportation customers and the transportation system;
- **Preservation:** To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- **Mobility (Congestion Relief):** To improve the predictable movement of goods and people throughout Washington;
- **Environment:** To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and
- **Stewardship:** To continuously improve the quality, effectiveness, and efficiency of the transportation system.

In March 2010, the Governor and Legislature added a new policy goal for transportation: **Economic Vitality**. It directs WSDOT to "promote and develop transporation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy." WSDOT is developing the necessary business direction plans through the agency's strategic planning process.

The Transportation Progress Report

Under this law, the Washington State Office of Financial Management (OFM) is responsible for setting objectives and establishing performance measures for each of the goals. OFM must report on the attainment of the goals and objectives to the Governor and Legislature each biennium. In January, 2008, OFM published a "baseline" report to get feedback from the Governor and Legislature on draft objectives and performance measures.

The most recent Attainment Report, for 2010, is available online at www.wsdot.wa.gov/Accountability/PerformanceReporting/Attainment.htm , or on OFM's performance and results website: www.ofm.wa.gov/performance/.

About WSDOT's Performance Dashboard

The 'dashboard' of performance measures on the facing page offers readers a snapshot glance at WSDOT's progress against the five statewide policy goals and WSDOT's strategic plan. Some results are discussed in depth within this edition of the *Gray Notebook*, while others are in previous editions or will be updated in coming editions based on established reporting cycles. Turn to the Subject Index (pp. 83-88) to find earlier coverage; all previous editions are available online at www.wsdot.wa.gov/accountability.

WSDOT Strategic Plan

WSDOT's 2011-2017 strategic plan Business Directions summarizes WSDOT's work plan based on the programs and budgets authorized by the State Legislature and the Governor. The plan describes the agency strategic directions and initiatives to address critical programs and service delivery mandates. The table on pages viii-ix illustrates this alignment. WSDOT's 2011-17 strategic plan is available online at: www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm.

Other performance reporting requirements

Priorities of Government (POG)

POG is an investment prioritization process used to help the Governor and Legislature develop agency budgets. Every biennium, workgroups composed of government agency and private sector representatives identify results that citizens expect from government, and evaluate the performance of state agency activities and services against those expected results. Information about the 20011-13 POG process is available at: www.ofm.wa.gov/budget/pog.

Government Management Accountability and Performance program (GMAP)

GMAP is a management tool that promotes the sharing and evaluation of current performance to improve results. Under GMAP, the Governor and her leadership team meet in "GMAP forums" with agency directors to review results and develop action plans to improve results. These meetings provide an opportunity for candid conversations about what is working, what is not, and how to improve results.

WSDOT regularly reports to the Governor during the Transportation GMAP forums. WSDOT's GMAP reports can be found at: www.wsdot.wa.gov/Accountability/PerformanceReporting/GMAP.htm.

Performance Dashboard

✓ Goal has been met. ↑ Performance is trending in a favorable direction. ↔ Trend is holding. ↓ Performance is trending in a unfavorable direction.

Policy goal/Performance measure	Previous reporting period	Current reporting period	Goal	Goal met	Progress	Comments
Safety						
Rate of **traffic fatalities** per 100 million vehicle miles traveled (VMT) statewide (annual measure, calendar years: 2008 & 2009)	0.94	0.87	1.00	✓	↑	The rate of highway fatalities continues to decline (a lower rate is better)
Rate of **strains and sprains / hearing-loss injuries** per 100 WSDOT workers[1, 7] (quarterly measure: FY10 Q4, FY11 Q1)	2.2/ 0.7	2.5/ 0.5	2.4/ 0.4	—	↓	Both strains/sprains and hearing-loss just barely missed their goals for the quarter
Preservation						
Percentage of state **highway pavements** in fair or better condition (annual measure, calendar years: 2007 & 2008)	93.3%	94.0%	90.0%	✓	↑	Recovery Act-funded projects are contributing to reductions in "due" rehabilitations
Percentage of **state bridges** in fair or better condition (annual measure, fiscal years: 2009 & 2010)	97.0%	98.0%	97.0%	✓	↑	Recovery Act funds contributed to increase in Good/Fair rating
Mobility (Congestion Relief)						
Highways: annual weekday **hours of delay** statewide at **maximum throughput speeds**[2] (annual measure: calendar years 2007 & 2009)	32 million	25 million	N/A	N/A	↑	Reduction of 21% as a result of reduced demand due to the economy, and increased capacity
Highways: Average clearance times for **major (90+ minute) incidents** on 9 key western Washington corridors[7] (quarterly: FY10 Q4, FY11 Q1)	151 minutes	154 minutes	155 minutes	✓	↓	One 11-hour extraordinary incident affected the program's average clearance time this quarter.
Ferries: Percentage of trips departing on time[3, 7] (quarterly, year to year: FY10 Q1, FY11 Q1)	86%	83%	90%	—	↓	None of the routes met the goal; new evaluation program underway
Rail: Percentage of Amtrak *Cascades* trips arriving on time[4, 7] (quarterly, year to year: FY10 Q1, FY11 Q1)	71%	73%	80%	—	↑	WSDOT and Amtrak continue to evaluate projects and other means to improve on-time performance
Environment						
Cumulative number of WSDOT **stormwater treatment facilities** constructed or retrofitted[5] (annual measure: calendar years 2008 & 2009)	Over 800	Over 1,037	N/A	N/A	↑	Stormwater facilities will now be constructed under a new permit, with new requirements
Cumulative number of WSDOT **fish passage barrier improvements** constructed since 1990 (annual measure: calendar years 2008 & 2009)	226	236	N/A	N/A	↑	Ten additional retrofits were completed in 2009
Stewardship						
Cumulative number of Nickel and TPA **projects delivered,** and **percentage on time**[7] (quarterly: FY10 Q4, FY11 Q1)	272/ 87%	282/ 89%	90% on time	—	↑	Performance improved slightly from previous quarter[8]
Cumulative number of Nickel and TPA **projects completed** and **percentage on budget**[7] (quarterly: FY10 Q4, FY11 Q1)	272/ 94%	282/ 94%	90% on budget	✓	↔	Competitive bidding and construction environment contribute to controlling costs[8]
Variance of total project costs compared to **budget expectations**[6, 7] (quarterly: FY10 Q4, FY11 Q1)	under-budget by 1.0%	under-budget by 1.0%	on budget	✓	↔	Total Nickel and TPA construction program costs are within 1% of budget[8]

Data notes: N/A means not available: new reporting cycle data not available or goal has not been set. Dash (—) means goal was not met in the reporting period.

1 Sprains/strains and hearing loss are current high priority focus areas for WSDOT. Hearing loss rate based on preliminary data.

2 Compares actual travel time to travel time associated with 'maximum throughput' speeds, where the greatest number of vehicles occupy the highway system at the same time (defined as 70%-85% of the posted speeds).

3 'On-time' departures for Washington State Ferries includes any trip recorded by the automated tracking system as leaving the terminal within 10 minutes or less of the scheduled time.

4 'On-time' arrivals for Amtrak *Cascades* are any trips that arrive at their destination within 10 minutes or less of the scheduled time.

5 Number of estimated facilities in permitted counties: Clark, King, Pierce, and Snohomish.

6 Budget expectations are defined in the last approved State Transportation Budget.

7 Washington's fiscal year (FY) begins on July 1 and ends on June 30. FY11 Q1 refers to the quarter ending September 30, 2010.

8 See page 55 for more information on the expanded view of capital projects in the current 2010 Legislative Transportation Budget for highway construction.

Navigating the WSDOT Information Stream

Linking performance measures to strategic goals

This table illustrates the alignment of WSDOT's performance measures with the five statewide transportation policy goals and the WSDOT strategic plan, *Business Directions*. (See also page vi.)

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last *Gray Notebook* report
1. Safety: To provide for and improve the safety and security of transportation customers and the transportation system	Vigilantly reduce risks and increase safety on all state-owned transportation modes; reduce fatalities and serious injuries; assist local communities in identifying effective solutions to transportation safety needs.	Number of traffic fatalities	annual	GNB 38 p. 5
		Rate of traffic fatalities per 100 million miles traveled	annual	GNB 38 p. 6
		Percent reduction in collisions before and after state highway improvements	annual	GNB 38 p. 7
		Number of recordable workplace injuries and illnesses	quarterly	GNB 39 p. 2
State policy goal	**WSDOT business direction**	**Key WSDOT performance measures**	**Reporting cycle**	**Last *Gray Notebook* report**
2. Preservation: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.	Catch up with all necessary maintenance and preservation needs on existing highways, bridges, facilities, ferry vessels, airports, and equipment, while keeping pace with new system additions.	Percent of state highway pavement in fair or better condition	annual	GNB 36 pp. 10-15
		Percent of state bridges in fair or better condition	annual	GNB 38 pp. 12
		Percent of targets achieved for state highway maintenance activities	annual	GNB 36 pp. 16-19
		Number of ferry vessel life-cycle preservation activities completed	annual	GNB 37 pp. 14-15
		Percent of ferry terminals in fair or better condition	annual	GNB 37 p. 16
State policy goal	**WSDOT business direction**	**Key WSDOT performance measures**	**Reporting cycle**	**Last *Gray Notebook* report**
3. Mobility (Congestion Relief): To provide for the predictable movement of goods and people throughout the state.	Move people, goods, and services reliably, safely, and efficiently by adding infrastructure capacity strategically, operating transportation systems efficiently, and managing demand effectively.	Travel times and hours of delay on the most congested state highways	annual	GNB 39 p. 10
		Reliable travel times on the most congested state highways around Puget Sound	annual	GNB 39 p. 11
		Percentage of commute trips while driving alone	annual	GNB 38 p. 31
		Average length of time to clear major incidents lasting more than 90 minutes on key highway segments	quarterly	GNB 39 p. 14
		Ferry ridership	quarterly	GNB 39 p. 17
		Ferry trip reliability	quarterly	GNB 39 p. 18
		Percent of ferry trips on time	quarterly	GNB 39 p. 19
		Amtrak *Cascades* ridership	quarterly	GNB 39 p. 21
		Percent of Amtrak *Cascades* trips on time	quarterly	GNB 39 p. 22

Linking performance measures to strategic goals

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last *Gray Notebook* report
4. Environment: Enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.	Protect and restore the environment while improving and maintaining Washington's transportation system.	Conformance of WSDOT projects and programs with environmental legal requirements	annual	GNB 36 p. 37-38
		Number of fish passage barriers fixed and miles of stream habitat opened up	annual	GNB 36 pp. 34-36
		Number of WSDOT stormwater treatment facilities constructed or retrofitted	annual	GNB 37 p. 38
		Number of vehicle miles traveled	annual	GNB 39 p. xx
		Transportation-related greenhouse gas emissions (measure to be developed)	n/a	n/a

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last *Gray Notebook* report
5. Stewardship: To continuously improve the quality, effectiveness and efficiency of the transportation system	Enhance WSDOT's management and accountability processes and systems to support making the right decisions, delivering the right projects, and operating the system efficiently and effectively in order to achieve the greatest benefit from the resources entrusted to us by the public.	Capital project delivery: on time and within budget	quarterly	GNB 39 pp. 39-48
		Recovery Act-funded project reporting	quarterly	GNB 39 pp. 34-38

State policy goal	WSDOT business direction	Key WSDOT performance measures	Reporting cycle	Last *Gray Notebook* report
6. Economic Vitality: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.	Note: Performance measures and WSDOT strategic business directions for the new policy goal "Economic Vitality" are under development as part of the 2011-13 strategic planning process. Information will be added to this table in a future edition of the *Gray Notebook*.			GNB 39 pp. 30-31

Navigating the WSDOT Information Stream

Organization of the *Gray Notebook*

Through more than 35 editions, in fact nine years, WSDOT has published a quarterly performance report known as the *Gray Notebook*. The original publication, bound in gray paper, was organized in two sections:

- the Beige Pages, so-called for the color of paper they were printed on, which covered project delivery on the Nickel, Transportation Partnership Account (TPA), and Pre-Existing Funds project programs, and
- the White Pages, which presented quarterly and less frequent reports on a wide variety of transportation-related topics.

How is the *Gray Notebook* organized?

The *Gray Notebook* (GNB) presents articles in a way that makes the topics' relationship to the six Legislative policy goals – and WSDOT's own strategic business directions – more clear. (These goals are discussed in detail on page vi.)

The *Gray Notebook* is organized into sections devoted to those strategic goals, each marked by a page that recaps WSDOT's goals for Safety, Preservation, Mobility/Congestion Relief, Environment, and Stewardship. A new section, for topics related to ways in which the transporation system supports the Legislature's policy goal of economic vitality, was added in the March 2010 *Gray Notebook* 37. Each section divider carries a mini-directory to the topics covered within the section, and points to other articles within the *Gray Notebook* that contain information relevant to that goal.

The white pages primarily feature quarterly and annual reports on key agency functions, providing regularly updated system and program performance information that was previously covered in the White Pages. Annual system performance updates are rotated over four quarters based on data availability and relevant data cycles, to provide in-depth analysis of topics such as capital facilities, aviation, freight, and a post-winter report on highway maintenance. Quarterly topics, such as worker safety, incident response, Amtrak *Cascades*, and Washington State Ferries, are featured in each edition since data is generally available more frequently.

Matters pertaining to finance, capital project delivery, workforce, and agency highlights appear in the Stewardship section. Since *Gray Notebook* 33, the Stewardship section leads off with coverage of WSDOT's Federal Recovery Act-funded projects, including high speed rail and TIGER grant projects.

The Beige Pages immediately following address the delivery of the projects funded in the 2003 Transportation Funding Package (Nickel), 2005 Transportation Funding Package (TPA), and Pre-Existing Funds (PEF). They contain summary tables, detailed narrative project summaries, and financial information supporting WSDOT's "no surprises" reporting focus.

More easily tracked business plan results

By aligning the *Gray Notebook*'s articles with WSDOT's business goals as outlined in the strategic plan, *Business Directions*, WSDOT hopes to make tracking performance results against specific strategic actions more simple.

Business Directions reflects WSDOT's program and project delivery responsibilities with the goal of demonstrating the best possible return for taxpayers' dollars. For a copy of Business Directions, please visit: www.wsdot.wa.gov/Accountability/PerformanceReporting/StrategicPlan.htm.

Publication frequency and archiving

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/GrayNotebook/gnb_archives.htm.

A separate detailed navigation folio is available at www.wsdot.wa.gov/Accountability/GrayNotebook/.

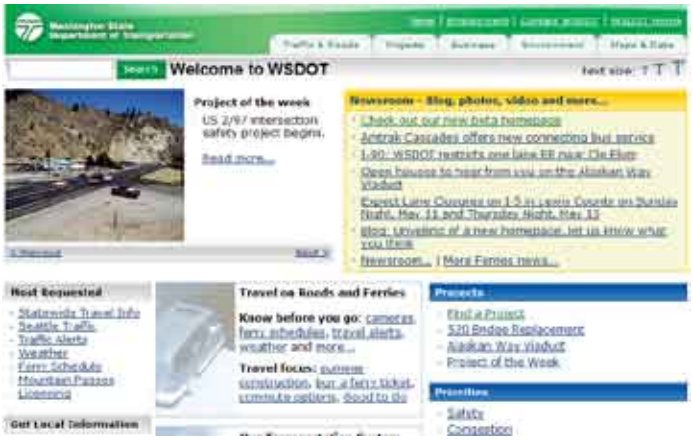
Gray Notebook Lite

WSDOT publishes a quarterly excerpt of selected performance topics and project delivery summaries from the *Gray Notebook*, called *Gray Notebook Lite*. The folio-style *Lite* allows for a quick review of WSDOT's most important activities in the quarter. It can be accessed at www.wsdot.wa.gov/Accountability/GrayNotebook/navigateGNB.htm.

Online capital project reporting and using the website

WSDOT prepares information for legislators, state and local officials, interested citizens, and the press on the progress of the state's three capital delivery programs. The *Gray Notebook*, in the Beige Pages section, highlights each quarter's progress and reports on financial and other program management topics, but much more detailed information can be found on-line at the WSDOT website.

WSDOT's on-line project reporting uses several different tools, including the *Gray Notebook* (as a downloadable PDF), 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.



Navigate the WSDOT website

The WSDOT home page (shown above; www.wsdot.wa.gov) offers several ways to find information on projects. The Projects tab on the top navigation bar links to the WSDOT's Projects page; there, you'll find information and links to detailed descriptions of all WSDOT projects. The Accountability navigation menu offers links to several important topics (including Congestion Relief, Safety, and Preservation) and the most recent edition of the *Gray Notebook*.

Project Pages

Project Pages (found at www.wsdot.wa.gov/projects/, typical page shown below) report on virtually all WSDOT capital delivery program construction projects.

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, which are updated regularly.

Project Pages cover:

- Overall project vision
- Financial table, funding components
- Roll-up milestones
- Roll-up cash flow, contact information
- Maps and Links to QPRs.

Quarterly Project Reports

The Quarterly Project Reports (QPRs) are reached by a link on the Project Page. They summarize quarterly activities:

- Highlights
- Milestones
- Status description
- Problem statement
- Risks and challenges
- Project costs, cash flow
- Contact information.

Contributors

The work of many people goes into the writing, editing, and production of the *Gray Notebook* every quarter. This list of contributors reflects the efforts of data analysts, engineers, project leads, and many more individuals behind the scenes. Information is reported on a preliminary basis as appropriate and available for internal management use; it is subject to correction and clarification. On-line versions of this publication are available at www.wsdot.wa.gov/accountability

Contributors

Safety	Worker Safety	Joel Amos, Kathy Dawley, Cathy English, Kathy Radcliff, Ernst Stahn
Preservation	ITS	Katherine Boyd
Mobility/ Congestion Relief	Measuring Congestion & Delay Annual Report	For the full list of contributors see page 3 on the 2010 annual Congestion Report
	Incident Response	Katherine Boyd, Paula Connelley, Vince Fairhurst, Diane McGuerty, Tom Stidham. For WSP: Captain Chris Gundermann, Jim Hill, Lila Kirkaby, Marcia Marsh, Jennifer Meyer, Captain Jeff Sass
	Washington State Ferries, including new ferry construction program	Jean Baker, Matt Hanbey, Laura D. Johnson, Al McCoy, Ron Wohlfrom
	Passenger Rail	George Xu
Environment	Air Quality	Tim Sexton, Sheila Helgath
	Noise Quality	Tim Sexton, Jeff Uhlmeyer
Economic Vitality	Freight Rail	George Xu
Stewardship	Federal Recovery Act Reporting	WSDOT offices including: Capital Project Delivery & Management, Highways & Local Programs, SAPD, Rail, Construction, Public Transportation
	WSDOT's Capital Project Delivery Programs (the Beige Pages)	Jay Alexander, Capital Project Delivery & Management office, Claudia Lindahl, Regional Program Managers
	SR 520 Pontoon Construction Project Spotlight	David Gitlin, Suanne Pelley
	Tacoma/Pierce Co. HOV Lanes Update	Claudia Cornish
	I-5 Grand Mound to Maytown Update	Ron Landon, Brian McMullen
	Use of Consultants	Larry Schofield, Erik Jonson
	Hot Mix Asphalt	Dave Erickson, Jenna Fettig
	Tolling	Jennifer Ziegler
	Workforce Level and Training	Sue Briggs, Norma Chavez, Matthew Moreland, Cathy Roberts, David Supensky
	Program Highlights	Ann Briggs
GNB Production	Performance Analysis Team	Laura Cameron, Sreenath Gangula, Dan Genz, Rachel Knutson, Todd Lamphere, Anna Lee, Colleen Rozillis, Tyler Winchell
	Graphics	Chris Britton, Steve Riddle, Chris Zodrow
	Publishing and Distribution	Linda Pasta, Trudi Philips, Deb Webb
For information, contact:	Daniela Bremmer, Director WSDOT Strategic Assessment Office 310 Maple Park Avenue SE, PO Box 47374, Olympia, WA 98504-7374 Phone: 360-705-7953 :: E-mail: bremmed@wsdot.wa.gov	

Safety

Statewide policy goal

To provide for and improve the safety and security of transportation customers and the transportation system.

WSDOT's business direction

To vigilantly reduce risks and improve safety on all state-owned transportation modes; reduce fatalities and serious injuries; assist local communities in identifying effective solutions to transportation safety needs.

safety

In this section

See also

Earlier articles concerned with safety

Worker Safety Quarterly Update

Worker Safety Highlights

- WSDOT held its annual Safety Stand Down event for all employees in September, with renewed emphasis on making safe workplace practices a fundamental value of the agency.
- Employees sustained 86 OSHA-recordable injuries in the third calendar quarter, 16 fewer than the same quarter a year earlier.
- Time lost to sprain/strain injuries also dropped year-on-year, from 877 in the third quarter of 2009 to 568 in 2010.
- WSDOT has completed 65% of the criteria required for designation as a Washington Wellness Worksite.

WSDOT has a strong commitment to improve the safety of its employees as they perform their jobs. In 2009, WSDOT established a goal of zero workplace injuries by 2019. Since then, WSDOT has embarked on an ambitious program to transform its worker safety program, guided by a core value that every employee should go home safely at the end of the day. Though much has been accomplished, WSDOT recognizes that there are still many opportunities to improve the safety of its workforce.

New efforts to improve the worker safety program call for employee participation in developing their own safe work habits

In September 2010, WSDOT conducted its annual Safety Stand Down, an opportunity for all agency workers to focus on safe working practices whatever their role or tasks might be. In their presentations, agency senior executives addressed the role of line management in safety leadership. A video was circulated to all WSDOT offices and was required viewing for all staff as part of the Safety Stand Down; each organizational group was also directed to hold a discussion about relevant safety problems and solution, and explore an array of safety-related materials. Assistant Secretary for Washington State Ferries David Moseley noted "Safety leadership requires safe behavior, not just words," while Deputy Secretary David Dye directed all employees to "own" their own safety, in order to return home safe after the work day. Managers across the agency encouraged employees to place renewed emphasis on taking responsibility for their own safety and health.

As line management integrates safety into the stated expectations of how workers conduct their daily activities and operations, WSDOT hopes to create an environment in which management provides the motivating force, resources, and influence necessary to place safety as a fundamental value within the organization. By providing the means through which workers can work safely every day – identifying and correcting workplace hazards in conjunction with their line managers, using Pre-Activity Safety plans to weave safe work practices into daily activities, and so on – WSDOT intends to strengthen its worker safety program across all regions and organizational groups.

Number of OSHA-recordable injuries sustained by category of worker

July 1-September 30, 2010 (Quarter 3, calendar year 2010)

Injuries	Highway maintenance	Highway engineering	Admin staff	Ferry System
Number of injuries Q3 CY10	49	14	3	20
Percent of all injuries that these numbers represent	57%	16%	3%	23%
Total number of days away from work associated with these injuries	458	38	7	455
Days away due to sprains/strains	*294*	*12*	*7*	*255*
For comparison				
Number of injuries April-June, Q2 CY10	48	15	3	28
Number of injuries July-Sept, Q3 CY09	37	23	2	40

Data source: WSDOT Safety Office.

WSDOT moves from fiscal year to calendar year reporting

In previous years, WSDOT and the *Gray Notebook* reported worker accident data by state fiscal year, but as of July 1, 2010, WSDOT will be moving to a calendar year reporting cycle, to better align with Washington's Department of Labor and Industries (L&I) claims data reporting. As fiscal year 2010 ended June 30, 2010, the year-on-year data reporting will experience a lag of six months, July through December 2010, before the new reporting cycle begins in January 2011. Agency executives elected to continue accident-reduction goals from fiscal year 2010. The tables on page 3 reflects the continued goal rates for the remaining six months of calendar year 2010.

WSDOT employees: Rates of injuries and illnesses

WSDOT again reduces the number of OSHA-recordable injuries/illnesses

WSDOT employees sustained 86 OSHA-recordable injuries and illnesses between July 1 and September 30, 2010. This is eight fewer than the previous quarter of 2010, and 16 fewer than the same quarter in calendar year 2009 (102 recordable injuries).

The table on page 2 shows a breakdown of injuries sustained by various categories of WSDOT employees, including the proportion of overall injuries each group represents.

Sprains and strains (highlighted in the table as a subset of all injuries) remain a leading cause of days away from work. More than half of all lost workdays in the third calendar quarter (July – September 2010) were due to such injuries: 568 of the 958 total days lost to injury or illness resulted from sprains or strains.

Time lost to sprains/strain injuries decreasing from 2009

It is typical for the number of such injuries to rise during the summer construction season, at its height in this quarter. Last year in this quarter, WSDOT workers lost 877 workdays to sprains/strains in 2009.

WSDOT sprain/strain injury rates per 100 workers, by organizational unit

*Quarterly rate July-September 2010, cumulative rate January-September 2010**

Organizational unit	CY 2009 sprains/ strains results	Rate of sprain/strain injuries Q3 CY 2010 (July-September 2010)	Cumulative rate of sprain/strain injuries through Q3 FY 2010	CY 2011 sprain/ strain reduction goal
Northwest Region	2.9	3.1	2.7	2.2
North Central Region	4.8	1.6	1.5	2.2
Olympic Region	2.9	1.6	3.0	2.2
South Central Region	3.2	0.8	2.4	2.2
Southwest Region	1.8	2.4	1.1	2.2
Eastern Region	3.0	6.9	4.4	2.2
All Regions combined	3.0	2.7	2.6	2.2
Ferry System	1.0	2.9	3.8	4.7
Headquarters	5.9	0.9	0.8	0.4
Agency-wide	3.2	2.4	2.5	2.4

Data source: WSDOT Safety Office.

* Previously reported by fiscal year, the data now compares rates and results for calendar years (CY). Performance results will be reported in *Gray Notebook 40* at the end of CY 2010, measured against the 2011 goals.

WSDOT hearing loss injury rates per 100 workers, by organizational unit

*Results of audio testing to date, September 30, 2010**

Organizational unit	CY 2009 hearing loss results	Rate of hearing loss injuries Q3 CY 2010 (July-September 2010)	Cumulative rate of hearing loss injuries through Q3 FY 2010	CY 2011hHearing loss goal
Northwest Region**	0.4	0.3	0.5	0.4
North Central Region**	0.4	1.6	3.1	0.4
Olympic Region	0.9	0.0	0.0	0.4
South Central Region**	2.4	0.0	0.0	0.4
Southwest Region	1.4	0.0	0.8	0.4
Eastern Region	0.7	0.0	0.6	0.4
All Regions combined	0.9	0.2	0.6	0.4
Ferry System	0.1	1.6	0.6	0.4
Headquarters**	0.8	0.3	0.1	0.0
Agency-wide	0.7	0.5	0.5	0.4

Data source: WSDOT Safety Office.

Notes: Audio testing is conducted over the course of the year.

* Previously reported by fiscal year, the data now compares rates and results for calendar years (CY). Performance results will be reported in *Gray Notebook 40* at the end of CY 2010, measured against the 2011 goals. ** Have completed hearing testing for the year.

Worker Safety Quarterly Update

WSDOT Wellness

WSDOT Wellness

The Wellness Program is half way through the 16-month Washington Wellness Worksite (W3) Collaborative. The aim of W3 is to implement specific criteria that lead to improved workforce heath and productivity, and have a positive financial impact on the Public Employee Benefits Board's healthcare cost trend. As of September 30, 2010, WSDOT has completed 65% of the criteria required for designation as a Washington Wellness Worksite.

Overall, 55% of WSDOT employees agency-wide participated in the wellness survey administered through the University of Washington. The purpose of the survey is to provide the WSDOT's wellness program with baseline data over time to guide the agency's actions and determine if progress is being made in the areas of workforce physical activity, eating healthily, living tobacco-free, and using preventive care. In June 2011, employees will repeat this survey.

Resulting aggregate information from the initial W3 survey has been presented to WSDOT. This baseline data provides observed differences between regions and headquarters, enabling the agency to take targeted action that will guide future planning and implementation in promoting employee health and productivity.

Below is sample of the results received from the survey:

- 57% of employees meet recommended physical activity levels
- 51% of employees have a favorable perception regarding workplace support of living a healthier life
- 40% of employees have a favorable perception regarding workplace support of physical activity

The Secretary's Executive Order E 1036.00, Wellness Activities at Work, has been approved and included on the agency's website.

Through November, WSDOT is hosting statewide flu shot clinics available to employees and their families.

Ergonomics webpage for employees encourages stretching to prevent injury, promote health

Sprain and strain injuries continue to be WSDOT's most frequent and most costly injuries. In an effort to reduce these types of injuries, WSDOT continuously looks for ways to reduce the physical demands placed on the workforce. WSDOT also understands the importance of employee wellness, and like many well known companies – including Kiewit, Boeing, Toyota, CH2M Hill, and Bechtel – the agency fully supports a stretching program for the workplace. Research has shown that the benefits of regular stretching can include greater flexibility, a greater range of motion, plus a reduction in injuries and their severity, in turn resulting in fewer work-days lost and lower medical bills for injured workers.

The Department of Transportation Secretary Paula Hammond recently signed a Wellness Executive Order which includes provisions allowing WSDOT workers to conduct stretching exercises during work hours. WSDOT fully supports the Stretch & Flex Program and recommends that all supervisors lead their teams in daily stretching exercises.

WSDOT's staff intranet ergonomics webpage contains a downloadable PDF showing stretches which employees can do on their own or with a group of co-workers at the start of a shift. Employees are encouraged to consult their doctors before beginning any new exercise routine.

Employees are encouraged to perform stretches and simple exercises to strength core muscle groups before beginning heavy manual labor.

Preservation

Legislative policy goal

To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services.

WSDOT's business direction

To catch up with all necessary maintenance and preservation needs on existing highways, bridges, facilities, ferry vessels and terminals, airports, and equipment, while keeping pace with new system additions.

In this section

See also

Earlier articles concerned with preservation

Asset Management: Bridge Assessment, GNB 38
Capital Facilities Annual Report, GNB 38
Safety Rest Areas Annual Report, GNB 37
Annual Post-Winter Report, GNB 37
Ferry Vessel and Terminal Preservation Semi-Annual Update, GNB 37
Asset Management: Pavement Conditions Annual Report, GNB 36
Highway Maintenance Annual Report, GNB 35

Asset Management: Intelligent Transportation Systems

Inventory of ITS elements continues to grow

Intelligent Transportation System Highlights

- WSDOT's ITS inventory now includes 1,933 systems, an 18% increase from the 1,644 systems in the ITS inventory in September 2009.
- WSDOT added 144 closed circuit television cameras to the inventory in 2010, the largest systems addition among the seven ITS categories.
- A new category, 'Smarter Highway gantries,' was added to inventory of equipment used for active traffic operations on I-5, I-90, and SR 520.
- For more information on preservation, please see the Maintenance Accountability Program (MAP) annual report on pp. 16-18 from *Gray Notebook 36*.

Intelligent Transportation Systems (ITS) are electronic traffic-detecting devices that WSDOT uses to increase safety and keep traffic moving on the highway. These devices can be as small as a ramp meter and as complex as an active traffic management (ATM) system; the latter includes WSDOT's new 'Smarter Highways' ATM system (see the *2010 Congestion Report*, p. 48, for information). The table below shows WSDOT's ITS inventory as of September 30, 2010. This year, WSDOT has added an ITS category for Smarter Highway gantries, the devices that support ATM operations in the Puget Sound region on I-5, I-90, and SR 520.

Growth of inventory, obsolescence, and buying power affect maintenance performance

The agency's ITS inventory continues to grow annually in every category. Each ITS component requires routine inspections, preventive maintenance, and repairs: as the ITS inventory grows, the maintenance workload increases correspondingly. When work outpaces available resources, a backlog develops. The Legislature provided additional funding to WSDOT in the 2009-2011 biennium to address the backlog of ITS preventative maintenance tasks, to improve the percentage of completed tasks from 13% of a complete, basic maintenance program in 2009 to 57% at the end of 2011. As of July 1, 2010, 89% of the work planned for completion to date had been accomplished.

ITS maintenance differs from much of WSDOT's routine maintenance activities. ITS equipment can become technologically obsolete much sooner than traditional equipment such as signals, a trend that has accelerated in the last five years. And – as with consumer technologies – manufacturers may no longer support their own earlier products, or may go out of business altogether. WSDOT must either develop ways to support obsolete systems internally or replace them with newer products that may be more expensive. Manufacturers who develop ITS equipment are few in number, and prices for their systems are not subject to much competition; WSDOT's limited funding constrains its ability to purchase new or replacement systems. Within these scenarios, WSDOT is always working to refine the way it manages ITS preventive maintenance in order to be active, rather than reactive, in responding to these challenges.

WSDOT's Intelligent Transportation Systems inventory

Number of devices/sites in the statewide inventory, 2007-2010

	Number of devices or sites each year				
Device type	**2007**	**2008**	**2009**	**2010**	**Approximate cost per device/site**
Closed circuit television cameras[1]	521	542	555	699	$15,000-$30,000
Variable message signs[1]	179	181	186	201	$100,000 - 250,000
Highway advisory radio transmitters[2]	64	68	70	82	$50,000
Road/Weather information systems	94	97	100	105	$25,000-$50,000
Metered ramps	137	137	143	154	$10,000-$100,000[3]
Traffic data stations	530	554	565	639	$10,000-$20,000
Smarter Highway gantries[4]	0	0	25	53	$650,000 - $900,000

Data source: WSDOT Traffic Operations Office.

Data notes: 1 Some local cities and counties pay WSDOT to maintain their closed circuit televisions and variable message signs; for 2007, figures included both WSDOT-owned and WSDOT-maintained elements, 2008-2010 figures include only WSDOT-owned elements.
2 Six highway advisory radio transmitters were miscategorized and included in the previous reports for 2007-2009. The figures above are correct.
3 This represents the cost of one ramp meter device; there may be multiple ramp meters on one ramp.
4 Gantries include electronic message and speed signs.

Mobility
(Congestion Relief)

Statewide policy goal

To improve the predictable movement of goods and people throughout the state.

WSDOT's business direction

To move people, goods, and services reliably, safely, and efficiently, by adding infrastructure capacity strategically, operating transportation systems efficiently, and managing demand effectively.

In this section

See also

Special Report: Federal Recovery Act-funded Projects 34

Quarterly Report on Capital Projects (Beige Pages) 39

New Ferry Construction 60

Earlier articles concerned with mobility

Commute Options Annual Report, GNB 38

Travel Times Six Month Update, GNB 38

Trucks, Goods & Freight Annual Report, GNB 37

CVISN, GNB 37

Measuring Delay and Congestion Annual Report

Executive Summary of Measures and Results

Highlights from the 2010 Annual Congestion Report

Individuals drove 300 miles less during 2009 in Washington with per capita vehicle miles traveled declining by 4% since 2007.

Statewide vehicle hours of delay declined by 21% between 2007 and 2009, saving Washington drivers and businesses an estimated $159 million in lost productivity due to delay.

In 2009, less of the highway system was congested than in 2007 (5.6% in 2007 vs 5.2% in 2009). In terms of real numbers, 950 of 18,260 lane miles were congested in 2009.

Vehicle hours of delay on major Puget Sound corridors declined by 38% between 2007 and 2009.

Travel times and reliability improved on most of the 38 tracked high demand commute routes in the Puget Sound: average travel times improved on 31 commute routes and reliable travel times improved on 28 routes. The duration of the congested period decreased on 34 of the commute routes.

Moving Washington projects are being implemented at strategic locations on the state highway system to help fight congestion.

Congestion on Washington State's highways decreased in 2009 compared to 2007. Travelers spent an average of an hour less in congestion. Delay on some of the most heavily traveled Puget Sound corridors was reduced by 38%. Much of this decline is due to the combination of factors including the economic recession and WSDOT's congestion relief project and strategies.

WSDOT continues to fight congestion aggressively through Moving Washington – a three-pronged strategy comprised of operating the transportation system efficiently, managing travel demand, and strategically adding capacity by delivering projects. These three strategies are having an impact, and are improving travel for Washington drivers:

- **Operating the existing system efficiently** Low cost high benefit strategies include dynamic travel time signs with route choices, variable message signs, signal retiming, arterial signal coordination, ramp metering, etc. Advanced ITS techniques such as Smarter Highways (Active Traffic Management), High Occupancy Tolling projects, and the Incident Response program, contribute to the existing transportation infrastructure so it can operate more efficiently.
- **Managing travel demand** Strategies including vanpools, Commute Trip Reduction, and Growth and Transportation Efficiency Centers (GTECs) all encourage drivers to use less congested routes and reduce trips driving alone.
- **Adding capacity** By September 30, 2010, WSDOT had completed 70 congestion relief projects funded through the 2003 and 2005 gas tax packages valued at $2.4 billion. These projects are reducing the time that Washington drivers spent in traffic. For example, the I-405 South Bellevue widening project improved travel times by 16 minutes during the morning peak period in 2009 compared to 2007.

As the economy improves, it will be accompanied by increased travel demand. WSDOT stands ready to address these challenges. Looking to the future, major congestion relief projects, including the Alaskan Way Viaduct, SR 520 Floating Bridge, Columbia River Crossing, and projects in the I-405 Corridor Program, remain to be delivered. Smarter highways, using technologies such as active traffic management, will be implemented on more miles of the central Puget Sound region's busiest corridors. This technology was introduced onto I-5 in August 2010 and is scheduled to be implemented on SR 520 and I-90 in November 2010 and spring 2011 respectively. Next year's annual Congestion Report will report on the benefits of these improvements and how they have affected system performance.

Congestion Report Dashboard of Indicators

2010 Congestion Report Dashboard of Indicators	2006	2007	2008[5]	2009	Difference 2007 vs. 2009*
Demographic and economic indicators					
State population (millions)	6.4	6.5	6.6	6.7	+2.8%
Average gas price per gallon (July)	$3.08	$3.05	$4.36	$2.81	-7.9%
Unemployment rate (annual)	4.9%	4.6%	5.4%	8.9%	+4.3%
Rate of annual economic growth[1]	2.8%	4.4%	2.0%	N/A	N/A
Real personal income (billions)[1]	245.3	256.8	259.9	257.3	+0.2%
Systemwide congestion indicators					
Less travel					
Statewide vehicle miles traveled (VMT), in billions	56.5	57.0	55.6	56.5	-0.9%
Statewide per capita VMT, in miles	8,867	8,779	8,440	8,467	-3.6%
Less of the system congested					
Lane miles of state highway system congested[3]	1,030	1,011	930	950	-6.0%
Percent of state highway system congested[3]	5.7%	5.6%	5.2%	5.2%	-0.4%
Less delay					
Total vehicle hours of delay on state highways, in millions of hours[2]	37	32	32	25	-21%
Annual hours of per capita delay on state highways[2]	5.7	4.9	4.8	3.8	-22%
Reduced costs (2009 dollars in millions)					
Estimated economic costs of delay on state highways[2,6]	$878	$767	$762	$608	-21%
Corridor-specific congestion indicators					
Congestion on 38 high-demand commute routes in the central Puget Sound (compared to two years earlier)					
Number of routes where the duration of the congested period improved[4]	1	8	31	34	N/A
Number of routes where average peak travel time improved	3	9	30	31	N/A
Number of routes where 95% reliable travel time improved	2	10	26	28	N/A
WSDOT congestion relief projects					
Number of completed Nickel and TPA mobility projects as of September 30th of each year (cumulative)	12	34	46	70	36
Cumulative project value (dollars in millions)	$172	$708	$1,154	$2,400	$1,692

Data sources include: WSDOT, Office of Financial Management; Economic and Revenue Forecast Council; Bureau of Economic Analysis, U.S. Department of Energy - Energy Information Administration; Bureau of Labor Statistics – Consumer Price Index.

***Note:** Analysis in the Congestion Report examines 2007 and 2009 annual data, to more accurately capture congestion trends. 2006 and 2008 data is provided for information only. **1** Real Gross Domestic Product for Washington is measured in chained 2000 dollars. Real personal income for Washington is measured in chained 2005 dollars. **2** Based on maximum throughput speed thresholds (85% of posted speed). **3** Based on below 70% of posted speed; see page 14 for an explanation on lane miles. **4** For central Puget Sound Corridors, duration of congestion is calculated with 45 mph as threshold. **5** 2008 data not available for four of the 38 routes. For more information see gray box on p. 15 of the 2009 Annual Congestion Report. **6** Inflation adjusted through the Consumer Price Index.

Measuring Delay and Congestion Annual Report

Executive Summary of Measures and Results

The 2010 annual Congestion Report examines 2009 calendar year data focusing on the most traveled commute routes in the central Puget Sound region, and where data are available around the state. The Congestion Report's detailed analysis shows where and how much congestion occurs, and the trends on the state highway system.

Economic recession, and WSDOT's Moving Washington projects and strategies, helped reduce congestion in 2009

The dynamics of the economic recession, and the completion of numerous WSDOT Moving Washington projects helped reduce congestion on state highways in 2009. Overall, individuals in Washington traveled over 300 miles less in 2009 compared to 2007 with per capita vehicle miles traveled (VMT) dropping from 8,779 miles to 8,467 miles.

Statewide, travel delay on state highways declined by roughly 21% in 2009 compared to 2007. On major Puget Sound corridors travel delay was reduced by 38%. Commute times and reliability also improved on most of the tracked high-demand commute routes in the central Puget Sound.

This summary provides a menu of measures to readers of the annual Congestion Report that are elaborated on in greater detail in the full report. The page numbers shown in this executive summary refer to the full analyses on each measure topic in the annual Congestion Report.

2010 Congestion Report Executive Summary of measures and results

 Trend is moving in a favorable direction.

 Trend is holding.

 Trend is moving in an unfavorable direction.

	Trend		Page in main Report
Statewide indicators: Percent system congested, Hours of delay, and vehicle miles traveled			
Total statewide delay Statewide delays, relative to posted speeds and maximum throughput speeds (70%-85% of posted speed), decreased by 15% and 21% respectively. The reduction in delays indicates that many highways across the state became less congested between 2007 and 2009.	Total statewide vehicle hours of delay declined by 21% relative to maximum throughput speeds.		13
Per capita delay On a statewide per capita basis, between 2007 and 2009, delay was reduced from about 4.9 hours per person per year to 3.8 hours per person per year, as measured using maximum throughput speeds.	Per capita delay declined by 22% between 2007 and 2009 relative to maximum throughput speed.		13
Percent of the system congested Roughly 5.6% of state highways (in lane miles) were congested in 2007, meaning they dropped below 70% of posted speeds. This measure dropped to 5.2% in 2009, mirroring the decrease in travel seen throughout the country. As expected, most of the congested state highways are in urban areas.	Percent of state highways that are congested show a .4% decrease from 2007 (5.6%) to 2009 (5.2%).		14
Vehicle miles traveled (VMT) Total VMT on all public roads dropped by 0.9% between 2007 and 2009 while it increased by 1.8% between 2008 and 2009. VMT on state highways dropped by 1.6% between 2007 and 2009 while it increased by 2.3% between 2008 and 2009. Associated with this, statewide (all public roads) per capita VMT dropped by 3.6% between 2007 and 2009 while improving by 0.3% between 2008 and 2009.	Per capita VMT on all public roadways declined by 3.6% between 2007 and 2009.		14
Central Puget Sound corridors: Hours of delay and vehicle miles traveled			
Vehicle hours of delay on major central Puget Sound corridors Between 2007 and 2009, vehicle hours of delay relative to the posted speeds (60 mph) and maximum throughput speeds decreased by approximately 27% and 38% respectively. All surveyed corridors saw reduced delay.	Travel delay dropped by 38% relative to maximum throughput speeds.		15
Vehicle miles traveled (VMT) dropped overall in the central Puget Sound in 2009. On the selected major Puget Sound corridors, VMT dropped by 0.3% in 2009 compared to 2007. The steepest drop was over 4% seen on I-90 while VMT on I-5 dropped the least at 0.6%.	VMT dropped by 0.3% in 2009 compared to 2007.		15
Central Puget Sound corridors: Throughput productivity			
Throughput productivity compares the observed average vehicle flow (vehicles per hour per lane – vphpl) for a selected location to the observed highest average five minute vehicle flow at that location. All eight selected Puget Sound monitoring locations show improvements in vehicle throughput from 2007 to 2009. I-405 at SR 169 in Renton continues to experience the greatest loss in productivity, as congested conditions result in a 38% reduction in vehicle throughput during the morning peak period in 2009.	All eight locations saw improvements in throughput productivity between 2007 and 2009.		16

Executive Summary of Measures and Results

2010 Congestion Report Executive Summary of measures and results

 Trend is moving in a favorable direction.

 Trend is holding.

 Trend is moving in an unfavorable direction.

	Trend		Page in main Report
Travel times analysis: High demand Puget Sound commute routes			
Average peak travel times improved on 31 of the 38 surveyed high demand commute routes between 2007 and 2009, with improvements ranging from one to 16 minutes. Average travel times increased on three SR 520 EB evening commutes by several minutes (Seattle to Bellevue, Seattle to Redmond, and Bellevue to Redmond) during the same period and remained unchanged on four.	Average peak travel times improved on 31 commutes, remained the same on 4, and became worse on 3 when comparing 2009 to 2007.		18
Duration of congested period The duration of congestion—defined as the period of time in which average speeds fall below 45 mph—improved on 34 routes between 2007 and 2009 with improvements ranging from 15 minutes to 3 hours 20 minutes. One route did not show a |change in the duration of congestion, and three routes do not have average speeds fall under the 45 mph threshold.	Duration of congestion improved on 34 commutes, remained the same on 1, no congestion on 3 when comparing 2009 to 2007.		18
95% reliable travel times Between 2007 and 2009, 28 of the 38 high demand commutes saw improvements in 95% reliable travel time, with improvements ranging from 1 to 21 minutes. Six commutes saw reliable travel times worsen between one and six minutes, while reliable travel times remained unchanged on four commutes.	Reliable travel times improved on 28 commutes, remained the same on 4, and became worse on 6 when comparing 2009 to 2007.		27
Additional performance analyses for the high demand Puget Sound commute routes			
Range of percentiles reliability analysis Reliability percentile analysis looks at travel times at the 50th percentile (median), 80th percentile, 90th percentile, and 95th percentile values for the 38 high demand routes. The percentile analysis also provides a way to track changes in travel times over the years at a finer level, in order to evaluate operational improvements.			27
Percentage of days when speeds were less than 35 mph — Stamp graphs The most visual evidence of peak periods improving in 2009 can be seen in the graphs on pages 31-32. These 'stamp graphs,' comparing 2007 and 2009 data, show the percentage of days annually that observed speeds are at or below 35 mph (severe congestion).			30
Travel time comparison graphs The bar graphs on pp. 44-46 show four of the travel time performance indicators during the peak five minutes interval for weekday: travel times at posted speeds, travel time at maximum throughput speeds (50mph), average peak five minute travel times, and 95% reliable travel times. For each of the surveyed high-demand commutes general purpose (GP) and HOV travel times are shown. The graphs also illustrate the travel time advantages HOV lane users have compared to GP lane users.			44
Travel time analysis: 14 additional Puget Sound commutes			
In addition to the high demand commute routes, WSDOT tracks 14 other commutes in the central Puget Sound where data are available. Average travel times for nine of these 14 routes improved by 1 to 4 minutes between 2007 and 2009. Three routes showed an increase in average travel times with two unchanged in 2009 compared to 2007. In terms of the 95% reliable travel time, seven of the routes saw improvements in travel times ranging from 1 and 8 minutes between 2007 and 2009, with five getting worse by couple of minutes while the remaining two show no change.	95% reliable travel times improved on 7 of 14 commutes, remained the same on 2, and became worse on 5 between 2007 and 2009.		33
Travel time analysis: Spokane commutes			
For 2009, Incidents remain the major cause of delay in the corridor. The significant reduction in 95% reliable travel time can be attributed to higher than normal travel times documented in 2007 due to a major I-90 construction project. Reliable travel times for Spokane remain good, being less than 1 minute than travel times at posted speeds. Spokane traffic volumes on I-90 decreased this past year with a peak flow near Altamont Street of 109,000 vehicles per day. This is a decrease of 4.4% since 2007. An overall decrease was measured not only in volume but also vehicle miles traveled which decreased by 7% during the peak periods in 2009 as compared to 2007.	Average peak travel time decreased on both routes. Reliable travel times also decreased on both tracked Spokane commutes.		34

Measuring Delay and Congestion Annual Report

Executive Summary of Measures and Results

2010 Congestion Report Executive Summary of measures and results

 Trend is moving in a favorable direction.  Trend is holding.  Trend is moving in an unfavorable direction.

	Trend	Page in main Report
HOV lane performance		
HOV Lane reliability standard The reliability standard requires the HOV lane to maintain a speed of 45 mph for 90% of the peak hour. In 2007, five of 14 HOV commute corridors met the reliability standard; eight of 14 HOV commute corridors met the reliability standard in 2009. Of the six that did not, five of the seven evening peak commutes have such high traffic volumes that the corridors are below the HOV performance standard; one of the seven morning peak commutes is also below the performance standard.	8 of 14 HOV commute corridors met the reliability standard in 2009. 	35
Person throughput Most HOV lanes continue to be more effective at moving more people during peak periods than general purpose (GP) lanes. At the monitoring locations, the average HOV lane carries about 33% of the people on the freeway in the morning and evening peak periods. At six of the ten monitoring locations HOV lanes move more people than adjacent GP lanes.	In 2007, HOV lanes carried more people than average GP lanes at 8 of 10 monitoring locations; in 2009 it was 6 of 10. 	37
HOV Lane travel times Average travel times and 95% reliable travel times are almost always faster in HOV lanes than in general purpose (GP) lanes. In 2009 average HOV lane travel times beat GP lane travel times on 39 out of 48 routes. Forty-four HOV routes provide better reliability (95% reliable travel time) than their general purpose lane counterparts.	In terms of average travel time, HOV lanes are faster than GP lanes in 39 of 48 routes. 	38
On-going tracking of performance for operational strategies		
NEW Operate efficiently: Incident Response (IR) annual report This year's Congestion Report introduces an annual look at the 2007 and 2009 data. This articles introduces the refined definitions for incident classification, and presents new research addressing congestion caused by incidents.		50

Incident Response Quarterly Update

The mission of WSDOT's Incident Response (IR) Program is the safe, quick clearance of traffic incidents on state highways. IR minimizes traffic congestion and restores traffic flow by removing dangerous traffic blockages that can lead to secondary collisions. IR roving units operate during peak traffic periods, offering a variety of motorist assistance services such as providing fuel and jump starts, changing flat tires, and moving disabled vehicles safely off the roadway reducing motorists' exposure to risk.

IR responders are trained and equipped to assist Washington State Patrol (WSP) troopers at collisions and other traffic emergencies. Available for call out 24/7, IR units assist WSP with traffic control, mobile communications, clean-up, and other incident clearance functions as needed during major incidents. More information on the IR program can be found at www.wsdot.wa.gov/Operations/IncidentResponse/.

Incident Response Highlights:

In Q3 2010, the program cleared 12,444 incidents, 3.9% more incidents than responded to in Q2 2010.

The average incident clearance time in Q3 2010 was 12.4 minutes.

The average duration of over-90-minute incidents in Q3 2010 was 154.

WSDOT's Incident Response team cleared more incidents in Q3 2010

In the third quarter of 2010 WSDOT's IR teams responded to 12,444 incidents, 3.9% more than last quarter's 11,974 incidents. This is 4.2% more responses than the 11,943 incidents in the third quarter of 2009. The statewide average clearance time for all incidents in the third quarter of 2010 was 12.4 minutes, 3.3% longer than last quarter's average clearance time of 12.0 minutes. This is a 3.9% improvement over the 12.9 minutes average clearance time in the third quarter of 2009.

More time taken to clear fatality incidents

Fatality data for Washington shows that the number of traffic fatalities continues to be at its lowest in four years as of October 1, 2010. (See the graph on page 14, the table below.)

In the third quarter of 2010, the IR team responded to 21 fatality incidents, with an average clearance time of 207 minutes. This is 10.1% longer than last quarter's clearance time of 188 minutes, and a 1.4% improvement from the average time of 210 minutes in the same quarter of 2009. The range for quarterly fatality response durations between 2008 and 2010 has been 162-242 minutes; this quarter is at about the midpoint of that range.

Annual Washington traffic fatalities statewide

As of October 1, 2007-2010

Reporting date	Fatalities recorded in FARS*
10/1/2007	407
10/1/2008	383
10/1/2009	344
10/1/2010	315

*Data source: Washington Traffic Safety Commission – Fatality Analysis and Reporting System (FARS).

Number of incidents responded to by Incident Response program

July 1, 2009-September 30, 2010

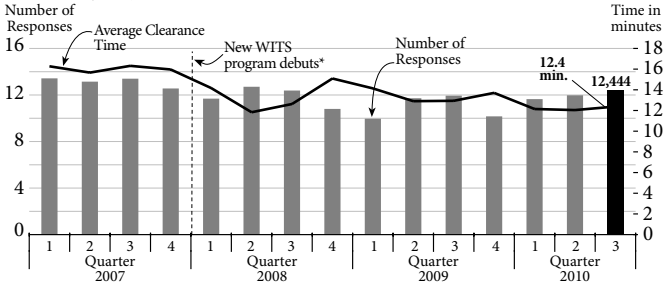
Quarter	# of incidents
Q3 (July 1 – September 30) 2010	12,444
Q2 (April 1 - June 30) 2010	11,974
Q1 (January 1 - March 31) 2010	11,644
Q4 (October 1 - December 31) 2009	10,163
Q3 (July 1 - September 30) 2009	11,943

Source: WSDOT Traffic Office's Washington Incident Tracking System.

Number of responses and overall clearance time

January 1, 2007 - September 30, 2010

Number of responses in thousands, clearance time in minutes



Data Source: Washington Incident ResponseTracking System, WSDOT Traffic Office.

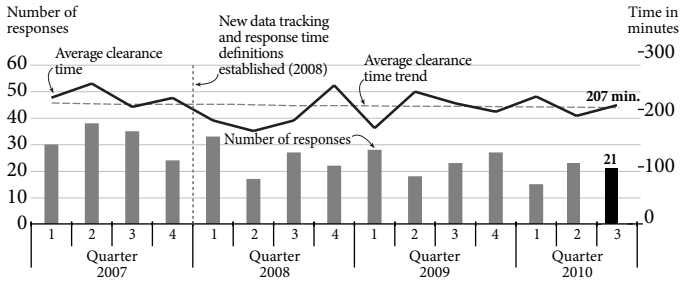
*Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, the number of responses by IRT are shown. From Q3 2003 to Q2 2007, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total. From Q1 2002 to Q4 2007, Average Clearance Time do not include "Unable-to-Locate" (UTL) responses into calculation. Average number of responses does include UTLs, because this represents work performed on behalf of the Incident Response Program. In Q1 2008, WSDOT's Incident Response Program moved to a new database system and began calculating average clearance time in a different way. This accounts for the apparent decrease in the average clearance time value.

Incident Response Quarterly Update

Fatality Incidents, Over-90-Minute Incidents

Number of responses and average clearance time of fatality collisions

January 1, 2007 - September 30, 2010



Data source: Washington Incident Tracking System, WSDOT Traffic Office.

Note: In Q1 2008, WSDOT's Incident Response Program moved to a new database system and began calculating average clearance time in a different way. This accounts for the apparent decrease in the average clearance time value.

WSP and WSDOT target reductions in duration of over-90-minute incidents

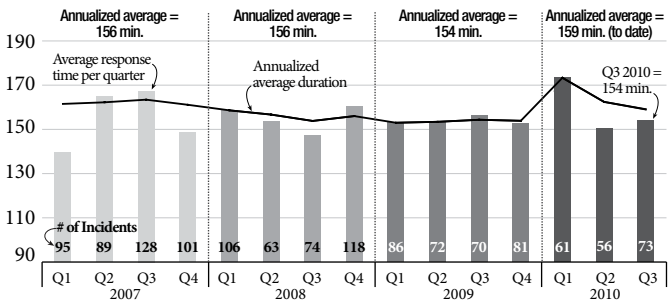
WSDOT and WSP have a formal agreement to clear incidents in 90 minutes or less, if possible, although incidents with complicating factors may require more time to clear. Through her Government, Management, Accountability and Performance (GMAP) program, Governor Gregoire charged the two agencies with lowering the average duration of these over-90-minute incidents, on nine key highways in the Puget Sound.

In 2009, the two agencies made the GMAP goal of 155 minutes, with the average annual duration for GMAP incidents coming in at 154 minutes. The annual average clearance time in 2007 was 156 minutes. This number has been incorrectly reported as 161 minutes in the previous GNB editions. In 2007, and 2008, the 155 minute clearance goal was missed by one minute.

Progress toward the goal for reducing average clearance times for over-90-minute incidents on the nine key western Washington highway segments

January 1, 2007 - September 30, 2010

Number of responses per quarter vs. annualized average duration in minutes



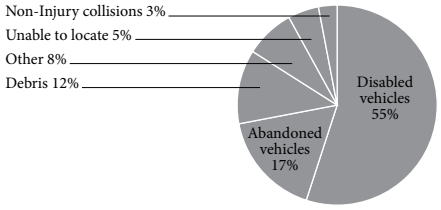
Data source: Washington State Patrol and WSDOT Traffic Office.

Number and percentage of responses by category

Q3, July 1, 2010 - September 30, 2010; 12,444 incidents

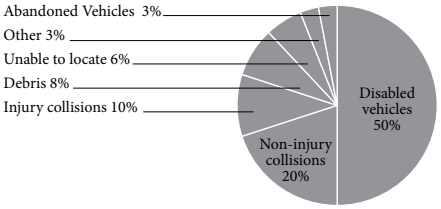
Incidents lasting less than 15 minutes (9,496)

Injury, and Police Activity were less than 1% (not shown). There were 20 Fires and 6 Hazardous Materials events involved incidents in addition to or as a result of above incidents. 17 incidents involved WSDOT property damage, and 140 were located in work zones.



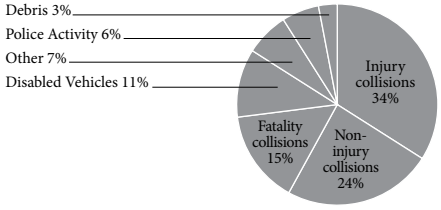
Incidents lasting 15 to 90 minutes (2,826)

Police Activity and Fatality collisions were less than 1% (not shown). There were 543 Fire, and 0 Hazardous Materials involved incidents in addition to or as a result of above incidents. 481 incidents involved WSDOT property damage, and 240 were located in work zones.



Incidents lasting 90 minutes and longer (122)

There were 339 Hazardous Materials and 221 Fire involved incidents in addition to or as a result of above incidents. 578 incidents involved WSDOT property damage, and 237 were located in work zones.



Data source: WITS, WSDOT Traffic Office.

Average duration of over-90-minute incidents increased to 154 minutes in Q3 2010

During the third quarter of 2010, 73 over-90-minute incidents occurred on the nine key routes, producing an average duration of 154 minutes for the quarter. This duration is three minutes longer than the 151 minutes recorded in the second quarter 2010, bringing the annualized average to-date for 2010 to 159 minutes.

Extraordinary incidents in this quarter: Semi-truck roll-over blocks I-5 in Federal Way for almost 12 hours

This quarter had one extraordinary (6+ hour) incident that lasted eleven and a half hours. On September 21 at 10:16 pm, three semi-trucks headed southbound on I-5 were involved in an injury collision in Federal Way (MP 148). Because one truck was a fuel trailer hauling 11,000 gallons of volatile liquid, the accident had the potential to cause a major explosion. Consequently, the entire southbound roadway was closed to ensure public safety. Complicating the recovery, the semi-tractor's own fuel tanks were leaking slightly, and responders had to take precautions to prevent fuel spilling into an area with open waterways.

This incident required an extraordinary number of responders; 15 different federal, state, and local agencies were on the scene, including 18 fire and EMS vehicles from four separate regional

Extraordinary Incident, Program Review

agencies and SeaTac Airport, the U.S. Coast Guard's National Response Center (specializing in oil and chemical spills), WSP investigators, WSDOT Incident Response teams, the Washington State Department of Ecology, and four tow companies, among others. WSP and WSDOT's Major Incident Tow (MIT) program was activated.

The responders had to safely empty the fuel tanks, attend to the injured, clean up the spilled fuel, and remove the disabled semis. The rolled tankers could not be righted without potentially puncturing the tanks; the National Response Center clean-up team drilled holes in the tanks to transfer the liquids to another fuel trailer, a slow and careful process to ensure that it would not ignite and explode. Since the trailers had been compartmentalized to carry different grades of fuel, the team had to drill holes into four separate tanker chambers.

Lanes were not fully re-opened until 9:45 am the next day, September 22. This seriously disrupted the morning commute, as traffic was detoured to parallel routes such as SR 167 and SR 99. This was the only extraordinary (6+ hour) incident of the quarter. Without this incident, the average clearance time for Quarter 3 would have dropped from 154 minutes to 146 minutes.

WSDOT and WSP conduct a review of nationally-recognized best practices in incident response

WSDOT and WSP monitor these incidents throughout the year as the agencies continue to strive for the 90-minute average clearance time goal. Both agencies conducted a review of nationally-recognized best practices in incident response that examined the factors influencing clearance times. This review was presented to the Governor during the Transportation GMAP forum in September 2010.

The results of the review showed that WSDOT and WSP operate robust incident response programs that utilize all nationally-recognized best practices. The review also revealed four areas for improvement (see table below).

Best practice improvement areas for WSDOT Incident Response program

Improvement area	Recommended actions (by July 2011)
1. Provide multi-disciplinary statewide and regional coordination and training across agencies.	• *Enhance incident management trainings and quarterly meetings in King County (pilot project area) to strengthen partnerships, seamless communication, collaboration, and coordination.* • *Coordinate and host regularly scheduled incident debriefings, and encourage all state and local responder partners to attend and participate.*
2. Develop performance measures and goals and measure progress.	• *Enhance data collection and analysis to better understand factors influencing response and clearance times within King County (pilot project area) and identify improvement opportunities. Key reports that will be enhanced include After Action Reports, Investigation Reports, and Police Traffic Collision Reports.* • *All WSP Troopers who respond to major incidents in the pilot project area will be required to complete an Enhanced Investigation Report. (See Next Steps below.)* • *WSP will work with WSDOT to determine the type and format of data to be collected, and to process and analyze information from the reports.*
3. Use best-available technology to facilitate rapid and coordinated response and clearance, including communications, traffic control, investigations, and traveler information.	• *WSDOT will continue to enhance its use of Intelligent Transportation and Traveler Information Systems, as part of its Smarter Highways Initiative (see pp.48-49 of the 2010 Congestion Report), to mitigate congestion and manage traffic associated with incidents.*
4. Develop interoperable voice and data networks	• *WSP will continue to install the Statewide Electronic Collision and Ticket Online Records System (SECTOR) into patrol vehicles. SECTOR is the in-vehicle computer application that enables scanning driver's licenses and registration bar codes in the field, and creating and submitting tickets and collision reports electronically. The "quick capture" scanning feature of SECTOR provides expeditious on-scene data capture.*
Next steps	
Establish a one year pilot program in King County to improve response and clearance times for major incidents. The pilot program will include the actions noted above, consistent with the four elements identified for improvement in the best practices review. Note: In 2009, 51% of the major incidents tracked for GMAP occurred in King County.	• Pilot project start date: July 2010 • Pilot project end date: July 2011 • Interim report: January 2011 • Final report: no later than January 2012

Incident Response Quarterly Update

Improved Program Performance Measures

WSDOT refines its definitions of incidents

WSDOT and the Washington State Patrol, together with many other public safety and private sector professionals, have worked cooperatively to safely and efficiently clear traffic incidents and incident-related debris from the state highway system to reduce congestion, improve safety and increase traffic operations efficiency.

Traffic incidents have been identified as a major contributor to non-recurring traffic congestion. Traffic incidents account for 46% of all non-recurring congestion. For each of the different causes, whether recurring or non-recurring, there are strategies to reduce congestion.

Incident Response and performance measurements

The IR Program is a congestion reducing strategy that targets the largest contributor to non-recurring traffic congestion – traffic incidents. The motto of the IR program is "Clearing Roads. Helping Drivers." By reducing the number of traffic incidents and the time associated with clearing those incidents the IR program has a significant impact on traffic congestion, as well as improving the safety of the traveling public. Nationally recognized traffic incident management performance measures include:

- **Roadway clearance time** This interval is defined as the time between the first recordable awareness of an incident (detection, notification, or verification) by a responding agency and first confirmation that all lanes are available for traffic flow.
- **Incident clearance time** This interval is defined as the time between the first recordable awareness of the incident and the time at which the last responder has left the scene.

These are important measures in tracking incident response performance, and WSDOT will be using both to report its performance on incident response in future *Gray Notebooks*.

The difficulty with incident response performance measurement is the definition of an incident is broad. It is easy to identify those capacity-reducing, lane-blocking incidents such as vehicle crashes, stalled vehicles, and roadway debris, but equally important are the abandoned or disabled vehicles on the shoulder causing a distraction and potentially being involved in a struck-by incident. In an attempt to capture the complexity of the work of the IR program WSDOT has identified two general types of incidents – Blocking and Non-blocking.

Emergency/Blocking incidents may be related to traffic (such as a blocking collision, stalled or disabled vehicle, or debris in the travel portion of a roadway) or unrelated to traffic (such as natural disasters, severe weather conditions affecting traffic operations, etc.). These incidents involve life safety, whether due to the nature of the incident or because a travel lane is blocked and creating the risk of a secondary collision.

Non-blocking incidents are any incidents that do not block a travel lane but may constitute a hazard or be a distraction to other motorists. Non-blocking incidents can either be unplanned events (such as a disabled vehicle on shoulder, or a motorist parked on the shoulder using a cell phone) or planned events (such as parades or funeral processions). While not an immediate danger, these incidents are distractions and create a degree of risk for the individuals involved and for passing motorists, and require attention.

Emergency/Blocking & Non-blocking incidents 2009 Program review

WSDOT plans to enhance its reporting by identifying incident types as either Emergency/Blocking ("clearing roads") or Non-blocking ("helping drivers"). In 2009, there were 10,257 (23.4%) Emergency/Blocking responses and 33,529 (76.6%) Non-blocking responses, totaling 43,786 incidents.

Of the 10,257 Emergency/Blocking ("clearing roads") responses, 10,190 (99.3%) were traffic-related incidents, leaving 67 (0.7%) as non-traffic incidents. Emergency/Blocking traffic-related incidents tend to have one or more travel lanes blocked and usually involve critical life safety issues. Emergency non-traffic-related incidents include such events as pedestrians on the highway, search and rescue operations, brush fires, or other natural disasters.

For the "helping drivers" non-blocking incidents in 2009, 31,898 (95.1%) were unplanned events (such as abandoned and disabled vehicles or contacts with motorists who appeared to need assistance, but were on the phone or resting). Non-injury collisions that do not block the road also fall into this category. Planned events often involved traffic control responsibilities at such events as funerals processions, parades, or other civic events. There were 1,631 planned events in 2009, 4.9% of all non-blocking responses.

In 2009 the average incident clearance time for all 43,786 incidents was 13.4 minutes, and the average roadway clearance time when roads were blocked was 19.6 minutes.

Washington State Ferries Quarterly Update

Ridership and Farebox Revenues

Washington State Ferries (WSF) serves as both an extension of the state's highway system and as a regional mass-transit provider. It provides a critical link to communities separated by water or longer driving distances, and is essential to the movement of goods and people in the Puget Sound region. It is the largest operating auto-ferry fleet in the world, carrying 10 million vehicles and nearly 23 million ferry passengers each year.

Ridership and farebox revenues now reported on a quarterly basis

In past editions of the *Gray Notebook*, ridership and farebox revenues were presented by month, comparing actuals and projections for two consecutive fiscal years (FY). While this comparison was helpful in showing the month-to-month variations in ridership and farebox revenue, it obscured the seasonal nature of WSF travel patterns. In *Gray Notebook 39,* these two measures compare the first fiscal quarter (Q1) of 2011 with the same fiscal quarter in earlier years to provide a direct comparison that accounts for seasonality and provides a more accurate look at overall trends in these areas.

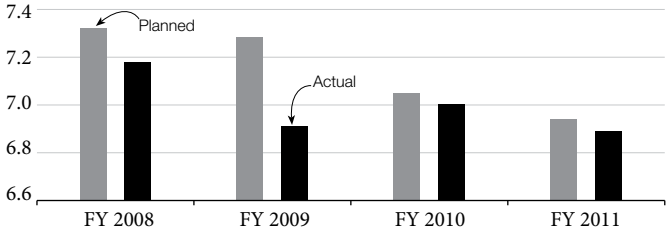
Ridership remains below projected levels

For the first quarter of fiscal year 2011 (July 1–September 30), 6.9 million people traveled on the Ferry system, about 53,000 (less than 1%) below the levels projected in June 2010. Compared to the same quarter one year ago, WSF served 114,000 fewer riders, a drop of slightly less than 2%.

Analysis across four years for the same fiscal quarter shows that WSF ridership projections are becoming more accurate over time: differences between planned and actual ridership decrease dramatically in FY 2010 and FY 2011.

Ferries planned and actual annual ridership

First quarter (July 1 - September 30), Fiscal Years 2008-2011
Ridership in millions



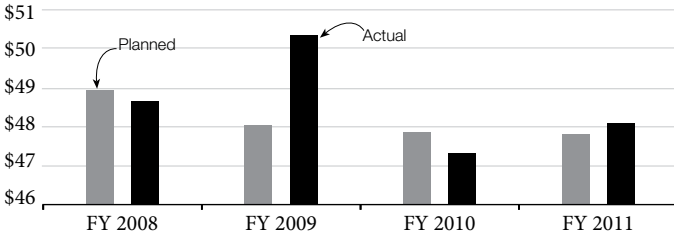
Data Source: WSDOT Ferries Division.

Farebox revenues are above projected levels

For the first quarter of FY 2011, farebox revenue was $48.1 million, $343,000 more than forecast in June 2010. Farebox revenues were 1.7% higher ($812,000) than the same quarter last year.

Ferries planned and actual farebox revenue

First quarter (July 1 - September 30), Fiscal Years 2008 to 2011
Dollars in millions



Data source: WSDOT Ferries Division.
Data note: Revenue dollars are farebox only and do not include other operating revenues.
Note: The large difference between FY2009 actual and projected revenue is due to a WSF accounting prior-period adjustment in July 2009. See *Gray Notebook 31* for more details.

Washington State Ferries Highlights

Service reliability improved, with 138 missed trips vs. 239 in the first quarter of FY 2010. System average reliability was 99.7%.

Farebox revenues were $48.1 million, or about $343,000 higher than projected.

On-time performance worsened slightly, with 83% of sailings "on-time" vs. 86% in the first quarter of FY 2010.

Total complaints increased this quarter to 8.3 per 100,000 customers, an increase of 2.5 per 100,000. 14% of the increase was due to a galley closure on the Hyak.

Following a request by the Governor, WSF was the subject of a Passenger Vessel Association (PVA) study this quarter. The PVA produced a report outlining 36 recommendations. In November 2010, WSF will present the Governor with an action plan to address the PVA recommendations.

For more information on Ferries Division reform, visit: wsdot.wa.gov/ferries/accountability.

Washington State Ferries Quarterly Update

Farebox Recovery / Service Reliability

Farebox recovery increased between FY 2009 and FY 2010
Farebox recovery is the percentage of operating costs supported by farebox revenues. This measure is more meaningful on an annual basis due to timing of payments for operating expenses, which are not spread evenly across the year. Farebox recovery improved from a level of 63.8% in FY 2009 (farebox only) to 70.5% in FY 2010. When other miscellaneous revenues were counted (concessions, advertising, galleys, etc.), the total revenue recovery rate went up from 65.3% in FY 2009 to 72% in FY 2010. The balance was paid primarily from a portion of the gas tax, motor vehicle registration and combined licensing fees, and a subsidy from the state Motor Vehicle fund.

Service Reliability

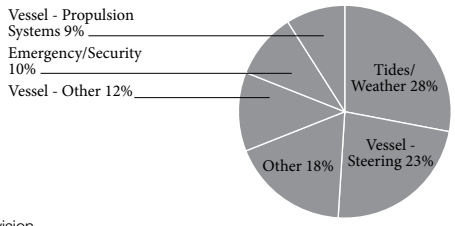
Fewer trips were missed than same quarter a year ago

The number of missed trips in the first quarter of FY 2011 was about half of the missed trips in the first quarter of FY 2010, 138 vs. 239. In the first quarter of FY 2011, 42,253 regular service trips were scheduled. Of those trips, 167 were cancelled and 29 were replaced, resulting in a total of 42,115 trips during the quarter (42,253 scheduled – 167 cancelled + 29 replacement trips = 42,115 net trips).

Trips are cancelled for a variety of reasons, including tide and weather conditions, mechanical problems with vessels or terminals, and cancellations arising when a ferry is diverted for emergency transport. Trips are also missed when vessels fall too far behind the published schedule to make all the trips for that day.

Compared to the first quarter of FY 2010, there were 76 fewer emergency/security cancellations and 42 fewer cancellations because of mechanical problems. There were also 20 fewer cancellations due to tides and weather, and no cancellations because of terminal problems compared to 12 in the first quarter of FY 2010.

Reasons for missed trips
First quarter (July 1 - September 30), Fiscal Year 2011



Data source: WSDOT Ferries Division.
Data Note: Most trips categorized as "other" did not fit the usual trip cancellation categories. 21 cancellations occurred to maintain schedules because of peak loading issues; 11 trips were missed due to dispatch/crewing issues; 10 trips were due to domino effects of mechanical problems with another vessel; three trips were missed due to train/pedestrian issues and a priority loading event; two cancellations occurred from the impact of medical evacuations, and other reasons.

Washington State Ferries missed-trip reliability comparison

	First quarter (July 1 - September 30) Fiscal Year 2010			First quarter (July 1 - September 30) Fiscal Year 2011		
Route	Number of planned trips	Number of missed trips[1]	Overall reliability average[2]	Number of planned trips	Number of missed trips[1]	Overall reliability average[2]
San Juan Domestic	7,428	39	99.5%	7,593	24	99.7%
International Route (Sidney, BC)	536	0	100.0%	358	0	100.0%
Edmonds - Kingston	4,626	33	99.3%	4,308	18	99.6%
Fauntleroy - Vashon - Southworth	10,834	86	99.2%	10,784	27	99.7%
Coupeville - Port Townsend	2,042	60	97.1%	1,840	28	98.5%
Mukilteo - Clinton	7,010	4	99.9%	6,960	35	99.5%
Pt. Defiance - Tahlequah	3,136	7	99.8%	3,496	2	99.9%
Seattle - Bainbridge Island	4,167	8	99.8%	4,167	2	100.0%
Seattle - Bremerton	2,562	2	99.9%	2,747	2	99.9%
TOTAL	42,341	239	99.4%	42,253	138	99.7%

Data source: WSDOT Ferries Division.
1 'Number of missed trips' is the difference (net) between the number of cancelled trips and the number of replaced trips.
2 The overall (trip) reliability average is calculated by dividing the recorded number of net trips (scheduled trips - cancelled trips + make-up trips) by the number of scheduled trips.

Service Reliability / Customer Feedback

Washington State Ferries on-time performance comparison

Route	First quarter (July 1 - September 30) Fiscal Year 2010			First quarter (July 1 - September 30) Fiscal Year 2011		
	Number of actual trips[1]	Percentage of trips 'on-time'	Average delay from scheduled sailing time[2]	Number of actual trips[1]	Percentage of trips 'on-time'	Average delay from scheduled sailing time[2]
San Juan Domestic	5,362	74.6%	7.6	5,536	74.6%	7.8
International Route (Sidney, BC)	241	67.9%	9.3	300	84.0%	3.2
Edmonds - Kingston	3,322	74.3%	7.0	3,668	85.8%	3.9
Fauntleroy - Vashon - Southworth	9,431	89.6%	4.1	8,621	81.7%	4.1
Coupeville - Port Townsend	1,439	73.1%	7.9	1,369	76.3%	6.8
Mukilteo - Clinton	6,423	91.9%	3.6	6,043	87.7%	3.2
Pt. Defiance - Tahlequah	2,957	95.0%	7.9	3,076	88.3%	3.5
Seattle - Bainbridge Island	3,650	88.4%	0.0	3,465	83.5%	4.1
Seattle - Bremerton	2,384	96.6%	3.0	2,468	89.9%	3.4
TOTAL	35,569	85.6%	5.0	34,546	82.9%	4.6

Data source: WSDOT Ferries Division.

Data notes: The Seattle-Vashon passenger-only route is no longer operated by WSF as required by RCW 47.60.658. While the data from the passenger-only route is not included in the table, the data is included in the overall system statistics for the first quarter of FY2010.
1 'Number of actual trips' represents trips detected by the automated tracking system. It does not count all completed trips during the quarter.
2 'Average delay' is represented in minutes, and is the average delay past 10 minutes of scheduled departure time.

WSF trip reliability no longer includes missed-trip index

Beginning in the first quarter of FY 2011, WSDOT will no longer report a "missed trip index" (MTI). The MTI was oriented towards daily commuters, while many WSF customers travel for non-work reasons or are not regular commuters. The assumptions underlying the index do not apply equally to the various routes in the system. Therefore, trip reliability will be reported in terms of the numbers of missed trips and the reliability percentages. As context for the reliability of the system as a whole, reliability of 99.7% on a route indicates that there have been three missed trips for every thousand planned trips.

On-time performance declined in first quarter

A trip is considered delayed when a vessel does not leave the terminal within 10 minutes of the scheduled departure time. The quarterly average delay is the average delay past 10 minutes of the scheduled departure time. WSF calculates its on-time performance rating using an automated tracking system on each of its vessels that records when a vessel leaves the dock.

WSF's system-wide on-time performance for the first fiscal quarter declined by 5.3% compared to the previous quarter, at 82.9% vs. 88.2%. Compared to the same quarter one year ago, on-time performance decreased by 2.7%. The average sailing delay decreased from 5.0 minutes for the first quarter of FY 2010 to 4.6 minutes of delay for the first quarter of FY 2011. The median sailing delay for the first quarter of FY 2011 was 2 minutes, meaning half the trips had less than 2 minutes delay, and half had more.

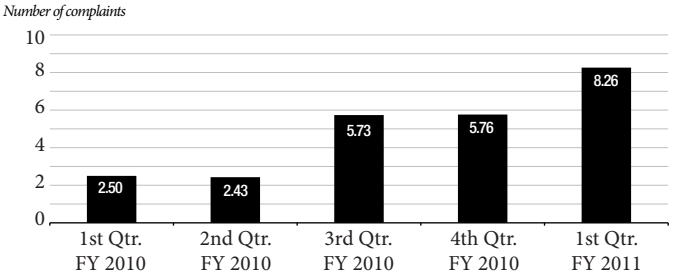
WSF is now recording reasons for late departures in a manual log. As soon as this system is automated, WSF will begin reporting the causes for delays.

Customer complaints increase

In the first quarter of FY 2011, there was a large increase in customer complaints, from 5.8 complaints to 8.3 per 100,000 customers. Of 569 complaints recorded, 77, or nearly 14%, were due

Complaints per 100,000 customers

July 2009-September 2010, by fiscal quarter



Data Source: WSDOT Ferries Division.

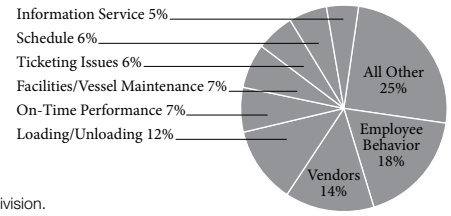
Washington State Ferries Quarterly Update

Customer Feedback / Ferries Division Reform

to a coordinated write-in campaign concerning galley service on the *Hyak*. An increase in complaints about employee behavior represented 19% of the increase. Complaints about vessel and facility maintenance, and loading and unloading, comprised another 29% of the increase in the customer complaint rate.

More than 100 complaints concerned employee behavior, about 18% of the total, nearly double compared to last quarter.

Ferries customer complaints by category
July-September 2010



Data source: WSDOT Ferries Division.

WSF's customer feedback methodology

WSF investigates all complaints about employee behavior and responds to each customer who files a complaint. Each complaint is investigated, and WSF takes appropriate action with the employee as warranted. If there was a reason for an employee action that could not have been known to the customer, WSF includes that explanation in the response to the customer.

Customer service review identifies areas of improvement

WSF recently completed a customer service review to assess current WSF customer service practices and identify steps for improvement. WSF's plans include improving basic customer service functions through the following actions:

- Revise and improve staff training
- Identify customer service performance standards
- Enhance employees capacity to resolve customer issues on the spot
- Improve external communications through the use of emerging tools such as Twitter
- Further develop the website and other customer resources to make them easier to use and to provide better information to customers
- Revise signage at terminals and on vessels to make it easier for customers to use the ferry system and to improve the overall travel experience
- Focus on facility and vessel cleanliness, increasing pride of ownership

Ferries Division Reform

WSDOT and WSF management are committed to continuous improvement in providing safe, reliable, and efficient service. Since 2007, the Ferries Division has been the subject of a number of audits by the State Auditor, the Joint Transportation Committee, and WSDOT's internal audit staff. WSF has implemented nearly all of the audit recommendations, and has produced reports for the legislature and Governor on a wide variety of topics. WSF has worked to improve delivery of the capital program, and has made changes to increase transparency to the legislature and the public.

Recognizing the need to cut costs, consistent with direction from the Governor and the legislature, WSF has reduced expenses wherever possible. Finding new ways to economize is a continuous effort. Among the savings achieved so far, WSF recalibrated and lowered costs for its terminal Life Cycle Cost Model (LCCM), reduced use of consultants by over 80%, reduced staff and temporary employees, made across-the-board cuts in operating departments, reduced overtime, cut back expenses for crew housing, and reduced travel time and mileage for special projects staff. The Terminal Engineering department is developing an asset management plan that will provide further guidance for how to use scarce preservation funds in the 2011-2013 biennium. WSF plans further cuts in the areas of overtime, administrative staffing, non-mandated training, marketing, and consolidation of training and administrative facilities.

Passenger Vessel Association Audit

The Passenger Vessel Association issued a report on September 8, 2010 that made 36 recommendations for ferry operations and capital programs. WSF is in the process of analyzing each of the recommendations and is developing an action plan to be presented to the Governor on November 15.

For more information on Ferries Division reform, visit the website at: www.wsdot.wa.gov/ferries/accountability.

Rail: Amtrak *Cascades* Quarterly Update

Passenger Rail: Amtrak *Cascades*

Washington is one of 13 states, including Oregon, to provide operating funds to Amtrak for intercity passenger rail service. The Amtrak *Cascades* serves 466 route miles between Eugene, Oregon, and Vancouver, B.C. Amtrak provides operating funds for one daily round-trip route, Oregon provides funding for two routes, and Washington, through WSDOT, provides for four roundtrips. Amtrak uses five European-designed, Talgo trains for daily operations, two owned by Amtrak and the remainder by Washington.

Amtrak *Cascades* ridership by funding partner
Quarter 3 ridership in 2008-2009-2010

Funding partner	Round trips funded	Quarter 3 April – June 2008	Quarter 3 April – June 2009	Quarter 3 April – June 2010
Washington	4	154,354	156,769	167,886
Oregon	2	35,867	27,810	33,297
Amtrak	1	36,425	36,483	35,979
Total ridership		**226,646**	**221,062**	**237,162**

Data source: WSDOT State Rail and Marine Office.

Note: Washington-funded trains: Amtrak *Cascades* 501, 506, 507 (Seattle/Portland), 508, 510, 513, 516, and 517. Oregon-funded trains: Amtrak *Cascades* 500, 504, 507, and 509 between Portland and Eugene. Amtrak-funded trains: Amtrak *Cascades* 500 and 509 between Seattle and Portland.

On July 3, 2009, the Canadian government approved a pilot project to run a second daily round-trip service between Seattle and Vancouver, B.C. WSDOT worked with Amtrak, BNSF Railway, U.S. Customs, the BC Ministry of Transport, Canadian Border Services Agency (CBSA), and other stakeholders to get the additional Amtrak *Cascades* service operational. The trial service was approved to run until the end of March 2010, after the Winter Olympics and Paralympics. The trial was then extended until September 30, 2010. As of October 14, the trial has been extended another year. This second Amtrak Cascades train has been very popular and carried nearly 57,000 passengers to and from Vancouver, B.C., in the first year of operation.

Amtrak *Cascades* third quarter ridership up 7.1% from previous year

Although fewer people took the train in 2009 than 2008, ridership came back strong in 2010. *Cascades* served 167,886 passengers in the third quarter of 2010, 7.1% more than in 2009, and 8.8% more than 2008's record ridership.

Amtrak *Cascades* ticket revenue up 38.5% compared to the previous year

During the third quarter of 2010, ticket revenues for Amtrak *Cascades* trains were $6.3 million, up 38.5% when compared to the same period in 2009. This revenue increase can be partially explained by the new service running between Vancouver, B.C. and Portland. The ticket revenue from this new service amounts to $1.0 million. Other new, contributing factors to revenue growth include an effective ticket pricing

Rail Performance Highlights

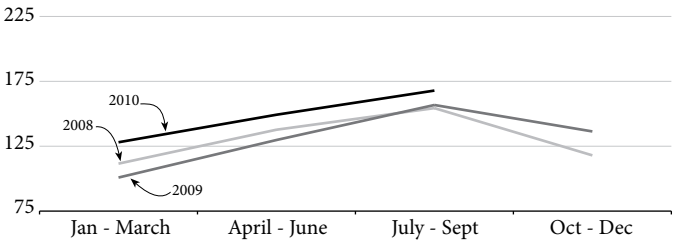
Amtrak Cascades Q3 ridership is up 7.1% from the same quarter in 2009.

On-time performance is 73.6%, continuing the trend of improvement towards the long-term goal of 80%.

Ticket revenues were $6.3 million in Q3 2010, up 38.5% from the same quarter in 2009.

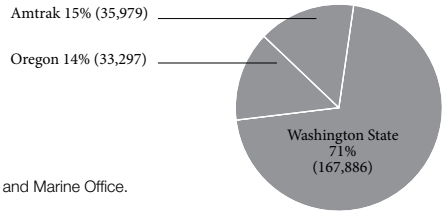
For more information on Recovery Act high-speed passenger rail funding see p. 38.

Amtrak *Cascades* quarterly ridership
Number of passengers per quarter, 2008 - 2010
Riders in thousands



Data source: WSDOT State Rail and Marine Office.
Note: Ridership for Washington-funded trains only.

Amtrak *Cascades* ridership by funding entity
Quarter 3, 2010



Data source: WSDOT State Rail and Marine Office.

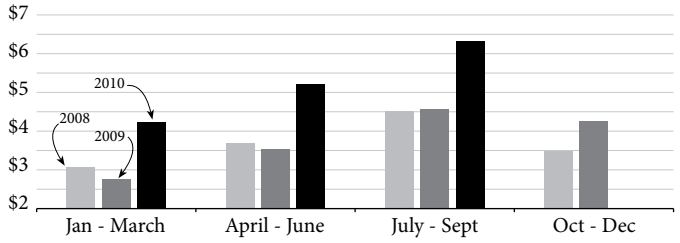
Rail: Amtrak *Cascades* Quarterly Update

Passenger Rail: Amtrak *Cascades*

strategy, marketing, and adoption of the Amtrak Performance Tracking (APT) accounting system, a new cost accounting system. A study is being conducted to analyze the growth drivers and their long term impacts.

Amtrak *Cascades* ticket revenue by quarter

Dollars in millions, 2008 - 2010



Data source: Amtrak and WSDOT State Rail and Marine Office.

Note: Ticket revenues for Washington-funded trains only.

Tickets on the service are sold using a revenue management model that mirrors that used by the airline industry. Sales are made at different discounted rates from the standard fare that reflect the capacity of the train, the level of advance bookings already made, and the time of booking. Generally, early booking results in lower fares being paid by the passenger. This system is managed on a real time basis, and adjusted according to the criteria above.

Amtrak *Cascades* (Washington sponsored trains) operation revenue covers about 54% of the operation cost in 2009. The state subsidy or the balance (46%). The per rider subsidy is the total annual state subsidy divided by the total number of riders. Therefore, the more riders, the less the subsidy the state pays for each rider.

Amtrak *Cascades* is intercity passenger rail service for long distance riders between cities, not for commuters. Long-distance travelers generate more revenue due to higher ticket prices and food and beverage sales. However, when a seat is taken by a short distance traveler (Olympia to Centralia), it is no longer available to a long distance traveler (Seattle to Portland). To maximize revenue, an effective pricing strategy would be encouraging more long-distance riders. The revenue increase resulting from this strategy will cover more of the operations costs and reduce the state subsidy.

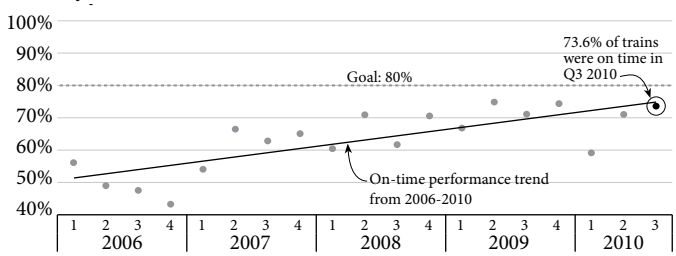
Quarterly average on-time performance is 73.6%, up slightly from the same quarter in 2009

On-time performance for state-supported Amtrak *Cascades* trains was 73.6% for the quarter, up 2.5% compared to the same quarter in 2009, continuing the trend of improvement toward the long-term goal of 80%.

On-time performance is affected by of a number of natural and operational conditions that vary daily; WSDOT examines these issues with Amtrak and the host railroad (BNSF) to determine the causes of delay. Contributing factors include localized speed restrictions (slow orders track condition), interference from other trains on the corridor, poor weather, station overtime, and slow running trains.

Amtrak *Cascades* on-time performance

Percent of trains on time, 2006 - 2010



Data source: WSDOT State Rail and Marine Office.

Note: A basic indicator of on-time performance, "percent on time" is calculated by dividing the number of trains that arrive at their endpoint on time by the total number of trains operated during a specific period. Amtrak's monthly "percent on time" reports incorporate the former interstate Commerce Commission's (ICC's) tolerance for lateness in the calculations. These ICC allowances consider trains 10 to 30 minutes late as on time, depending on the route length. The tolerance time is 10 minutes for Seattle–Portland trains and 15 minutes for Portland-Vancouver, BC trains.

Passenger rail projects

WSDOT has identified a number of projects that can improve on-time performance, and bring significant improvements to reliability of the service. WSDOT also works with Amtrak and BNSF to minimize disruptions to smooth, timely operations. For 2009-2011, there are currently 9 total passenger rail projects in progress.

Passenger rail capital projects: 2009-2011

Recently completed	On time	On budget
Stanwood - New Station	√	√
Blaine - Customs Facility Siding	√	√
Other selected projects in progress for 2009-2011		
Stanwood - Siding Upgrades	√	√
King Street Station - Track Improvements	√	√
Vancouver - Rail Bypass and W 39th Street Bridge	√	√
Mt. Vernon - Siding Upgrade	√	√
Everett - Rail Yard and Storage Tracks Improvements	–	√

Data source: WSDOT State Rail and Marine Office.

Environment

Statewide policy goal

To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.

WSDOT's business direction

To protect and restore the environment while improving and maintaining Washington's transportation system.

In this section

See also

Quarterly Report on Capital Projects (Beige Pages) 39

Earlier articles concerned with environment

Endangered Species Act Documentation, GNB 38

Programmatic Permitting Annual Report, GNB 38

New Stormwater Permit GNB 37

Stormwater Treatment Facilities, GNB 37

Construction Site Water Quality, GNB 37

Construction Site Erosion Control, GNB 37

Wetlands Preservation Annual Report, GNB 37

Special Report: NEPA, GNB 33

Special Report: Climate Change, GNB 34

Air Quality Annual Report

Status of Designated Maintenance Areas for Air Quality Monitoring

Air Quality Highlights

There are currently 10 areas monitored by the EPA for three different types of air-based pollutants.

Nine areas are in maintenance, meaning they have not violated the air quality standard for the monitored pollutant since they were designated.

Only the Wapato Hills (Puyallup River Valley) is in non-attainment, meaning it has violated the standard for the monitored pollutant.

WSF continues to look for ways to reduce fuel consumption to limit its impact on Puget Sound air quality.

WSF is investigating and seeking funding to evaluate fuel savings of flow meters, which can send real-time data on fuel consumption against current conditions.

A diesel pile-driver releases exhaust at the SR 20 Fredonia to I-5 project.

Maintenance status for designated areas in Washington

The U.S. Environmental Protection Agency (EPA) assesses whether urbanized areas are in compliance with the National Ambient Air Quality Standards (NAAQS). If measurements reveal that an area has violated the NAAQS standard, it can be designated to be in 'non-attainment'. Agencies like WSDOT must then collaborate with other local governments and regional planning authorities to develop a *State Implementation Plan* to show how these groups will work to meet NAAQS for the next 20 years. Failure to meet these goals (or non-attainment) would result in WSDOT being unable to secure federal funding or project approval for some transportation projects that would occur within the non-attainment areas. In Washington, there are currently 9 areas that previously violated EPA standards for a given pollutant (non-attainment), but have since maintained emissions within the allowable limits (maintenance).

List of EPA-designated maintenance areas for Washington

As of September 30, 2010

Maintenance area	Violation year	Pollutant (chemical abbreviation)	Current status
Spokane	1978	Carbon Monoxide (CO)	Maintenance
Puget Sound urban area	1978	Carbon Monoxide (CO)	Maintenance
Yakima	1978	24-hour fine particulate matter (PM_{10})	Maintenance
Duwamish Industrial Area (Seattle/South King County)	1987	24-hour fine particulate matter (PM_{10})	Maintenance
Tacoma Tideflats/Puget Sound	1987	24-hour fine particulate matter (PM_{10})	Maintenance
Kent/Puget Sound area	1987	24-hour fine particulate matter (PM_{10})	Maintenance
Vancouver	1991	Carbon Monoxide (CO)	Maintenance
Spokane	1991	24-hour fine particulate matter (PM_{10})	Maintenance
Olympia urban area	1997	24-hour fine particulate matter (PM_{10})	Maintenance
Wapato Hills/Puget Sound	2006	24-hour fine particulate matter ($PM_{2.5}$)	Non-attainment

Data Source: WSDOT Environmental Services Office.

As reported in *Gray Notebook 31* (p. 31), the Wapato Hills area (the Puyallup River Valley) was designated by EPA as being in non-attainment. The *State Implementation Plan* for this area will not be finalized until 2013, and until then, interim tests for $PM_{2.5}$ (24-hour fine particulate matter/2.5 μm) will be used for air quality compliance. WSDOT is working with air quality partner agencies to help determine EPA test parameters to evaluate attainment status.

New NAAQS approved and expected by December 31, 2010

Since the last Air Quality report in *Gray Notebook 35*, the EPA approved tighter standards for nitrogen dioxide (NO_2), and is expected to approve tighter standards for ozone (O_3) by December 31, 2010. Measurements in Enumclaw exceeded the previous 1997 standards for O_3, but the EPA has not made a determination yet as to its attainment status.

New EPA software helps WSDOT model emissions

In spring 2010 EPA presented MOVES: Motor Vehicle Emission Simulator software. Beginning in 2011, WSDOT will use MOVES to monitor vehicle emissions and evaluate compliance with NAAQS in the 10 designated non-attainment and maintenance areas in Washington. In 2012, WSDOT will use MOVES to evaluate NAAQS compliance at the project level.

Monitoring and Reducing WSDOT's Emissions Contributions

WSDOT's efforts will help contribute to maintaining air quality in Washington

WSDOT has a number of collaborative efforts with other state, regional, and local organizations, demonstrating WSDOT's cooperation and commitment to meeting NAAQS in State Implementation Plans. WSDOT's own contributions include making improvements to its facilities and maintenance vehicle fleet that reduce emissions. WSDOT received a $41,000 grant from the American Recovery and Reinvestment Act to retrofit South Central region maintenance vehicle signboards and warning lights with LEDs (light-emitting diodes) that reduce diesel consumption by 1,400-2,100 gallons a year. Similar retrofits have been successful in the past. WSDOT's 'no idling policy' and Executive Order E1047.00 direct the department and to reduce fuel consumption wherever possible to conserve on fuel, but to also reduce emissions.

WSF operations affect Puget Sound air quality

In 2005, WSF worked collaboratively with the Puget Sound Marine Emissions Inventory (PSMEI) project, a partnership of public and private organizations, to inventory greenhouse gas and other air emissions in Puget Sound. The study found that WSF was accountable for one-third of all port-marine-based emissions in the Puget Sound region.

Since then, WSF tested and implemented the use of low-sulfur and ultra-low marine diesels to reduce particulate matter (see p. 71 of *Gray Notebook 31*). WSF also attempted to improve its emissions by reducing fuel consumption, developing route profiles, investigating vessel positive restraint, and recycling engine heat to warm passenger cabins.

Currently WSF is seeking funding opportunities to acquire flow meters that evaluate the effects of weather, tidal and current, and vessel conditions on ferry vessel mileage. Similar to route profiling (see p. 71 of *Gray Notebook 31*), these flow meters send real-time data back to WSF on vessel performance relative to conditions. WSF estimates that flow meters could save 321,000 gallons (2% of the annual total) of fuel for the 15 vessels under consideration for this equipment. Cost-benefit analysis shows that with the savings in fuel, the equipment would pay for itself in as little as four years. (See table below).

WSF is also investigating and seeking funding for positive restraint systems, which can reduce a vessel's RPMs as it pushes against a dock during loading and unloading. The positive restraint systems would be targeted for two vessels on the Seattle – Bainbridge Island route, and are estimated to provide a fuel savings of 26,000 gallons a year.

Past & future efforts will be measured by new inventory

The efforts made by WSF since 2005 will be included in the second Puget Sound marine air emissions inventory being conducted by the PSMEI. WSF's initiatives will be measured with those of other major emissions producers in the region, including ports, shippers, and other maritime industries.

WSF estimates on fuel and investment savings with the use of flow meters

Vessel class	Annual fuel consumption	Estimated annual fuel savings[1]	Estimated lifetime fuel savings[1]	Investment per vessel class[2]	Estimated return on investment[1]	Years to realize investment (break-even)
Jumbo Mark I Class	2,516,691	50,334	503,340	$400,000	$3.18	3.1
Jumbo Mark II Class	4,602,300	92,046	920,460	$600,000	$3.88	2.6
Super	4,863,333	97,267	972,670	$800,000	$3.08	3.3
Issaquah	4,109,694	82,194	821,940	$1,200,000	$1.73	5.8
Total	16,092,018	321,841	3,218,410	$3,000,000	$2.71	3.7

Data source: WSDOT Ferry System.

Data note: 1 Fuel and cost savings are conservative estimates based on the manufacturer's claims. 2 Based on $200,000 per flow meter, per vessel.

Noise Quality Annual Report

Federal Noise Obligations

Noise Quality Highlights:

- Noise wall work in 2009-2010 focused on retrofit projects. One-half mile of retrofit noise wall was constructed in fiscal year 2010 (July 1, 2009 to June 30, 2010).
- After four years of testing, quieter pavement shows little improvement in noise reduction.
- Concrete texturing, such as diamond grinding and Next Generation Concrete Surface, is being evaluated for acoustic performance on I-82 and Avondale Road.
- I-5 Ship Canal Bridge pilot project retrofit construction completed.
- For more information about WSDOT's quieter pavement test program and updated tracking of testing results, visit: www.wsdot.wa.gov/Business/materialslab/quieterpavement.

Carsonite AcoustaShield planks on the I-5 - 5th Ave. NE to NE 92nd Street Noise Wall project. The planks are made of a composite strengthened with fiberglass and filled with ground-up tire rubber.

Federal noise rules require that states evaluate noise whenever they expand or change the roadway in a way that could affect the noise environment or bring highway traffic closer to neighborhoods. WSDOT follows a three-step process to develop a noise study that complies with federal regulations. First, WSDOT determines whether the noise meets or exceeds federal noise impact criteria (in Washington, the threshold is 66 decibels or higher). Second, if noise impacts are identified, WSDOT evaluates whether a mitigation solution is logistically possible and effective or "feasible". Third, proposed solutions are evaluated for meeting federal cost/benefit criteria. If mitigation is deemed reasonable, WSDOT most often installs noise walls. These free-standing structures may be anywhere from four to 20 feet tall and made of concrete or other materials.

Noise wall work focused on retrofit projects from 2009-2010

Roughly one-half mile of noise wall projects were constructed in the period from July 1, 2009 to June 30, 2010 (fiscal year 2010) as "Type 2" projects, or noise abatement retrofits to an existing highway. WSDOT's noise retrofit program targets residential areas that were constructed before the highway was built or expanded. Retrofit projects are made possible through targeted funding from the state legislature and are prioritized by community age, density, noise levels, and the cost of abatement. There remain about 60 other prioritized but unfunded retrofit locations statewide.

"Type 1" projects are those which could increase noise for a neighborhood by widening or bringing a roadway closer to people by adding traffic lanes. In 2009-2010, less than one-quarter of a mile of Type 1 noise wall was constructed.

Expanding WSDOT's noise-reduction options

WSDOT continues to research noise wall technologies and other means of addressing noise. In fiscal year 2010, WSDOT constructed a noise wall in Seattle made of Carsonite AcoustaShield™, a composite product. Composite panels are expected to have the same acoustic performance as concrete panel, but unlike concrete, can be moved and re-used. Since this is WSDOT's first use of this product, the agency will monitor its performance over time. WSDOT is also researching new ways to reduce noise from bridges, particularly from bridge joints and bridge reflective noise, and is evaluating the performance of pavement technologies, or "quieter" pavements, as a cost-effective noise reduction option (see page 27).

Quieter pavement testing

More than 70% of roadway noise comes from tires on pavement when vehicles travel at high speeds, making new pavement types and mixtures a potential way to reduce highway noise.

Currently there are three specifically designated quieter asphalt pavement test sections: I-5 Lynnwood (constructed in 2006), SR 520 Medina (2007), and I-405 Bellevue (2009). The tested pavements were generally quieter than standard asphalt pavements when first constructed, but then lost any audible noise reduction benefits within about one year. The final decisions on whether to use quieter pavements at other locations will be made at the end of the tested pavement life.

WSDOT is comparing two quieter pavement types on the I-5 and SR 520 test sections and three quieter pavements on I-405. The pavements are being tested for both acoustics and life cycle costs, which considers both initial cost and durability

Quieter Pavement Testing

(or pavement life). The two pavements on I-5 and SR 520 are designed with air pockets and different asphalt glue holding the gravel together (rubber and polymer) to make them quieter. WSDOT is comparing these two types with a control section made up of standard dense asphalt with fewer air pockets.

Performance measures for quieter pavement studies

For acoustic measurements, A-weighting of decibels (the measurement of sound pressure levels) is done to better reflect sound levels according to the range of human hearing: three A-weighted decibels (dBA) is considered the minimum sound level change audible to a young, healthy human ear.

WSDOT has collected monthly acoustic measurements, taken three inches above the roadway where the tire hits the pavement; rutting measurements have been collected twice annually to assess pavement durability.

Pavement friction, smoothness, and rut depth are measured twice a year. Rut depth has been used as the primary indicator for durability performance because, for safety, WSDOT starts scheduling pavement for replacement when any lane reaches a rut depth of 12 mm (1/2 inch).

Quieter pavement initial findings

SR 520 Medina Vicinity Test Section

The test section immediately east of Lake Washington was installed in July 2007. Five lanes were paved: two general purposes eastbound and westbound and one westbound HOV lane. Since construction, the two quieter pavements' sound intensity levels have increased faster than sound levels on the conventional asphalt pavement control section installed at the same time. Neither test section was audibly quieter than conventional asphalt pavement about six months after construction.

The graph below shows the average sound intensity level for the SR 520 Medina vicinity quieter pavement section, from initial readings in June 2007, to installation in July 2007, to the end of August 2010. As this graph shows, there were initially some reductions in sound levels, however as time progressed, the average sound intensity levels increased.

Results for rubberized surfaces

The rubberized test section on SR 520 was not audibly quieter (>3 dBA) than the conventional asphalt after about six months and, on average, has been less than one dBA louder than the conventional asphalt since December 2009.

Results for polymer surfaces

The polymer test section on SR 520 was never audibly (>3 dBA) quieter than the conventional asphalt pavement. However, its performance deteriorated at a slower pace than both the conventional and rubberized asphalts and is currently about 1.5 dBA quieter than the conventional asphalt and over two dBA quieter than the rubberized asphalt.

Results for rutting measurements

Rutting measurements made on the SR 520 sections in May 2010 showed raveling (loss of aggregate from the surface in the wheel tracks) on the outside lane of the rubberized section occurring at more than twice the rate of the outside lane on the polymer section: 8.6 mm vs. 4.1 mm (5/16 vs. 3/16 inch).

Lynnwood open graded asphalt on southbound I-5

The test section in Lynnwood, near the Alderwood Mall, was installed in August 2006. Since the installation, the two quieter pavements' average sound intensity levels have increased faster than sound levels on the conventional asphalt pavement control section installed at the same time. The test sections are no longer audibly quieter than conventional asphalt pavement.

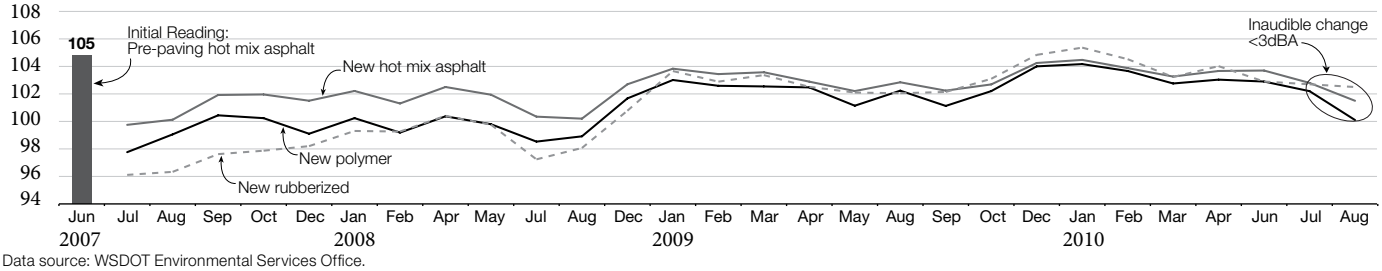
Results for rubberized surfaces

The rubberized section on I-5 was not audibly quieter (>3 dBA) within five months of installation. It has been louder than the

Quieter pavement test results - SR 520 Medina vicinity (King County)

July 2007 - September 2010

Average Sound Intensity Level (dBA); Decibel changes less than three dBA are inaudible to the human ear.



Data source: WSDOT Environmental Services Office.

Quieter Pavement Testing / Concrete Surface Texturing

Initial and current noise levels for quieter pavement test sections
By pavement material used; Noise levels in dBAs

Pavement material	Initial / Sept 2006: I-5 Lynnwood	Current / August 2010: I-5 Lynnwood	Initial / July 2007: SR 520 Medina	Current / August 2010: SR 520 Medina	Initial / August 2009: I-405 Bellevue	Current / August 2010: I-405 Bellevue
New HMA	98.8	103.5	99.8	101.5	100.8	102.3
Rubberized asphalt	95.0	103.3	96.1	102.5	96.8	99.6
Polymer-modified asphalt	96.0	101.7	97.8	100.1	96.7	100.3
Diamond ground concrete	N/A	N/A	N/A	N/A	104.4	103.5

Data source: WSDOT Environmental Services

conventional asphalt pavement since December 2008, following the 2008/2009 winter storms.

Results for polymer surfaces

The polymer pavement was two to three dBA quieter than the conventional asphalt for about one year, but it stopped being audibly quieter after November 2007. The polymer pavement is currently about one dBA quieter than conventional asphalt.

Results for rutting measurements

Rutting measurements made in May 2010 show that the rubberized test section is continuing to ravel faster than the control section. The outside lane shows the deepest rut depth at 9.5 mm (3/8 inches). Rutting measurement for the outside lane of the polymer test section showed a rut depth of only 6 mm (between 3/16 and 1/4 inches). The hot mix asphalt (HMA) is not showing any raveling with an average rut depth of 4.8 mm (3/16 inches) in all lanes.

I-405 Bellevue Vicinity Test Section

The test section of I-405 is immediately south of downtown Bellevue, on both sides of I-90, and was installed in August 2009. To date, the test pavements on this project have performed better than the other test sections on SR 520 Medina and Lynnwood on southbound I-5.

Results for rubberized and polymer surfaces

The polymer asphalt was initially louder than the rubberized asphalt, and both were quieter than the conventional asphalt. Since installation, the test pavements have performed acoustically very similar to one another and are currently still audibly quieter than the conventional asphalt.

Results for rutting measurements

Rutting measurements on the SR 405 sections in May 2010 after one year of performance showed approximately equal rut depths for the rubberized, polymer and HMA sections. The rut depths in lane one for the rubberized and polymer sections were 2.5 and 2.3 mm (between 1/16 and 1/8 inch), respectively. The HMA test section has a rut wear of 2.3 mm.

Noise performance of concrete surface texturing

Both the acoustic and durability performance of the quieter asphalt pavements has been worse than WSDOT's standard asphalt pavement. Therefore, WSDOT is exploring the acoustic and durability performance of various surface textures available for use on concrete pavements.

In 2009-2010, WSDOT collected acoustic measurements before and after construction of tire-pavement for diamond ground concrete on I-5 and I-405 in Seattle, and a section of new concrete that used a Next Generation Concrete Surface (NGCS) texturing on Avondale Road in King County. WSDOT built NCGS on I-82 outside of Yakima, with other NGCS test sections are planned in 2011. Initial results are promising, but WSDOT will continue to periodically measure tire-pavement noise, friction, and rutting at these locations to evaluate the performance over time.

I-5 Ship Canal Bridge pilot project constructed

As part of the state's noise retrofit program, WSDOT finished construction on a pilot project to reduce noise for residents living near the I-5 Ship Canal Bridge. The retrofit design was complicated because much of the noise off this bridge comes from reflections off the underside of mainline I-5. The final design for abatement was recommended by a panel of internationally renowned acousticians and involves hanging about 700 panels of noise absorptive materials from the underside of the I-5 mainline.

WSDOT will measure pre-construction sound levels and post-construction levels at 22 locations for the next three years. Both the overall sound level (Leq) and the frequency of the sound will be measured to determine the acoustic effectiveness of the pilot project.

Economic Vitality

Statewide policy goal:

To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.

WSDOT's business direction:

To provide and operate a strong and reliable transportation system that efficiently connects people with jobs and their communities, moves freight, builds partnerships with the private sector, and supports a diverse and vibrant economy.

In this section

See also

Federal Recovery Act-funded Projects 34

Earlier articles concerned with economic vitality

Trucks, Goods & Freight, GNB 37

CVISN, GNB 37

Freight Rail
Semi-Annual Update

Freight Rail Highlights

In 2008, freight railroads operating in Washington carried 116 million tons of freight.

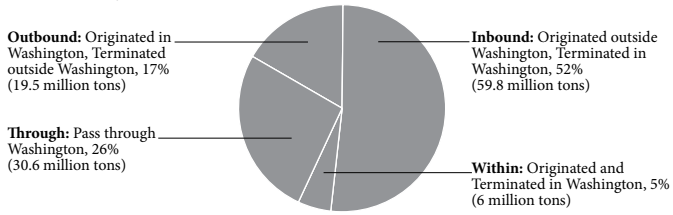
The Freight Rail Assistance Fund received 14 applications requesting $8.98 million in grants.

The Grain Train program purchased 29 new grain cars to help meet growing demand.

Rail transportation supports economic competitiveness and economic vitality. The state's freight rail system has evolved over the last century to serve a wide range of passenger and freight markets and has extended across many parts of the state. Thirty-two of the state's 39 counties are served by one of the state's freight railroads. There are two mainline freight railroads – the BNSF Railway Company (BNSF) and the Union Pacific Railroad (UP) – and 20 active short-line railroads operating in Washington.

Washington rail freight movement

In millions of tons; 2008



Data source: WSDOT State Rail and Marine Office.

Rail freight movement in Washington

In 2008, freight railroads operating in the state carried 116 million tons of freight over 3,604 operated route miles. As a global gateway state, Washington plays an important role in the national economy, especially in handling agricultural freight from the Midwest for export world wide. The largest component of Washington's rail freight for 2008 was inbound movement: 52% (59.8 million tons) of rail freight originated outside the state and terminated in Washington. Through movement made up the second largest component, with 26% (30.6 million tons) of the total rail freight originating and terminating outside Washington.

The Freight Rail Assistance Fund and the Freight Rail Investment Bank

The Freight Rail Assistance Fund is a grant program for larger projects that have difficulties securing funding and where the rail location or the project is of strategic importance to the local community and the state. It is open to applicants in both the public and private sector. This year the Freight Rail Assistance Fund received 14 applications from across the state requesting a total of $8.98 million. Projects are assessed by WSDOT and the Department of Commerce to determine which will be funded from the $2.75 million available. The completed list is scheduled to be presented to the Office of Financial Management (OFM) by November 1, 2010.

The Freight Rail Investment Bank is a $5 million low interest loan program open to public sector organizations; it is intended for smaller projects. Applications totaling $2.68 million were received from seven applicants. Projects are ranked by WSDOT and submitted to OFM for inclusion in the Governor's budget by November 1, 2010.

WSDOT serves in an advisory role but monitors project on-time and on-budget performance.

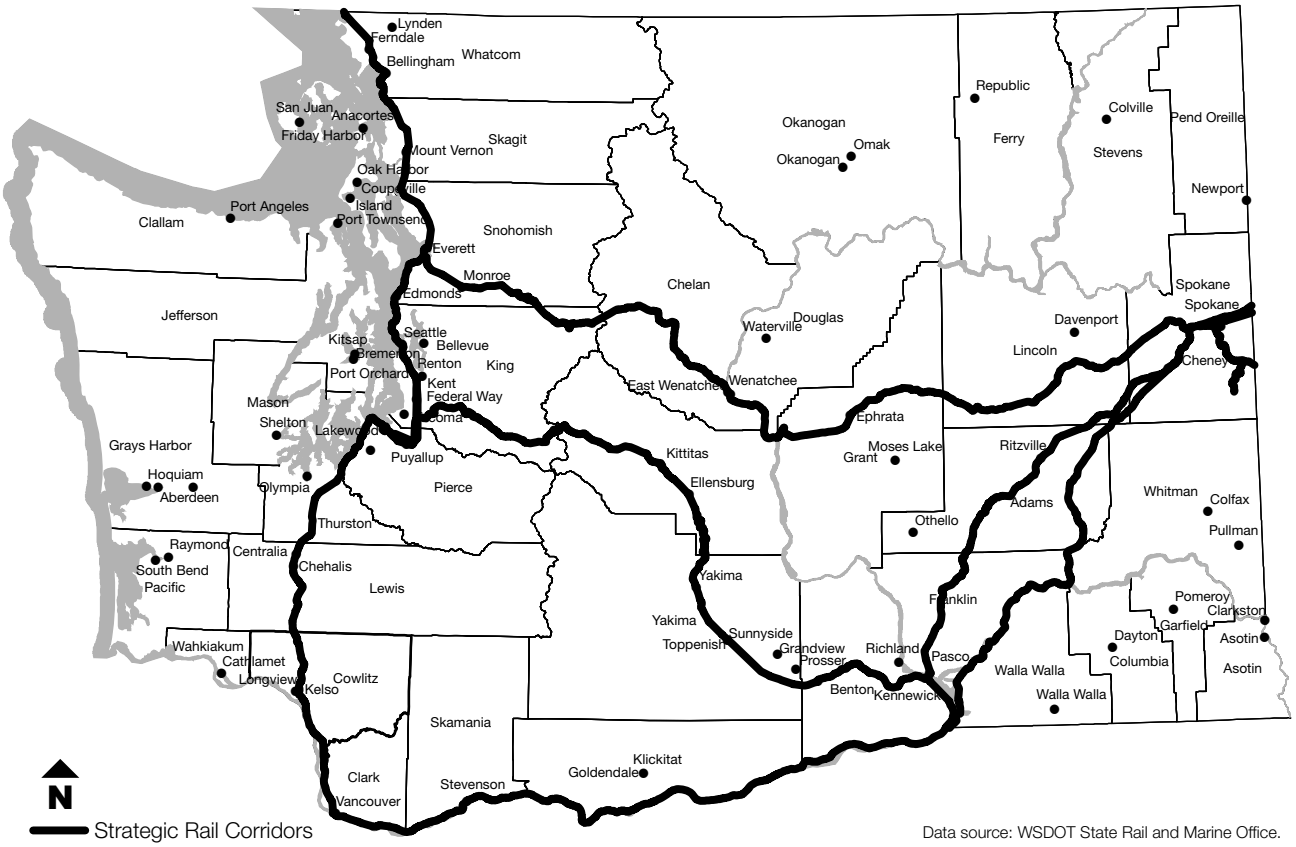
Freight rail capital projects

WSDOT identifies freight rail capital projects that can improve freight capacity, enhance rail-highway crossing safety, strengthen intermodal connectivity, and preserve existing track. Two recently completed projects with freight benefits include *Port of Ephrata - Additional spur rehabilitation* completed in November 2008 and *Port of Quincy - Short haul intermodal Pilot Project* completed in February 2010.

Strategic Rail Corridors

Washington strategic freight rail corridors

September 2010



Data source: WSDOT State Rail and Marine Office.

Freight rail capital projects: 2009-2011

Recently completed	On time	On budget
Port of Ephrata - Additional Spur Rehabilitation	√	√
Port of Quincy - Short Haul Intermodal Pilot Project	√	√
Other selected projects in progress for 2009-2011		
Clark County Rail Line/Battle Ground to Vancouver - Track Rehabilitation	√	√
CW Line/Lincoln County - Grade Crossing Rehabilitation	√	√
Palouse River and Coulee City RR - Rehabilitation	√	√
Port of Columbia/Wallula to Dayton - Track Rehabilitation	√	√
Port of Pasco - Intermodal Facility Improve., Phase 4	√	√
Tacoma Rail/Frederickson to Morton - Track Repair	√	√

Data source: WSDOT State Rail and Marine Office.

Strategic freight rail corridors

WSDOT recently updated the designation for strategic rail corridors. The Freight Mobility Strategic Investment Board adopted the strategic freight corridor classification. The state Legislature requires that strategic freight corridors be designated and updated every two years.

Freight Rail:
Semi-Annual Update

Grain Train / Produce Rail Car Program

WSDOT purchased 29 additional Grain Train cars to help meet demand

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

The economic downturn has not significantly affected Washington's agriculture grain shippers. Use of the state's Grain Train cars was much higher in 2010 compared to the third quarter of 2009 and 2008. WSDOT recently purchased 29 additional grain cars for the fleet to meet the increased demand for services. There were 495 carloads shipped in the third quarter of 2010 compared to 381 in the third quarter of 2009 and 291 for 2008.

Produce rail car utilization down compared to pre-recession levels

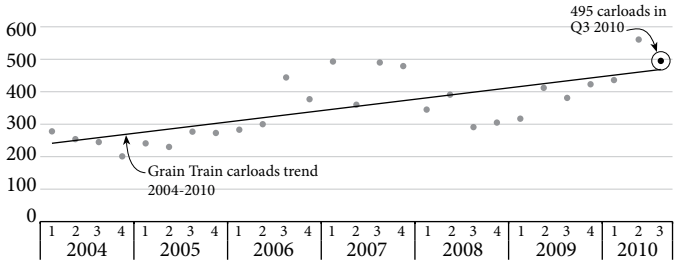
In 2006, the Legislature authorized WSDOT to provide a pool of refrigerated rail cars to haul perishable agricultural commodities. The program began operation in 2006 using a federal grant and state funds. The produce cars are used by shippers in Washington to transport produce throughout the U.S.

A total of 743 shipments have been made since the program began in 2006, resulting in an average utilization ratio of 54%. The utilization ratio has decreased from 65% in 2008 to 41% through September 2010. Unlike grain shipping, produce shipping in Washington has been impacted by the recession in both the national and state's economies.

The produce rail cars are used to ship frozen fruits, fresh and frozen potatoes, frozen meat, and frozen vegetables. Frozen vegetables have been the most heavily shipped products through this program, at 71% of all produce types.

Washington State Grain Train carloads

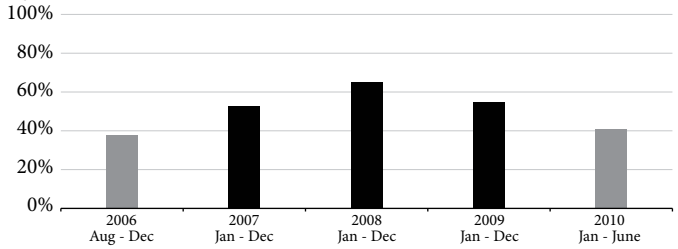
Carloads per quarter, 2004 - 2010



Data source: WSDOT State Rail and Marine Office.

Produce rail car average monthly utilization rate

Percent of time produce cars are in operation for month
August 2006 to June 2010

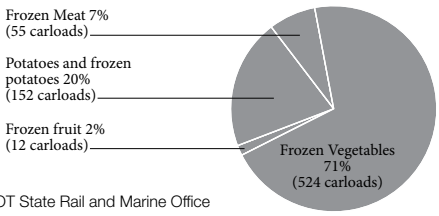


Data source: WSDOT State Rail and Marine Office.

Note: Utilization rate = monthly carloads shipped/monthly cars available. 2006 and 2010 data are not for complete years.

Produce rail car shipments by product

August 2006 to September 2010



Data source: Compiled by WSDOT State Rail and Marine Office from data reports of Rail Logistics.

Stewardship

Statewide policy goal

To continuously improve the quality, effectiveness, and efficiency of the transportation system.

WSDOT's business direction

To enhance WSDOT's management and accountability processes and systems to support making the right decisions, delivering the right projects, and operating the system efficiently and effectively in order to achieve the greatest benefit from the resources entrusted to us by the public.

In this section

See also

Worker Safety 2

Special Report on Federal Recovery Act-funded Projects

Recovery Act-funded Projects Overview

Recovery Act Highlights

- More than two-thirds (71.7%) of the Recovery Act highway projects were complete as of September 30, 2010.
- WSDOT and local governments met a September 30, 2010 deadline to obligate all Recovery Act highway and transit funds.
- Employees have earned over $130 million in payroll on local and state Recovery Act highway projects through September 30, 2010.
- In September, construction began on Recovery Act TIGER projects in Spokane and Seattle.
- The U.S. DOT awarded three additional grants totaling $45 million to Washington projects in the TIGER II program in October.
- All 28 state Recovery Act-funded rumble strip projects are complete, including 11 finished in September.
- WSDOT continues to work with the Federal Railroad Administration to implement the high-speed rail program.

For more information on Recovery Act-funded projects please visit www.wsdot.wa.gov/funding/stimulus and www.wsdot.wa.gov/funding/stimulus/passengerrail.htm

The 2009 American Recovery and Reinvestment Act (Recovery Act) provided Washington with more than $1 billion in transportation funds to preserve and expand the transportation system while helping create and retain jobs during the national recession. Washington and its local governments received $492 million for highway projects, $179 million for rail projects and won competitive grants for $590 million for high speed rail projects and $65 million in TIGER grants for road projects in Seattle and Spokane.

Through September 30, 2010, WSDOT and local governments have completed more than 150 highway projects, and certified 75 more to use the remaining funds. In the quarter, WSDOT completed preservation projects on I-5, US 195, US 97, SR 503, and SR 26, and built a new passing lane on US 97, while local governments completed more than 20 projects.

All Washington Recovery Act highway funds now obligated

WSDOT met a September 30 deadline to finish obligating all surplus Recovery Act dollars to new or existing stimulus projects. In all, 219 individual projects and two statewide programs to install median cable barriers and centerline rumble strips have been certified to receive Federal Highway Administration (FHWA) Recovery Act funds.

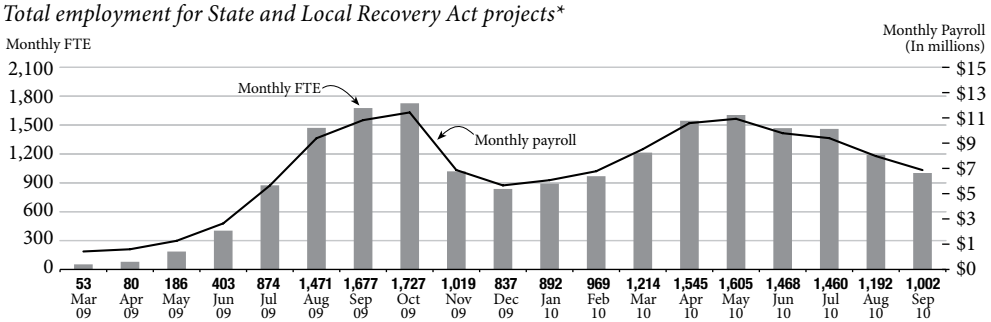
WSDOT and local governments have taken advantage of low bids on stimulus projects to add 40 projects to the original list of 179 individual projects and two statewide programs. Twenty-one of these additional Recovery Act projects are now complete.

As work has now been completed on over 70% of the Recovery Act highway projects, construction crews continue working to deliver high priority projects across the state, including interchange improvements to I-5 in Clark County and I-82 in Yakima County, as well as new I-5 HOV lanes in Pierce County and the I-405/NE 8th to SR 520 – Bellevue Braids project in King County.

Between July 1 and September 30, workers on FHWA Recovery Act projects earned $24.2 million working more than 632,000 hours on the job. To date, projects receiving FHWA stimulus funds have provided more than $130.1 million in payroll on state and local projects. Employees have worked more than 3.4 million hours on the projects since the Recovery Act's passage in February 2009. With more projects completed and fall weather taking hold, hours and payroll related to highway stimulus projects are expected to decline.

Recovery Act employment

*Total employment for State and Local Recovery Act projects**



* Due to the nature of construction work and firms working on multiple ARRA projects, a count of the number of employees may include double counting (employees working on multiple projects) and cannot be used as a "head count" of individual employees. Federal guidelines direct states to report full time equivalents (FTE) employed by state and local Recovery Act projects. WSDOT calculated these numbers based on a standard 2,080 hour work year which is equivalent to 173 hours each month.

Recovery Act Progress Summary

Recovery Act-funded highway projects through September 30, 2010

Number of projects by jurisdiction; dollars in millions

Project information	State	Local	Total	Notes
Individual highway projects	49	170	219	State projects specified in the Legislative Evaluation & Accountability Program (LEAP) list. Seventeen state and 23 local projects were added to the list and received federal approval. Six local projects are no longer receiving funds.
Certified by Governor	49	170	219	Governor must certify that projects were reviewed and represent an appropriate investment of taxpayer dollars. Including the two safety buckets separated below, 221 projects have been certified.
Projects advertised	49	165	214	
Contracts awarded/Under construction	47	162	209	
Projects completed	34	123	157	This is an increase from 123 reported complete as of June 30, 2010. The list of completed local projects is below.
Financial information	**State**	**Local**	**Total**	**Notes**
Recovery Act dollars provided	$340	$152	$492	$4 million in state enhancement funds provided to locals. While WSDOT controls $340 million, its total obligation authority was $344 million.
Recovery Act dollars obligated to date	$340	$152	$492	Obligated dollars represent projects approved by the Federal Highway Administration with an executed project agreement. All funds were obligated by the September 30, 2010 deadline.
Total cost of obligated projects	$828	$800	$1,628	Also includes non-Recovery Act leveraged fund sources.

Data source: WSDOT Capital Program Development & Management Office, Highways and Local Programs Office. Data as of September 30, 2010.

Note: Project totals are cumulative, so "advertised projects" include projects awarded and completed, and "projects awarded" include projects already completed.

Recovery Act-funded state highway 'bucket' projects through September 30, 2010

Number of bucket projects by type; dollars in millions

	Rumble strips	Cable median barrier	Total
Project status			
Certified by Governor	28	13	41
Projects advertised	28	13	41
Contracts awarded / Under construction	28	13	41
Projects completed	28	11	39
Financial information			
Funds available for buckets	$2.5	$7.1	$9.6
Recovery Act dollars obligated	$2.5	$7.1	$9.6
Total cost of obligated projects	$3.0	$11.5	$14.5

Data source: WSDOT Capital Program Delivery & Management Office.

Recovery Act project notes

Bucket projects – State projects using Recovery Act funds to address programmatic safety priorities statewide.

Newsletter – The latest stimulus project news is available online at www.wsdot.wa.gov/funding/stimulus/newsletter.

22 more Recovery Act local highway projects completed by September 30 2010

King County – 98th Street Phase 1
Ilwaco – Beards Hollow Overlook
Rainier – Minnesota Street
Battle Ground – Arterial Overlay
Mason County – Solar Lighted Intersections
Kelso – 13th Avenue Overlay
Annacortes – 6th Street Reconstruction
Rockford – Emma Street Sidewalks
Ferndale – 2nd Avenue
Clark County – NE 99th Street
Columbia County – Patit Creek Overlay
Lake Stevens – Lundeen Parkway
McCleary – Simpson Avenue Sidewalks
Vancouver – 2010 Arterial Overlay
Bellingham – Bakerview/Hannegan
Kalama – First Street Phase 2
Richland – First Street Improvements
Port Townsend – Upper Sims Way Improvements
Cowlitz County – Hall Road Reconstruction
Cheney – Spangle Road Improvements
Clallam County – Mt Pleasant Road
Cheney – 2010 Arterial Street Preservation

Special Report on Federal Recovery Act-funded Projects

Recovery Act Project Delivery

To date, WSDOT has completed 34 of the 49 state Recovery Act-funded individual highway projects, including eight between July 1 and September 30, 2010. The following summaries describe the costs, benefits, and performance for the projects completed in the quarter. The employment data is reported as of September 30, 2010, and though the projects are operationally complete, additional close-out work may take place. The number of employees is a best estimate of monthly employment, but, it is not an exact count and may include double-counting or exclude some workers.

SR 503/1 mile east of Rock Creek Bridge to Fredrickson Road – Paving (Cowlitz)

This project paved a 10-mile stretch of SR 503 in Cowlitz County between Rock Creek Bridge and Fredrickson Road.

Project's benefits: This project resurfaced a portion of the road that had deteriorated due to age and wear. The project strengthened and preserved the road surface to allow the highway to continue to serve freight and commuter traffic.

Project's highlights or challenges: The project was a Tier 3 project added in December of 2009 to use surplus Recovery Act funds due to low bids on earlier projects. The project was awarded to Kerr Contractors Inc. for $1.79 million, 26%, or $626,000, below the engineer's estimate.

Budget performance: This project was estimated to cost $2.45 million at completion, nearly $1 million below its estimated $3.44 million budget, in part due to the low bid. The project received $1.87 million in stimulus funds.

This project paved a 10-mile section of SR 503 in Cowlitz County.

Reported employment: An estimated total of 94 employees worked 9,684 hours and earned $361,830 in payroll.

Schedule performance: The project was completed on August 30, 2010, two months ahead of the anticipated schedule.

US 97/S of Chelan Falls – Passing Lane (Douglas)
US 97/Orondo – Northward – Paving – Chip Seal (Douglas)

The projects paved a 13-mile section of US 97 with chip seal and provided a new one-mile passing lane on US 97 near Chelan Falls.

Project's benefits: The projects restored a section of US 97 that needed new pavement and added a passing lane to provide an additional opportunity for motorists to pass in an area where there have been numerous passing-related collisions.

Project's highlights or challenges: The two projects were combined for construction efficiencies. The passing lane project was a Tier 2 project approved to receive surplus Recovery Act funds due to low bids on earlier projects. With additional surplus Recovery Act funds, the paving project was one of seven Tier 3 projects added in December 2009. The contract was awarded to Granite Northwest Inc. for $1.62 million, about $39,000, or 2% below the engineer's estimate.

Budget performance: The projects are estimated to cost $2.2 million at completion, below the original $2.97 million estimate. The projects received $1.52 million in Recovery Act funds and $134,000 in 2005 Transportation Partnership Account (TPA) gas tax revenue.

Reported employment: An estimated total of 87 employees worked 8,876 hours on this project and earned $299,922 in payroll.

Schedule performance: The project was completed on September 15, 2010, one month ahead of the anticipated schedule.

Recovery Act Project Delivery

SR 26/Royal City East – Chip Seal (Grant)
US 97/Okanogan to Riverside – Chip Seal (Okanogan)
US 97/Pateros South – Chip Seal (Okanogan)

These three projects provided new chip seal on two 15-mile sections of US 97 in Okanogan County and one 12-mile section of SR 26 in Grant County.

Projects' benefits: The projects repair existing roads and extend the life of three highway sections.

Project's highlights or challenges: These three projects were combined for construction efficiencies. All three projects were Tier 3 projects added in December of 2009 to use surplus Recovery Act funds due to low bids on earlier projects. The contract was awarded to Central Washington Asphalt Inc. for $2.82 million, about $22,000, or 1% above the engineer's estimate.

Budget performance: The engineer's estimate was revised before the advertisement, resulting in a lower project cost than originally anticipated, despite a bid above the engineer's estimate.

Reported employment: An estimated total of 105 employees worked 11,346 hours on this project and earned $386,707 in payroll.

Schedule performance: The projects were completed on August 23, 2010, a month ahead of the anticipated schedule.

I-5/Chamber Way Vicinity to Harrison vicinity – Paving (Lewis)

This project resurfaced the deteriorating asphalt on a section of I-5 to preserve and extend the life of the roadway between Chamber Way and Harrison Avenue in Lewis County.

Project's benefits: The project preserved a section of the interstate that handles heavy commuter and freight traffic.

Project's highlights or challenges: The Recovery Act funds added five miles to an already planned preservation project on I-5 and advanced the project's construction. The project was awarded to Lakeside Industries Inc. with a bid of $5.4 million, $1.2 million, or 18% below the engineer's estimate.

Budget performance: The Recovery Act portion of the project cost $2.79 million at completion, below the original approved budget of $4 million.

Reported employment: An estimated total of 132 employees worked 32,026 hours and earned $1,141,929 in payroll.

This project paved a section of I-5 in Lewis County. Recovery Act funds helped advance this project and extend it by five miles.

Schedule performance: The project was completed on July 22, 2010, one month behind schedule.

US 195/Idaho State Line to Colton – Paving (Whitman)

This project paved an 8.5-mile section of US 195 in Whitman County between Colton and the Idaho State line.

Project's benefits: The project repaved the road surface with hot mix asphalt to preserve the life of the highway.

Project's highlights or challenges: The project was a Tier 3 stimulus project added in December of 2009 to use surplus Recovery Act funds due to low bids on earlier projects. The project was awarded to Poe Asphalt Paving Inc. for about $2 million, about $719,000, or 26% below the engineer's estimate.

Budget performance: The project cost $2.73 million, less than originally anticipated, in part due to low bids. The project received $2.15 million in stimulus funds.

Reported employment: An estimated total of 142 employees worked 10,497 hours and earned $324,622 in payroll.

Schedule performance: The project was completed on July 13, 2010, more than three months ahead of schedule.

Special Report on Federal Recovery Act-funded Projects

TIGER Projects and High-Speed Rail

New TIGER II awards announced in October

In October, U.S. Transportation Secretary Ray LaHood announced names of 75 projects across the country that would receive TIGER II grants for transportation projects. Three Washington local governments won $45 million as part of this program, funded by $600 million in federal transportation funds in the 2010 budget.

- King County won a $34 million grant to help pay for the $131 million replacement of the South Park Bridge.
- The Port of Vancouver won a $10 million grant for its West Vancouver Freight Access Project.
- Franklin County won a $1,010,000 grant for the East Foster Wells Road Extension project.

Original TIGER projects now under construction

Mr. LaHood visited Washington in early September, attending the groundbreakings of two Washington projects that won $65 million in Recovery Act grants process earlier this year. In Seattle, the city began construction on its Mercer Corridor Improvements project, while WSDOT began building southbound lanes for the North Spokane Corridor in Spokane.

WSDOT receives new High-Speed Rail grants

Washington received $31 million more in October for high-speed rail improvements on the Pacific Northwest Corridor. The new grants, in addition to the $590 million announced in January, address specific projects to improve stations and route reliability.

Grants included $18.2 million for seismic retrofits to the King Street Station and its clocktower in Seattle and $9 million to convert a temporary platform at Sound Transit's Tukwila Station into a full-service station platform for commuter and Amtrak *Cascades* trains. Another $3.3 million was awarded to build sidings – passing lanes for trains – in Mount Vernon to improve speed and reliability for trains between Seattle and Vancouver, B.C. The remaining $400,000 will be spent developing a rail plan integrating freight and passenger service.

The latest grants were awarded as part of a $2.4 billion national investment in the 2010 budget for high-speed rail programs and required 20% matching funds from states. The awards were in addition to the $8 billion included in the 2009 Recovery Act.

WSDOT is administering the Recovery Act-funded High-Speed Rail program

In January, the Federal Railroad Administration (FRA) announced that Washington would receive $590 million in Recovery Act funds for the Pacific Northwest Rail Corridor. Projects funded by these grants will help grow the Amtrak *Cascades* service and improve on-time performance and reliability between Seattle and Portland.

The Recovery Act included $8 billion for President Obama's new High-Speed Intercity Passenger Rail (HSIPR) program, a significant federal investment in the nation's rail network. Thirteen corridors in 31 states were funded; Oregon received $8 million to upgrade Portland's Union Station and plan future track improvements.

While WSDOT proposed a series of projects in its 2009 grant applications, FRA did not identify specific projects for funding. States must resubmit project lists and negotiate funding, as described in the March 31, 2010, *Gray Notebook*. FRA must approve all projects for high-speed rail funds. The table below shows the status of WSDOT's 2009 HSIPR projects; several project start and finish dates are still awaiting completion of agreements between several parties.

Status of WSDOT's 2009 HSIPR grant projects

Project activities	Start	Finish
Advanced Signal System (corridor-wide)		
Final design, Construction	Jan 2011	Jan 2014
Cascades Corridor Reliability Upgrade - South		
Final design, Construction	Start–finish dates TBA	
D to M Street Connection Tacoma		
Construction	Oct 2010	Summer 2012
Storage Track (Everett)		
PE/NEPA, Final design, Construction	Jan 2011	Sept 2011
King Street Station track upgrades (Seattle)		
PE/NEPA, Right of way, Final design, Construction	Start–finish dates TBA	
Kelso Martin's Bluff – Kelso to Longview Jct. (Kelso)		
PE/NEPA, Right of way, Final design, Construction	Start–finish dates TBA	
Kelso Martin's Bluff – New Siding (Kalama)		
PE/NEPA, Right of way, Final design, Construction	Start–finish dates TBA	
Kelso Martin's Bluff – Toteff Siding (Kalama)		
PE/NEPA, Right of way, Final design, Construction	Start–finish dates TBA	
Amtrak Cascades New Train Set (Corridor-wide)		
PE/NEPA, Final design, Construction	Start–finish dates TBA	
Point Defiance Bypass (Tacoma)		
PE/NEPA, Final design, Construction	In progress	Jan 2016
Rail Bypass and W 39th St. Bridge (Vancouver)		
Final design, Construction	In progress	June 2013

Data source: WSDOT Rail & Marine Office.

Highway Construction: Nickel and TPA Project Delivery Performance Overview

As reported in last quarter's *Gray Notebook 38*, WSDOT has been refining the reporting format and information provided to communicate performance results in delivering the 2003 Nickel and 2005 TPA transportation packages in the Beige Pages.

Dashboard shows progress against 2010 Transportation Budget and includes individual programmatic and bucket projects

The 2010 Supplemental Transportation Budget signed into law by Governor Gregoire on March 30, 2010, directs WSDOT to develop and construct a specified list of projects in the course of the biennium. The greater part of these line-item projects were itemized in the original 2003 and 2005 Nickel and TPA programs. When the 2011 Transportation Budget is approved, the list and number of projects for the 2011-2013 biennium will very likely change the total project number and value of the program. WSDOT will provide details of the new budget in a future edition of the *Gray Notebook*.

The Beige Pages' tables show individual "unbundled" projects from programmatic budget items (such as the Bridges Seismic Retrofit Program), as well as subprojects within mega-projects (such as the Alaskan Way Viaduct project). The total combined number of projects in WSDOT's capital project delivery program is 421, as shown in the table below.

Capital projects executive summary of project number and value

Program element	Number of projects	Value of program ($ in thousands)
Projects completed in earlier biennia that are *not* included in the current Transporation Budget	70	$239,794
Projects completed that *are* included in the current Budget	212	$3,530,446
Subtotal of completed projects	**282**	**$3,769,331**
Projects included in the current Budget that are not yet completed	139	$11,767,250
Total	**421**	**$15,537,181**

Data source: WSDOT Capital Program Development & Management.

On time and on budget performance on individual projects remains steady

WSDOT's cumulative capital program delivery performance remained steady: 84% of all 212 projects have been delivered on time and on budget through the first quarter of fiscal year 2011 (FY 2011). Eleven projects were completed in the quarter ending September 30, 2010; all were completed within the current approved budget, and 82% were early or on time. One project was delayed one month to align its opening date with a ribbon-cutting ceremony organized by Snohomish County.

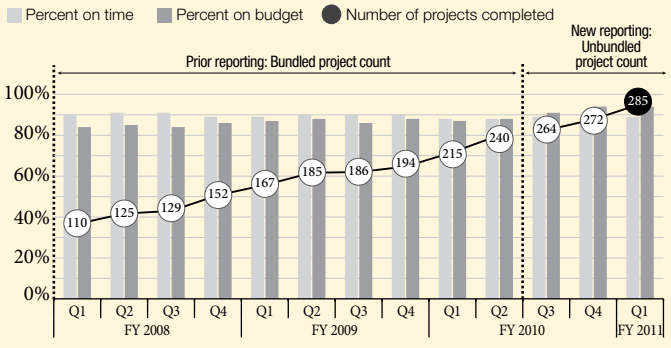
Fifty Nickel and TPA projects are currently under construction, with 36 of those projects advertised for construction in the biennium to date. No new projects were awarded in this quarter. Twenty-three projects are scheduled for advertisment for construction bids between October 1, 2010, and March 31, 2011; 78% of these will advertise on schedule.

Project Delivery Highlights

- WSDOT has completed 10 projects so far in the 2011-2013 biennium, and a total of 282 projects that were shown in previous or current Transportation Budgets.
- 89% of all Nickel and TPA projects were completed early or on time, an improvement of 2% on last quarter.
- 94% of Nickel and TPA completed projects combined were on or under budget, unchanged from last quarter.
- 84% of Nickel and TPA completed projects were both on time and on budget, an improvement of 1% on last quarter.
- For details of WSDOT's Federal Recovery Act-funded projects, please see pages 34-38.

Cumulative on time and on budget performance of Nickel and TPA projects

280 of 421 projects completed as of September 30, 2010



Data source: WSDOT Capital Program Development & Management.

WSDOT's Capital Project Delivery Program

Current 2011 Legislative Transportation Budget Performance Dashboard: Highways

Highway construction performance dashboard

As of September 30, 2010; Dollars in thousands

Combined Nickel and TPA programs	Number of projects	Value of program
Projects completed in earlier biennia that *are not* included in the current Transportation Budget	70	$239,485
Projects completed that *are* included in the current Transportation Budget	212	$3,530,446
Projects included in the current Transportation Budget but not yet completed	139	$11,767,250
Total number of projects[1] in Improvement & Preservation budget[2]	**421**	**$15,537,181**

Schedule and Budget Summary: Results of completed projects in the current Transportation Budget detailed on page 42-43.		**Combined Nickel & TPA**
Number of projects in current Transportation Budget completed to date: 2003 – September 30, 2010		**212**
Percent completed early or on time		89%
Percent completed under or on budget		94%
Percent completed on time and on budget		84%
Baseline estimated cost at completion		$3,530,446
Current estimated cost at completion		$3,479,410
Percent of total program over or under budget		-1% Under
Total number of projects completed in 2009-11 biennium to date	**68**	
Percent completed early or on time	93%	
Percent completed under or on budget	97%	
Percent completed on time and on budget	90%	
Baseline estimated cost at completion this biennium	$1,307,275	
Current estimated cost at completion this biennium	$1,258,738	

Advertisement Record: Results of projects entering into the construction phase or under construction detailed on pages 44-47.		**Combined Nickel & TPA**
Total cumulative number of projects in construction phase to date, 2003 – September 30, 2010		***50***
Percent advertised early or on time		80%
Total number of projects advertised for construction in 2009-11 biennium to date	***36***	
Percent advertised early or on time	92%	

Projects To Be Advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on page 48.	**Combined Nickel & TPA**
Total projects being advertised for construction bids October 1, 2010 – March 31, 2011	***23***
Percent on or better than anticipated advertisement schedule	78%

Budget status: 2009-2011 biennium *Dollars in thousands*		**WSDOT biennial budget**
Budget amount for 2009-2011 biennium		**$3,234,650**
Actual expenditures to date 2009-2011 biennium		$1,466,788
Total 2003 Transportation Funding Package (Nickel) expenditure	*$396,147*	
Total 2005 Transportation Partnership Account (TPA) expenditure	*$759,592*	
Total Pre-Existing Funds (PEF) expenditure[3]	*$311,049*	

Data source: WSDOT Capital Program Development & Management.

1. This project total has been updated to show "unbundled" projects which may have been previously reported in programmatic construction program buckets (such as Roadside Safety Improvements or Bridges Seismic Retrofit). See the June 30, 2010, *Gray Notebook 38*, page 55, for more details.
2. Per the 2005-2007 Transportation Budget, Section 603.
3. For full details of the PEF program, see pages 67-70

Current 2011 Legislative Transportation Budget Performance Dashboard: Rail and Ferries

Nine Nickel and six Transportation Partnership Account (TPA) rail construction projects have been delivered on time and on budget as of September 30, 2010, for $71.8 million. Seven projects (four Nickel-funded, three TPA-funded) in construction have award amounts of $32.2 million. No rail projects are planned to advertise before March 31, 2011.

To date, Ferries has completed five Nickel and one TPA construction projects, and two TPA-funded contracts (see note* below) have been awarded for $181 million. Additional Ferries construction projects are not planned for advertisement in this biennium. The award of a fourth ferry is pending, depending on future availability of funds.

Rail construction performance dashboard

As of September 30, 2010; Dollars in thousands

	Nickel (2003)	Transportation Partnership Account (TPA 2005)	Combined Nickel & TPA
Schedule, scope and budget summary: completed projects			
Cumulative to date, 2003 – September 30, 2010	9	6	15
% Completed early or on time	100%	100%	100%
% Completed within scope	100%	100%	100%
% Completed under or on budget	100%	100%	100%
% Completed on time and on budget	100%	100%	100%
Baseline estimated cost at completion	$45,907	$25,965	$71,872
Current estimated cost at completion	$45,907	$25,965	$71,872
% of total program on or under budget	0.0%Over	0.0%Over	0.0%Over
Advertisement record: projects under construction or entering construction phase			
Biennium to date, 2009-11			
Total advertised	4	3	7
% Advertised early or on time	100%	100%	100%
Total award amounts to date	$23,496	$8,728	$32,224
Advertisement schedule: projects now being advertised or planned to advertise			
October 1, 2010 through March 31, 2011			
Total being advertised for construction	0	0	0
% On schedule or earlier	100%	N/A	100%

Ferries construction performance dashboard

As of September 30, 2010; dollars in thousands

Schedule, scope and budget summary: completed projects			
Cumulative to date, 2003 – September 30, 2010	5	1	6
% Completed early or on time	100%	0%	100%
% Completed within scope	100%	0%	100%
% Completed under or on budget	100%	0%	100%
% Completed on time and on budget	100%	0%	100%
Baseline estimated cost at completion	$18,382	$77,000	$95,382
Current estimated cost at completion	$18,382	$77,000	$95,382
% of total program on or under budget	0.0% Over	N/A	0.0% Over
Advertisement record: projects under construction or entering construction phase			
Cumulative to date, 2003 – September 30, 2010	0	2	2
% Advertised early or on time	N/A	100%	100%
Total award amounts to date	N/A	$181,397	$181,397 *

Data source: WSDOT Capital Program Development & Management. N/A means not applicable.

* Note: The advertisement record includes the contract for the "144 Auto class ferry" furnished equipment. This already-purchased equipment has been accepted and currently is in storage: it will be installed during future, at-present unfunded, ship construction. The overall contract remains open to negotiate the training and installation of the equipment. The advertisement record also includes two contracts in the "64 Auto class ferry" vessel program: the first contract covers building the first ship, the second contract covers building the second and third vessels.

WSDOT's Capital Project Delivery Programs

Schedule and Budget Summary

Biennial summary of all projects completed 2003-2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

	Fund type	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost	On budget	Completed on time, on budget
Cumulative to date								
2003-2005 Biennium summary See *Gray Notebook* for quarter ending September 30, 2005, for project listing May be accessed at www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.	19 Nickel	4 early 15 on time	6 early 13 on time	19	$118,575	$118,450	9 under 8 on budget 2 over	17 on time and on budget
2005-2007 Biennium summary See *Gray Notebook* for quarter ending June 30, 2007, for project listing May be accessed at www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.	50 Nickel 23 TPA	20 early 48 on time 5 late	49 early 16 on time 8 late	73	$650,986	$652,896	27 under 33 on budget 13 over	53 on time and on budget
2007-2009 Biennium summary See *Gray Notebook* for quarter ending June 30, 2009, for project listing May be accessed at www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.	42 Nickel 60 TPA	18 early 62 on time 22 late	45 early 43 on time 14 late	102	$1,764,364	$1,769,732	52 under 38 on budget 12 over	80 on time and on budget

To view projects completed in the 2009-2011 biennium, please see Gray Notebook 35 for the quarter ending September 30, 2009, Gray Notebook 36 for the quarter ending December 31, 2009, Gray Notebook 37 for the quarter ending March 31, 2010, and Gray Notebook 38 for the quarter ending June 30, 2010.

May be accessed at www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.

Schedule and Budget Summary

11 projects completed as of September 30, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at the time of completion, dollars in thousands

Project description	Fund type	On time advertised	On time completed	Baseline estimated cost	Current estimated cost at completion	On budget	Completed on time and on budget
SR 17/Othello Vic to Soap Lake Vic - Install Lighting (Adams, Grant)	TPA	√	√	$590	$194	√	√
SR 150/W of Chelan - Install Lighting (Chelan)	TPA	√	√	$299	$182	√	√
SR 971/S Lakeshore Rd - Install Lighting (Chelan)	TPA	√	√	$121	$81	√	√
US 97/S of Chelan Falls - Add Passing Lane (Douglas)	TPA	√	√	$1,570	$919	√	√
SR 11, SR 525, and SR 900 - Roadside Safety Improvements (King, Skagit, Snohomish) This project was one of several in the WSDOT programmatic budget line item Statewide Roadside Safety Improvements Program	TPA	√	√	$800	$686	√	√
SR 169, SR 410, SR 525, SR 900 and SR 520 - Roadside Safety Improvements (King) This project was one of several in the WSDOT programmatic budget line item Statewide Roadside Safety Improvements Program	TPA	√	√	$1,200	$1,105	√	√
SR 142/Roadside Safety - Roadside Improvements (Klickitat) This project was one of several in the WSDOT programmatic budget line item Statewide Roadside Safety Improvements Program	TPA	√	√	$2,691	$1,840	√	√
SR 9/Lake Stevens Way to 20th St SE - Improve Intersection (Snohomish) Completion date was delayed one month to align with a Snohomish County ribbon cutting ceremony.	TPA	√		$14,016	$12,911	√	
US 12/Frenchtown Vicinity to Walla Walla - Add Lanes (Walla Walla)	Nickel/ TPA	√		$56,972	$54,175	√	
US 12/Tieton River West Crossing - Replace Bridge (Yakima) Advertisement date was delayed due to extra time needed to obtain the Joint Aquatic Resources Permit from county and local agencies.	TPA		√	$12,096	$11,942	√	
US 12/Tieton River East Crossing - Replace Bridge (Yakima) Advertisement date was delayed due to extra time needed to obtain the Joint Aquatic Resources Permit from county and local agencies.	TPA		√	*Combined with project above for construction efficiencies.*			

Data Source: WSDOT Capital Program and Delivery Management.

WSDOT's Capital Project Delivery Program

Advertisement Record

50 projects in construction phase as of September 30, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
Cumulative to date						
Concrete Rehabilitation Program	Nickel					
Although this budget line item is active, no projects are currently planned for construction in the 2009-2011 biennium.						
SR 285/George Sellar Bridge — Additional EB Lane (Chelan, Douglas)	TPA	Late	Jan-09	Max J. Kuney Company	Mar-11	$12,885
Advertisement date was delayed one month to address additional bridge analysis, design, and detailing requirements and to purchase railroad easements.						
SR 503/Gabriel Rd Intersection (Clark)	TPA	√	Oct-07	Nutter Corp. dba Nutter Underground Utilities Co. Inc	Nov-10	
Presence of potential hazardous waste site raised construction costs to a point exceeding the projected benefits of building the right turn lane. Project scope reduced to low-cost operational enhancements during the 2007 legislative session.						
I-5/SR 501 Ridgefield Interchange — Rebuild Interchange (Clark)	TPA	Early	Jun-09	Tapani Underground, Inc.	Nov-11	$15,795
This project has been identified to receive $8.2 million in federal Recovery Act stimulus funds.						
I-405/South Renton Vicinity Stage 2 — Widening	Nickel/ TPA					
• I-405/SR 167 to SR 169 — NB Widening (King)	TPA	√	Oct-08	I-405 Corridor Design Builders	Dec-10	$83,599
• I-405/SR 167 to SR 169 — Add new SB Lane (King)	Nickel	√	*Combined with project above for construction efficiencies.*			
• I-405/SR 515 — New Interchange (King)	TPA	√	*Combined with project above for construction efficiencies.*			
SR 520/W Lake Sammamish Parkway to SR 202, Stage 3 — Widening (King)	Nickel	Late	Jan-07	Tri-State Construction, Inc.	Sep-11	$9,988
The advertisement for the flyover ramp portion of this project was delayed to January 2007, due to stormwater and wetland design changes. The flyover ramp is currently open to traffic and the widening portion of the project was advertised in October 2008.						
I-405/NE 8th St to SR 520 Braided Ramps — Interchange Improvements (King)	TPA	√	Mar-09	Guy F. Atkinson Construction, LLC	Dec-12	$107,500
This project has received federal Recovery Act stimulus funds.						
I-90/Eastside Bridges — Seismic (King)	TPA	√	Oct-08	Imco General Construction, Inc.	Sep-11	$5,999
This is a project within the Bridge Seismic Retrofit Program.						
SR 203 — Roadside Safety Improvements (King)						
This is a project within the Statewide Roadside Safety Improvements Program.						
SR 99/Alaskan Way Viaduct — Replacement (King)						
• SR 99/S Massachusetts St to Union St — Electrical Line Relocation	TPA	√	May-08	Frank Coluccio Construction	Nov-09	$17,040
• SR 99/S Holgate St to S King St — Viaduct Replacement	TPA	√	Oct-09 May-10	Signal Electric, Inc. Skanska USA Civil West	Sep-13 Sep-13	$4,902 $114,569
This subproject has several contract components; the contract awarded to Skanska USA in May 2010 begins removal of the southern portion of the viaduct.						
• SR 99/Battery St Tunnel — Fire and Safety Improvement	TPA	√	Nov-09	Signal Electric, Inc.	Nov-10	$2,409
Additional sign-bridges have some elements that were not initially planned. New environmental right-of-way siting work and review was needed.						
SR 99/SR 518 Interchange Bridge Crossing Seismic Retrofit (King)	TPA	Late	Mar-10	Mid-Mountain Contractors, Inc.	Jun-10	$762
This is a WSDOT project that is tied to the Sea-Tac Airport rental parking facility which is being administered by the Port of Seattle. Due to the failure of the bond market, the Port of Seattle wasn't able to secure funding for the Sea-Tac Airport Rental Parking Facility project and the advertisement was delayed. Funding has been secured and the project was scheduled to advertise December 2009 but was delayed an extra quarter to March 2010. This is a project within the Bridge Seismic Retrofit Program.						
SR 99/Aurora Ave N Corridor – Add HOV Lanes	TPA	√	Jun-05		Jun-11	
This project represents WSDOT's contribution to a City of Shoreline project.						

Advertisement Record

50 projects in construction phase as of September 30, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
SR 520/I-405 Vicinity Seismic Retrofit (King) This is a project within the Bridge Seismic Retrofit Program.	TPA	√	Mar-10	Guy F. Atkinson Construction, LLC	Sep-11	$4,083
I-90/Snoqualmie Pass East — Hyak to Keechelus Dam — Corridor Improvement (Kittitas)						
• I-90/Snoqualmie Pass East Phase 1A Hyak to Crystal Springs — Detour (Kittitas)	TPA	Early	Feb-09	KLB Construction, Inc.	Oct-09	$3,298
• I-90/Snoqualmie Pass East Phase 1B Hyak to Snowshed Vicinity — Add Lanes and Bridges (Kittitas)	TPA	√	Nov-09	Max J. Kuney Co.	Oct-13	$76,699
I-5/Tacoma HOV Improvements (Pierce)	Nickel/ TPA					
• I-5/Port of Tacoma Rd to King Co Line — Add HOV Lanes (Pierce)	Nickel	Late	Jun-09	Tri-State Construction, Inc.	Nov-11	$31,015
Advertisement date was delayed due to design challenges associated with stormwater and floodplain issues; a formal consultation with US Fish & Wildlife (USFW) and National Oceanic & Atmospheric Administration (NOAA) was required. Inflation factor applied in early July 2008 added $6.6M to project cost estimate. This project has received federal Recovery Act stimulus funds.						
• I-5/SR 16 Interchange — Rebuild Interchange (Pierce)	TPA	√	Jul-08	Guy F. Atkinson Construction, Llc	Dec-11	$119,925
I-5/Ardena Road Bridge — Upgrade Bridge Rail (Pierce)	Nickel	Late	Jun-09		Nov-11	
This project was combined for construction with I-5/Port of Tacoma Rd to King Co Line — HOV. This is a project within the Bridge Rail Retrofit Program.						
I-5/236th St SW Bridge — Seismic Retrofit (Snohomish) This is a project within the Bridge Seismic Retrofit Program.	TPA	√	Dec-08	Midmountain Contractors, Inc.	Feb-11	$448
SR 532/Camano Island to I-5 Corridor Improvements (Snohomish, Island)	TPA					
• SR 532/270th St NW to 72nd Ave NW — Improve Safety (Snohomish)	TPA	Late	Oct-08	Parsons/Kuney Joint Venture	Dec-10	$50,416
This is a design-build project. Advertisement date was delayed due to additional time needed to acquire environmental permits and right-of-way parcels.						
• SR 532/Sunrise Blvd to Davis Slough — Improve Safety (Island, Snohomish)	TPA	Early	*Combined with project above for construction efficiencies.*			
• SR 532/General Mark W. Clark Memorial Bridge — Improve Safety (Snohomish)	TPA	Early	*Combined with project above for construction efficiencies.*			
• SR 532/64th Ave NW to 12th Ave NW — Improve Safety (Snohomish)	TPA	Early	*Combined with project above for construction efficiencies.*			
SR 532/General Mark W. Clark Memorial Bridge — Replace Bridge (Snohomish)	TPA	Early	*Combined with project above for construction efficiencies.*			
I-405/Kirkland Vicinity Stage 2 — Widening (Snohomish, King)	Nickel/ TPA					
• I-405/NE 195th St to SR 527 — NB Widening (Snohomish, King)	TPA	Early	May-09	Kiewit Pacific Co.	Jun-10	$19,263
US 395/NSC-US 2 to Wandermere and US 2 Lowering — New Alignment (Spokane)	Nickel	√	Aug-08		May-11	
• NSC — US 2 to Wandermere Vicinity (Spokane)	Nickel		May-09	Graham Construction & Management, Inc.	May-11	$37,541
• US395/NSC — US 2 Lowering (Spokane)	Nickel		Aug-08	Graham Construction and Management, Inc.	May-11	$42,849

WSDOT's Capital Project Delivery Program

Advertisement Record

50 projects in construction phase as of September 30, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
US 395/NSC-Francis Ave to Farwell Rd — New Alignment (Spokane)	Nickel	Late	Jan-04		Dec-11	
The advertisement delay on this project was due to delays in the right-of-way acquisition.						
• NSC-Farwell Road Lowering	Nickel		Jan-04	Max J. Kuney Company	Jul-05	$4,976
• NSC-Gerlach to Wandermere — Grading — Construction	Nickel		Nov-04	KLB Construction Inc.	Sep-06	$9,987
• NSC-Francis Avenue to US 2 Structures — Rebid	Nickel		May-06	Max J. Kuney Company	Jul-08	$17,236
• US 395/NSC-Freya to Fairview Vic — Grading and Structures	Nickel		Jan-07	Steelman-Duff	Apr-09	$10,571
• US 395/NSC-Freya St to Farwell Rd — PCCP Paving	Nickel		Feb-07	Acme Concrete Paving	Aug-09	$19,490
• US 395/NSC — BNSF RR Tunnel	Nickel		Sep-07	Scarsella Bros. Inc.	Aug-09	$17,295
• US 395/NSC — Freya to Farwell Rd - SB Additional Lanes	TIGER/ Nickel		Jun-10	Graham Construction & Management Inc.	Jun-10	$21,456
This project was reported as complete in *Gray Notebook 35* - September 30, 2009. Subsequent to that date, the project received a TIGER grant from the American Recovery and Reinvestment Act. Those funds were combined with remaining Nickel funds to add the project shown above.						
I-5/Grand Mound to Maytown Stage One — Add Lanes (Thurston)	Nickel	√	Dec-07	Scarsella Bros., Inc.	Jun-10	$61,495
SR 542/Nooksack River — Redirect River and Realign Roadway (Whatcom)	TPA	Late	Jan-09	Tapani Underground, Inc.	Oct-11	$395
Ad date delay due to additional time needed to reach a settlement on a privately owned right-of-way parcel that is required for the project. The project was advertised in May, 2008 and then pulled from Ad. FHWA RW certification requirements were not met prior to bid opening. Advertisement was rescheduled for Jan, 2009 to keep the in-water construction work within the July 1 to September 30th fish window.						
Biennium to date (2009-11)						
SR 26/W of Othello — Add Passing Lane (Adams)	TPA	Early	Dec-09	Selland Construction, Inc.	Oct-10	$609
SR 503/Lewisville Park Vicinity — Add Climbing Lane (Clark)	TPA	√	Jan-10	Rotschy, Inc.	Nov-10	$3,702
I-5/SR 432 Talley Way Interchanges — Rebuild Interchanges (Cowlitz)	TPA	√	Sep-09	Northwest Construction, Inc.	Dec-11	$20,529
SR 28/Jct US 2 and US 97 to 9th St, Stage 1 — New Alignment (Douglas)	TPA	Late	Sep-09	Selland Construction, Inc.	Oct-12	$735
The advertisement date was advanced so that construction on the irrigation canal could occur during the 2009/10 winter while the irrigation water is shut off.						
I-5/Ship Canal Bridge — Noise Mitigation Study (King)	TPA	√	Dec-09	Penhall Company	Oct-10	$1,560
The design is based on an acoustical optimization model recommended by the acoustic Expert Review Panel (ERP). Added design work was needed for the team of acoustical and structural engineering experts work for updated design scope, final noise modeling, structural capacity analysis, and final design. Because of the delay in finalizing a design concept, the project advertisement date was changed from April 2009 to December 2009. As a consequence, the project's operationally complete date has been delayed from August 2010 to October 2010.						
SR 203/Corridor Safety Improvements (King)	TPA	√	Nov-09	Tri-State Construction	Nov-10	$2,969
Lake Washington Congestion Management (King)	TPA	√	May-09	Elcon Corporation	Mar-11	$ 34,450
Portions of this project are now in construction, but were not previously captured in Gray Notebook 'Projects to be Advertised' tables. If necessary, new subprojects will be recorded in the advertisement pipeline tables in future editions.						
SR 520/ Bridge Replacement and HOV (King)	TPA					
• SR 520 Pontoon Construction (King)	TPA		Aug-09	Kiewit-General, A Joint Venture	4/30/2014	$367,330

Advertisement Record

50 projects in construction phase as of September 30, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at completion, dollars in thousands

Project description	Fund type	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
I-5/SR 161/SR 18 — Interchange Improvements (King)	Nickel/ TPA	√	Apr-10	Mowat Construction, Inc.	Oct-12	$50,779
The award amount for this project was incorrectly reported as $3,702 in *Gray Notebook 38*.						
SR 303/Port Washington Narrows Bridge — Upgrade Bridge Rail (Kitsap)	Nickel	√	May-10	C. A. Carey Corp.	Oct-10	$1,170
This is a project within the Bridge Rail Retrofit Program.						
SR 305/Unnamed Tributary to Liberty Bay — Fish Barrier (Kitsap)	TPA	√	Apr-10	Frank Coluccio Construction	Dec-10	$3,848
This is a project within the Fish Passage Barriers Program. The award amount for this project was incorrectly reported as $1,623 in *Gray Notebook 38*.						
US 97/Blewett Pass — Add Passing Lane (Kittitas)	TPA	√	May-10		Oct-10	
SR 410/214th Ave E to 234th — Add Lanes (Pierce)	TPA	Late	Dec-09	J. R. Hayes & Sons	Sep-10	$6,784
The advertisement and operationally complete dates have been delayed to allow time for continued environmental compliance issues. Right-of-way plans were revised for new pond sites, which required restarting the cultural resources process.						
SR 11/I-5 Interchange-Josh Wilson Rd — Rebuild Interchange (Skagit)	TPA	√	Nov-09	Interwest Construction, Inc.	Dec-10	$4,795
SR 203/Corridor Safety Improvements (Snohomish)	TPA	√	Nov-09	Tri-State Construction	Nov-10	$2,969
SR 9/Lundeen Parkway to SR 92 — Add Lanes and Improve Intersections (Snohomish)	TPA	√	Mar-10	Granite Construction Co.	Dec-11	$10,921
SR 522/Snohomish River Bridge to US 2 — Add Lanes (Snohomish)	Nickel	√	Apr-10	Scarsella Bros., Inc.	Nov-14	$15,514
I-5/196th St (SR 524) Interchange — Build Ramps (Snohomish)	TPA		Apr-10	Northwest Construction Inc.	Aug-11	$18,727
SR 529/Ebey Slough Bridge — Replace Bridge (Snohomish)	TPA		Apr-10	Granite Construction Co.	Apr-13	$21,541
SR 510/Yelm Loop — New Alignment (Thurston)	TPA	Early	Dec-09	Scarsella Bros., Inc.	Oct-10	$4,147
I-5/Mellen Street interchange to Grand Mound interchange — Add Lanes (Thurston, Lewis)	TPA					
• I-5/Blakeslee Junction Railroad Crossing to Grand Mound I/C — Add Lanes (Thurston, Lewis)	TPA	√	Feb-10	Tri-State Construction	Dec-11	$19,731
• I-5/Mellen St Interchange — Interchange Improvements (Thurston, Lewis)	TPA		Apr-11		Dec-13	
• I-5/ Mellen Street to Blakeslee Junction — Add Lanes, I/C Improvements (Thurston, Lewis)	TPA		Apr-12		Dec-14	
I-5/36th St Vicinity to SR 542 Vicinity — Ramp Reconstruction (Whatcom)	TPA	√	May-10	Vetch Construction	Oct-11	$4,440
SR 27/Pine Creek Bridge — Replace Bridge (Whitman)	TPA	√	Oct-09	Thompson Bros. Excavating, Inc.	Nov-10	$2,301
I-82/Valley Mall Blvd Interchange — Rebuild Interchange (Yakima)	TPA	√	Nov-09	Apollo, Inc.	Oct-11	$19,080
This project received federal Recovery Act stimulus funds.						
SR 22/I-82 to Toppenish — Safety Improvements (Yakima)	Nickel	√	Oct-09	Steele Trucking, Inc.	Nov-11	$143
The completion date for the second stage of this project has been delayed one year due to work that could not be performed inside the irrigation window.						
SR 823/Selah Vicinity — Re-route Highway (Yakima)	TPA	√	Dec-09		Jul-12	
The project will be readvertised in fall 2010 due to right of way issues. Its completion date has been delayed one year to 2012.						

Data source: WSDOT Capital Program Development and Management.

WSDOT's Capital Project Delivery Programs

Projects To Be Advertised

23 Projects in the delivery pipeline for October 1, 2010, through March 31, 2011

Nickel & Transportation Partnership Account (TPA) projects now being advertised for construction or planned to be advertised.
Costs estimated at completion, dollars in thousands

Project description	Fund type	Original planned ad date	Current planned ad date	On schedule	Baseline estimated cost at completion	Current estimated cost at completion
US 2/Wenatchee River Bridge - Replace Bridge (Chelan)	TPA	Mar-11	Mar-11	√	$11,739	$12,242
US 2/Chiwaukum Creek - Replace Bridge (Chelan)	TPA	Mar-11	Mar-11	√	$8,367	$8,567
SR 500/St Johns Blvd - Build Interchange (Clark)	TPA	Apr-10	Jan-11		$57,241	$57,401
Advertisement delayed due to design revisions which required revisiting environmental documentation and negotiation with FHWA and applying for new permits.						
SR 14/Camas Washougal - Add Lanes and Build Interchange (Clark)	TPA	Apr-10	Dec-10		$57,000	$57,000
Delays in obtaining local agency permit and right of way certification has delayed the advertisement date.						
SR 243/S of Mattawa - Install Lighting (Grant)	TPA	Nov-10	Dec-10	√	$246	$260
US 101/Hoh River (Site #2) - Stabilize Slopes (Jefferson)	TPA	Jan-11	Jan-11	√	$9,617	$9,716
SR 99/Aurora Ave-George Washington Memorial Bridge - Seismic (King)	TPA	Jan-11	Jan-11	√	$7,746	$16,346
SR 518/Bridges - Seismic (King)	TPA	Mar-11	Mar-11	√	$7,831	$8,786
US 101/Lynch Road - Safety Improvements (Mason)	TPA	Jan-11	Jan-11	√	$1,000	$1,000
SR 161/24th St E to Jovita - Add Lanes (Pierce)	Nickel	Apr-10	Nov-10		$37,600	$39,860
Advertisement delayed to allow time for WSDOT to find another site for wetland mitigation.						
SR 162/Puyallup River Bridge - Replace Bridge (Pierce)	TPA	Mar-11	Mar-11	√	$15,004	$15,662
SR 11/Chuckanut Park and Ride - Build Park and Ride (Skagit)	TPA	May-11	Dec-10	√	$12,991	$11,676
SR 530/Sauk River Bank Erosion - Realign Roadway (Skagit)	TPA	Oct-10	Dec-10	√	$8,022	$7,155
SR 9/SR 531-172nd St NE - Improve Intersection (Snohomish)	TPA	Jan-11	Jan-11	√	$14,731	$15,448
SR 532/Pilchuck Creek Tributary - Fish Barrier (Snohomish)	TPA	Feb-11	Feb-11	√	$731	$737
US 2/Wagley`s Creek Tributary (Sultan Mill Pond) - Fish Passage (Snohomish)	TPA	Feb-11	Feb-11	√	$779	$885
SR 9/212th St SE to 176th St SE, Stage 3 - Add Lanes (Snohomish)	Nickel	Mar-11	Mar-11	√	$87,289	$87,288
I-5/14th Ave Thompson Pl - Add Noise Wall (Thurston)	TPA	Nov-10	Nov-10	√	$4,435	$3,235
I-5/Queets Dr E Tanglewild - Add Noise Wall (Thurston)	TPA	Nov-10	Nov-10	√	$3,135	$2,346
I-5/Capitol Blvd Bridge - Upgrade Bridge Rail (Thurston)	Nickel	Jul-10	Oct-10		$295	$1,038
US 12/SR 124 Intersection - Build Interchange (Walla Walla)	TPA	Mar-10	Oct-10		$24,014	$24,974
Advertisement delayed while awaiting finalized land exchange with USFW.						
SR 542/Everson Goshen Rd Vic to SR 9 vicinity - Intersections Improvements (Whatcom)	TPA	Jan-11	Jan-11	√	$7,670	$7,720
SR 548/Terrell Creek - Fish Passage (Whatcom)	TPA	Feb-11	Feb-11	√	$576	$2,783

Data source: WSDOT Capital Program Development and Management.

Original 2003 and 2005 Transportation Funding Packages (Nickel & TPA) Performance Dashboard

Each quarter, WSDOT provides a detailed update on the delivery of the highway capital programs in the *Gray Notebook* and on the web (at www.wsdot.wa.gov) through the Project Pages and Quarterly Project Reports.

The dashboards below and on page 50 provide a status report on how WSDOT is delivering the program compared to the original Legislative intent as presented in the 2003 and 2005 LEAP (Legislative Evaluation & Accountability Program) lists. These dashboards include all budget items including preconstruction and environmental studies that were included in the original funding packages.

The first two columns in the first table show the total number of projects and the percentage of those projects that are complete, under way, scheduled to start in the future, or affected by a Legislatively approved change of project scope.

The second table presents a budget update showing original planned budgets and the current plan or actual expenditure.

In both tables, the next sets of columns break out the program by category: highways, ferries, and rail.

Project delivery update: Original 2003 Transportation Funding Package (Nickel)

Status as of September 30, 2010

	Total program		Highways		Ferries		Rail	
Project number and phase	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**
Total number of projects	**156**		**127**		**5**		**24**	
Completed projects	106	68%	95	75%	1	20%	10	42%
Total projects under way	40	26%	32	25%	3	60%	5	21%
In preconstruction phase	*20*		*18*		*2*		*0*	
In construction phase	*20*		*14*		*1*		*5*	
Projects starting in the future	3	2%	0	0%	0	0%	3	13%
Projects deferred, or deleted from program	7	4%	0	0%	1	20%	6	25%
Number of Legislatively approved scope changes	*20*	*13%*	*18*	*14%*	*0*	*0%*	*2*	*8%*
Preconstruction starts within 6 months	*0*		*0*		*0*		*0*	
Construction starts within 6 months	*2*		*2*		*0*		*0*	

Data source: WSDOT Capital Program Development & Management.
Note: Totals do not include Local Programs projects.

Project budget delivery update: Original 2003 Transportation Funding Package (Nickel)

Status as of September 30, 2010; Dollars in thousands

	Total program		Highways		Ferries		Rail	
	Budget	**Percent of total**	**Budget**	**Percent of program**	**Budget**	**Percent of program**	**Budget**	**Percent of program**
Total original Legislative planned budget	**$3,887,483**		**$3,380,124**		**$297,851**		**$209,508**	
Original plan, 2003 through 2007-09 biennium	$2,450,750	63%	$2,102,667	62%	$219,285	74%	$128,798	61%
Actual expenditures, 2003 through 2007-09 biennium	$2,641,045	68%	$2,469,953	73%	$80,904	27%	$90,188	43%
Original plan through 2009-11 biennium	$3,278,038	84%	$2,813,701	83%	$293,919	99%	$170,418	81%
Current plan through 2009-11 biennium	$3,438,132	88%	$3,189,471	94%	$132,787	45%	$115,874	55%
Actual expenditures, 2003 through September 30, 2010	$3,075,293	79%	$2,836,159	84%	$119,305	40%	$119,829	57%

Data source: WSDOT Capital Program Development & Management.
Note: Expenditures are Nickel funds only. Totals do not include Local Programs projects.

WSDOT's Capital Project Delivery Program

Original 2003 and 2005 Transportation Funding Packages (Nickel & TPA) Performance Dashboard

Project delivery update : Original 2005 Transportation Partnership Account (TPA)

Status as of September 30 , 2010

	Total program		Highways		Ferries		Rail	
Project number and phase	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**	**Number of projects**	**Percent of program**
Total number of projects	**248**		**229**		**4**		**15**	
Completed projects	137	55%	131	57%	0	0%	6	40%
Total projects under way	92	37%	86	38%	1	25%	5	33%
In preconstruction phase	*48*		*46*		*1*		*1*	
In construction phase	*44*		*40*		*0*		*4*	
Projects starting in the future	8	3%	4	2%	1	25%	3	20%
Projects deferred, or deleted from program	11	4%	8	3%	2	50%	1	7%
Number of Legislatively approved scope changes	*23*	*9%*	*23*	*10%*	*0*	*0%*	*0*	*0%*
Preconstruction starts within 6 months	*0*		*0*		*0*		*0*	
Construction starts within 6 months	*14*		*14*		*0*		*0*	

Data source: WSDOT Capital Program Development & Management.
Note: Totals do not include Local Programs projects.

Project budget delivery update: Original 2005 Transportation Partnership Account (TPA)

Status as of September 30, 2010; Dollars in thousands

	Total program		Highways		Ferries		Rail	
	Budget	**Percent of total**	**Budget**	**Percent of program**	**Budget**	**Percent of program**	**Budget**	**Percent of program**
Total original Legislative planned budget	**$6,982,128**		**$6,678,468**		**$185,410**		**$118,250**	
Original plan, 2005 through 2007-09 biennium	$2,274,805	33%	$2,224,451	33%	$1,940	1%	$48,414	41%
Actual expenditures, 2005 through 2007-09 biennium	$1,336,628	19%	$1,296,476	19%	–	0%	$40,152	34%
Original plan through 2009-11 biennium	$4,042,962	58%	$3,886,331	58%	$81,701	44%	$74,930	63%
Current plan through 2009-11 biennium	$3,171,106	45%	$3,037,418	45%	$67,234	36%	$66,454	56%
Actual expenditures, 2005 through September 30, 2010	$2,157,547	31%	$2,056,068	31%	$46,585	25%	$54,894	46%

Data source: WSDOT Capital Program Development & Management.
Note: Expenditures are TPA funds only. Totals do not include Local Programs projects.

Definitions

Completed projects Projects operationally complete, open to traffic.

Projects under way Funded projects that have begun preconstruction or construction activities.

Projects in preconstruction phase Projects in a 'pre-construction phase' have been funded and have commenced active work, such as environmental studies, design work, right-of-way purchase, preliminary engineering, and other activities that take place before ground-breaking.

Projects in construction All activities from ground-breaking to completion.

Projects starting in the future Projects funded but not yet in a construction or preconstruction phase.

Projects deferred or deleted Projects deferred beyond the 16-year program window or deleted from the program with Legislative approval.

Note

The column headed 'Percent of program' shows the percentage of each category represented by the raw number. For example, the Ferries columns show that of the five projects listed in the Nickel package, one has been completed, representing 20% of the total Ferries program; three Ferries projects are under way, representing 60% of the total program; and one Ferries project has been deferred or deleted, representing the remaining 20% of the total program.

Paying for the Projects: 2003 Transportation Funding Package (Nickel) financial information

Revenue forecast update

The following information incorporates the September 2010 transportation revenue forecast projections. 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 and funding issues, the 2007 Legislature moved projects beyond 2013. Both cumulative ten-year totals and individual biennial amounts are shown in the chart below.

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

The September 2010 forecast for gas tax receipts and licenses, permits, and fees for the Transportation 2003 (Nickel) Account is lower than the baseline forecast for the ten-year outlook by 11.6%. This reduction is due to continued lower gasoline consumption. Because Washington State's gas tax is based on gallonage rather than price, reduced consumption results in reduced revenues.

Multimodal Account projections for the vehicle sales tax are lower than the baseline forecast resulting in a decrease of 19.3% in the ten-year outlook. This decrease is primarily due to the decline in vehicle sales.

2003 Transportation Funding Package Highlights

Deposited into the Transportation 2003 (Nickel) Account

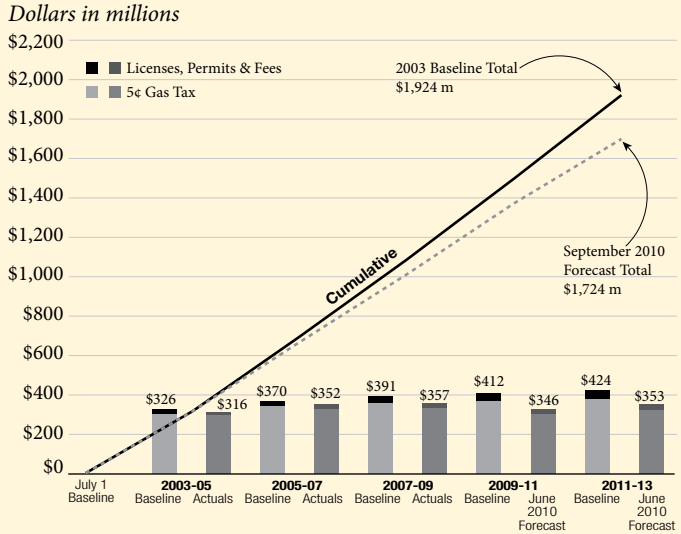
- 5¢ increase to the gas tax
- 15% increase in the gross weight fees on trucks

Deposited into the Multimodal Account (established in 2000)

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

Transportation 2003 (Nickel) account revenue forecast

March 2003 Legislative baseline compared to the September 2010 Transportation Revenue Forecast Council

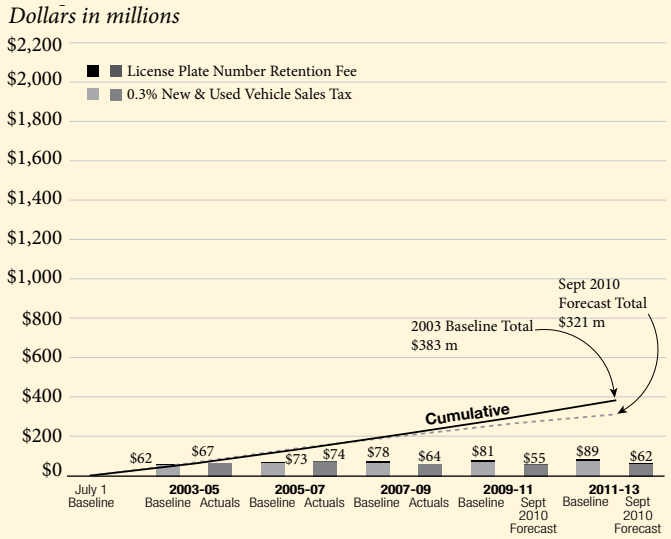


Data source: WSDOT Financial Planning.

Numbers may not add due to rounding.

Multimodal Account (2003 Package) revenue forecast

March 2003 Legislative baseline compared to the September 2010 Transportation Revenue Forecast Council



Data source: WSDOT Financial Planning.

Numbers may not add due to rounding.

WSDOT's Capital Project Delivery Program

Paying for the Projects: 2005 Transportation Partnership Account (TPA) financial information

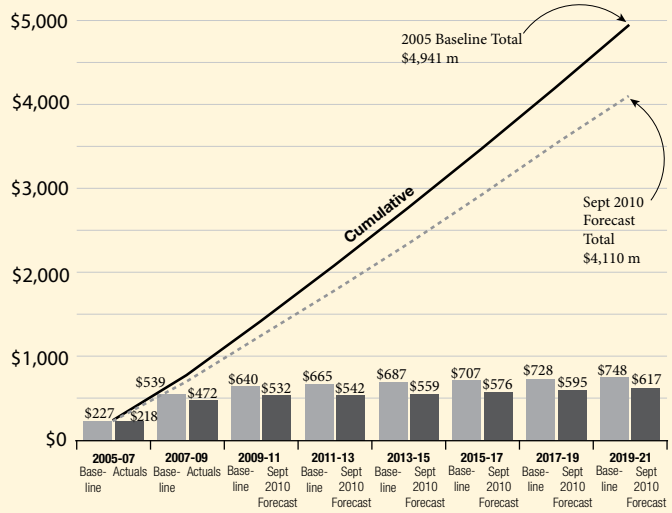
Revenue forecast update

The accompanying chart compares the current September 2010 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 September 2010 forecast for gas tax receipts over the 16-year period decreased by 20.2% from the baseline forecast. This reduction is due to continued lower gasoline consumption. Because Washington State's gas tax is based on gallonage rather than price, reduced consumption results in reduced revenues.

Transportation Partnership Account (TPA) gas tax revenue forecast

March 2005 Legislative baseline compared to the September 2010 Transportation Revenue Forecast Council
Dollars in millions



Data source: WSDOT Financial Planning.
Numbers may not add due to rounding.

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 pounds
  - $30 for cars between 6,000 and 8,000 pounds
- 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 motorhomes
- 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 fee 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)

Completed Projects: Delivering performance and system benefits

Between July 1 and September 30, 2010, WSDOT completed 10 projects that preserved the roadway, increased capacity, improved bridges, installed lighting, and enhanced safety features. Each project improved travel by making roads safer, trips faster and more reliable, and helping the environment and the economy. Each project also faced unique challenges to be delivered on time and on budget.

Building upon the principles of Performance Journalism and accountability, WSDOT publishes a brief report on each project completed in a quarter, organized by county. These summaries are intended to provide a better sense of the project delivery process, WSDOT's efforts to use tax dollars as efficiently as possible, and the benefits citizens can expect to see from completed projects.

Project delivery performance reporting regarding budget and schedule is measured against last approved budgets in accordance with criteria established by the Legislature; for this quarter, it is the 2010 supplemental budget. This report includes the original project appropriation from the 2003 and 2005 budgets to explain changes in project budgets over time. The graphs offer a visualization of the fluctuations in a project's cost from year to year and is scaled to show the dollar range in greater detail.

One of the completed projects this quarter, US 97/S of Chelan Falls - Add Passing Lane, received funding from both the 2005 Transportation Partnership Account tax and the federal Recovery Act program. The project is one of eight Recovery Act-funded projects completed this quarter. Summaries of completed projects receiving stimulus funds are included in the Recovery Act Special Report on pages 34-38. More information on completed projects is available online at www.wsdot.wa.gov/projects.

SR 17/Othello vicinity to Soap Lake vicinity – Install lighting (Adams, Grant)
SR 150/W of Chelan - Install lighting (Chelan)
SR 971/S Lakeshore Rd - Install lighting (Chelan)

These projects installed streetlights at eight intersections on three highways in Adams, Chelan, and Grant counties. The SR 17 project installed streetlights at four intersections in Adams and Grant counties: 12 SE, 11 SE, M SE, and 19 NE. In Chelan County, the SR 150 project installed lighting at the intersections with Winesap, Swartout, and Bennett Roads, and the SR 971 project installed lighting at the intersection with South Lakeshore Road.

Project's benefits: These projects installed lighting at intersections where it was lacking and will improve visibility for drivers and pedestrians.

Project's highlights or challenges: The three projects were combined for construction efficiencies. The SR 17 project was changed to replace planned lighting at 10th SE with a more heavily used intersection at 11th SE. The planned SR 17 lighting at the Neppel Road intersection was no longer needed following a Grant County project that realigned the road and removed the intersection, reducing the project cost by $136,000. The contract was awarded to McCandlish Electric Inc. for $163,704, about $100,000, or 38%, below the engineer's estimate.

Budget performance: The projects were estimated to cost $458,000 at completion, below the FY 2005 approved budget of $705,000, due in part to the low bid and changes outlined above.

Schedule performance: The projects were completed on April 2, 2010, a quarter ahead of schedule.

WSDOT's Capital Project Delivery Program

Completed Projects: Delivering performance and system benefits

SR 169 and SR 900 – Roadside safety improvements (King)

This project installed centerline and shoulder rumble strips on several miles of SR 169 and SR 900. It also replaced and installed new guardrail in selected locations.

Project's benefits: The project is designed to reducing the potential for crossover and run-off-the-road collisions.

Project's highlights or challenges: This project is part of the statewide program to install guardrail and improve roadsides on state highways. It was awarded 8.5% below the engineer's estimate. The project is also known as *SR 169, SR 410, SR 520, SR 525 and SR 900 – Roadside Safety Improvements*. The work on the other three highways has been moved to other projects.

Budget performance: The project cost $1,105,000 at completion, $95,000 lower than the initial FY 2006 approved budget of $1,200,000.

Schedule performance: The project was complete in August 2010, one quarter earlier than the originally approved schedule.

Crews installed guardrail at night on SR 169 and SR 900 as part of this project to improve roadsides in King County.

SR 11, SR 525, and SR 900 – Roadside safety improvements (King, Skagit, Snohomish)

This project installed guardrail, removed fixed objects, and improved roadsides along SR 11, SR 525, and SR 900 in King, Skagit, and Snohomish counties.

Project's benefits: This project removed outdated rumble strips and repaved sections to smooth asphalt for safer travel.

Project's highlights or challenges: While this project was awarded at 8.5% below the engineer's estimate, there was an increase in costs due to removal of some shoulder rumble strips installed earlier in the year.

Budget performance: The project cost $686,000 at completion. This is $114,000 less than the initial FY 2006 budget of $800,000. The project saved $191,000 due to lower bids at award. The total cost at completion includes a PE and construction cost increase of $78,000 to remove the rumble strips on SR 20 and SR 525.

Schedule performance: The project was complete in August 2010, one quarter earlier than the originally approved schedule.

Completed Projects: Delivering performance and system benefits

Crews installed guardrail on SR 142 in Klickitat County to reduce the severity of off-the-road colisions on the highway.

SR 142 – Roadside safety improvements (Klickitat)

This project installed guardrail, removed fixed objects, and improved roadsides on a 35-mile stretch of SR 142 from Lyle to Goldendale in Klickitat County.

Project's benefits: The project is designed to reduce the severity of collisions on the highway.

Project's highlights or challenges: This project is part of the statewide program to install guardrail and improve roadsides on state highways.

Budget performance: This project was estimated to cost $1.84 million at completion, below the original FY 2005 budget of $1.9 million.

Schedule performance: The project was completed on July 22, 2010, one quarter ahead of the schedule.

SR 9/Lake Stevens Way to 20th St SE – Improve intersection (Snohomish)

This project added new lanes southbound and northbound on SR 9 and new turn lanes at the intersection with 20th Street SE. The project also provides other improvements at the intersection, including stormwater, lighting, and signal upgrades.

Project's benefits: Snohomish County Public Works completed a project to reduce congestion and improve travel time on the 20th Street SE corridor in the Lake Stevens area. As part of the project, WSDOT provided funding to improve safety and reduce congestion on SR 9 between South Lake Stevens Road and 20th Street SE.

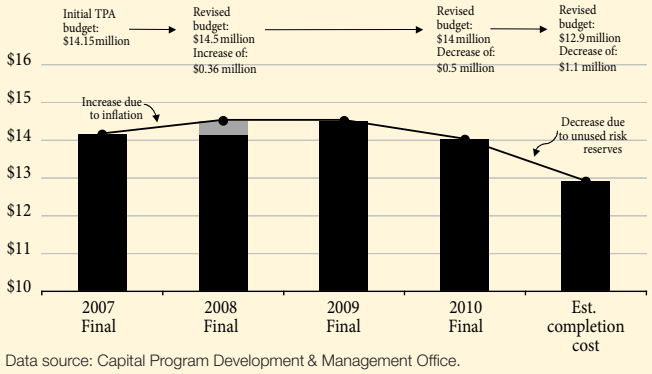
Project's highlights or challenges: This project's plan to include left turn restrictions was changed due to a review of the intersection and feedback from the community. WSDOT will continue to monitor the intersection.

Budget performance: The project was estimated to cost $12.91 million at completion, lower than both the original 2007 budget of $14.15 million, and $1.1 million below the last approved budget of $14.02 million, due to unused risk reserves.

Schedule performance: The project was completed on July 29, a month behind the last approved schedule due to ribbon-cut ting coordination with Snohomish County.

SR 9/Lake Stevens Way to 20th St SE - Improve intersection (Snohomish)

Annual project budget from conception to estimated cost at completion
Dollars in millions



Data source: Capital Program Development & Management Office.

This project added lanes to SR 9 and improved the intersection with Lake Stevens Road North.

WSDOT's Capital Project Delivery Program

Completed Projects: Delivering performance and system benefits

US 12/Frenchtown vicinity to Walla Walla – Widening (Walla Walla)

This project constructed a new four-lane divided highway to replace eight miles of two-lane highway on US 12 west of Walla Walla. The project also built a new interchange and roundabouts at Pine Street and Myra Road.

Project's benefits: The section of US 12 from the vicinity of McDonald Road to Walla Walla experiences congestion and a number of collisions. The additional lane will reduce congestion and provide more passing opportunities. The new divided highway with a median is expected to reduce on-coming collisions. Completing this project means WSDOT is nearing the halfway point to completing a four-lane highway on US 12 from the Tri-Cities to Walla Walla. Projects building 18 miles of four-lane US 12 are now open to traffic, with 21 miles remaining.

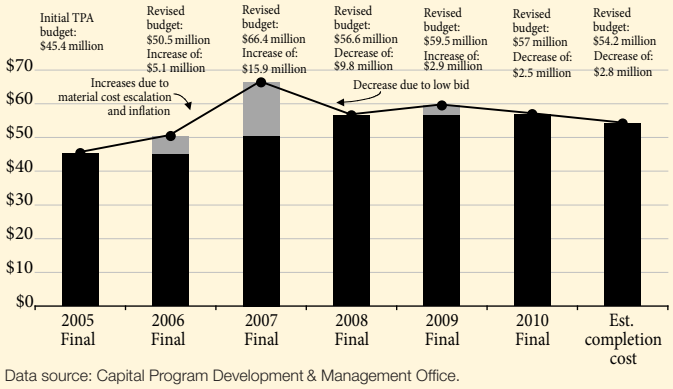
Project's highlights or challenges: The project budget increased due to material costs, especially the rise in fuel costs, and a minor change to avoid a historic property.

Budget performance: This project was estimated to cost $53.4 million at completion, $3.6 million below the last approved budget, and $17.4 million above the original FY 2005 approved budget due to the above reasons.

Schedule performance: The project was completed on July 23, 2010, two months behind the last approved schedule.

US 12/Frenchtown vicinity to Walla Walla - Widening

Annual project budget from conception to estimated cost at completion
Dollars in millions



Data source: Capital Program Development & Management Office.

Construction of the new lanes (on the right) was under way in this 2009 aerial photo.

Completed Projects: Delivering performance and system benefits

US 12/Tieton River West Crossing – Replace bridge (Yakima)
US 12/Tieton River East Crossing – Replace bridge (Yakima)

This project replaced two existing structurally deficient bridges across the Tieton River with two new bridges that are wider and meet current standards. WSDOT and the contractor also moved the highway between the two bridges away from rockfall hazards.

Project's benefits: The projects built two wider and longer bridges over the Tieton River in Yakima County, providing reliable passage on an important east-west highway.

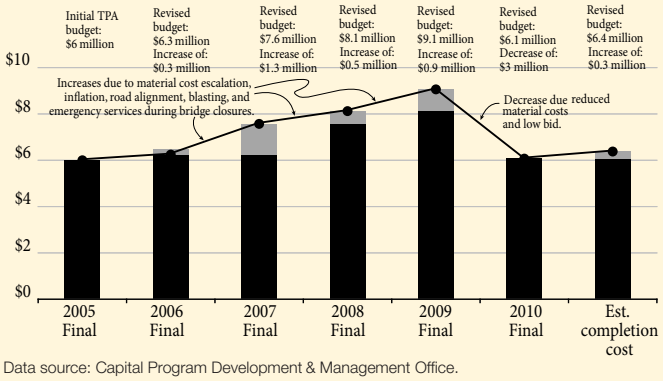
Project's highlights or challenges: The projects were combined for construction efficiencies. The bridges required a Joint Aquatic Resource Permit Application that in turn required a change in the road alignment. The project cost increased due to material cost inflation, excavation, blasting, and providing emergency services during bridge closures.

Budget performance: The West crossing was estimated to cost $6.4 million at completion, $300,000 above the last approved budget, and $400,000 above the original 2005 budget. The East crossing was estimated to cost $5.6 million at completion, $440,000 below its last approved budget and $1.6 million above the original 2005 budget. The graph shows the budget for the West crossing.

Schedule performance: The project was completed on September 13, 2010, one month ahead of the last approved schedule.

US 12/Tieton River W Crossing - Replace Bridge

Annual project budget from conception to estimated cost at completion
Dollars in millions



Data source: Capital Program Development & Management Office.

This project built two new US 12 bridges in Yakima County over the Tieton River to replace old bridges that were structurally deficient. The old East Crossing bridge is pictured below; its new replacement is pictured at right.

WSDOT's Capital Project Delivery Programs

Project Spotlight: SR 520 Floating Bridge Pontoon Construction

SR 520 Pontoon Construction Project Highlights

- WSDOT is building 33 pontoons for the SR 520 floating bridge replacement project, 19 more than the SR 104 Hood Canal Bridge refurbishment project.
- Pontoon construction is being advanced in case of a catastrophic failure of the current SR 520 bridge.
- Pontoons will be constructed in Grays Harbor, beginning in spring 2011.
- The largest pontoons will be 360 feet long, the same length as a U.S. football field.
- The largest pontoons will weigh 10,000 tons each - the same weight as 23 Boeing 747 jumbo jets.

An illustration from the Draft Environmental Impact Statement of what the pontoon construction facility may look like in Aberdeen.

WSDOT's SR 520 Pontoon Construction Project is a unique program that will prepare for the eventual replacement of the SR 520 Evergreen Point floating bridge while ensuring that the current floating bridge remains viable and open in the event of a catastrophic event. The current bridge is scheduled for replacement: its advanced age and deterioration make it vulnerable to failure in the event of a significant windstorm or earthquake. By advancing pontoon construction before bridge construction, WSDOT intends to have pontoons available should the current bridge fail before the new floating bridge is completed.

Construction of a test pontoon evaluates construction techniques

Before construction of the 33 pontoons required for the project, WSDOT constructed a test pontoon that would employ new construction techniques and an updated design. In August 2009, WSDOT awarded a $2.8 million contract to Quigg Brothers, Inc., to construct the test pontoon near Satsop in Grays Harbor County. Between September 2009 and April 2010, the project served as a laboratory for evaluating concrete mix methods for strength and durability, concrete forming methods for efficiency, and production methods that could expedite pontoon production. WSDOT constructed a test section of a SR 520 pontoon on site, measuring 38 feet wide by 28.5 feet tall by 120 feet deep. WSDOT published its final findings in May, and will use the techniques and processes it assessed to construct the pontoons.

WSDOT identifies preferred alternative for casting basin facility in Aberdeen

During the planning process, WSDOT determined that there were no existing casting basin facilities in Washington large enough to support the construction of the 33 pontoons. Instead, WSDOT scouted for locations to construct a new facility, identifying two suitable sites in Grays Harbor County. Both sites are situated on the north side of Grays Harbor; the Anderson and Middleton industrial yard is in Hoquiam and the former Weyerhaeuser export log yard in Aberdeen. WSDOT collaborated with the cities and ports of Aberdeen and Hoquiam, as well as the Quinault Indian Nation, to evaluate both sites for economic, ecological, and cultural considerations as part of the environmental review process (see p. 103 of *Gray Notebook 38* for more information).

In August 2009, WSDOT announced its preference for the Aberdeen site, then opened the project to bidding with the stipulation that all bids should include facility design proposals.

The contract was awarded in February 2010 to Kiewit-General Joint Venture (K-G) with a winning bid of $367 million, which was $180 million less than the engineer's original estimate. WSDOT recently purchased the Aberdeen site for $4.8 million. K-G will design and then begin developing the site in spring 2010.

Pontoons will be constructed and stored before use

The process for constructing the pontoons is very similar to the SR 104 Hood Canal Bridge pontoon project. The pontoons will be constructed in the casting basin and floats will be attached before the casting basin is flooded. The pontoons will float with the rising water and once at sea level, they will be tethered to a tug boat that will pull them out of the casting basin and into Grays Harbor, where they will be moored until they are needed on Lake Washington. WSDOT expects the first cycle of pontoons to be completed by spring 2012.

Special Report: Southwest Washington I-5 Expansion Program

WSDOT is planning and constructing a series of projects along the I-5 corridor in southwest Washington to accommodate the growing mobility needs in Thurston and Lewis counties. The existing I-5 was completed in the late 1960s and has not been substantially modified since then. The current capacity is exceeded during peak travel periods, particularly during holiday travel. These projects will widen the corridor in both directions, redesign and improve collector and distributor lanes, construct new flyovers and bridges, and add new ITS-traffic management features.

Under construction

I-5 Grand Mound to Maytown – Add lanes, Stage 1 (Thurston)

This $90 million project, advertised in December 2007, will construct an additional lane in both directions of I-5, between the communities of Ground Mound and Maytown in Thurston County. The project is nearing completion. During the 2008-09 winter, additional storm preparation and traffic control needs delayed the operationally complete date from summer 2010 to late-fall 2010/early winter 2011.

I-5 Blakeslee Junction to Grand Mound (Thurston & Lewis)

This project will widen I-5 from two lanes to three lanes for approximately four miles in both directions just south of the I-5 Grand Mound to Maytown Stage 1 project currently under way. Due to lower-than-expected bids, the project was awarded $9.4 million under the engineer's original estimate. Construction began on June 1: the contractor has been working primarily to the outside of existing lanes and will shift work toward the median side in the spring of 2011. The project will be operationally complete by 2012.

In preliminary engineering phases

I-5 Grand Mound to Maytown – New interchange, Stage 2 (Thurston)

The Stage 2 project will now immediately follow the completion of Stage 1, allowing WSDOT to move some of the latter's work items like final paving and stripping until the completion of Stage 2. The project will construct a new flyover for U.S. 12 to accommodate an expanded I-5. The flyover will be constructed off-site, reducing the project's total time from 20 to 14 months, and will greatly reduce traffic interruptions on I-5 and U.S. 12 during the final installation process. Revised contracting language that added a requirement for the staging strategy, and the added tasks from Stage 1 delayed the advertisement by two months. Construction is expected to begin in late 2010. (For more information on the resolution of delays discussed in *Gray Notebook 38*, please see page 66.)

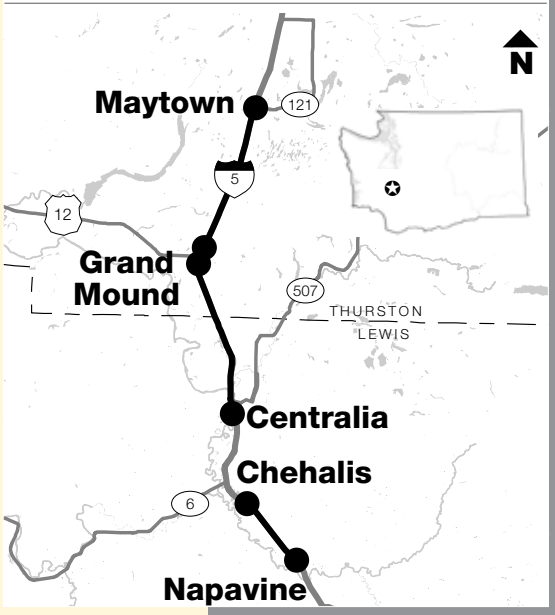
I-5 Mellen Street to Blakeslee Junction (Lewis)

This project will construct new collector-distributor lanes between Mellen Street and Harrison Avenue and widen I-5 from two lanes to three lanes in each direction north of Harrison Avenue, as well as other improvements. A new bridge over I-5 south of Mellen Street will be constructed as well. WSDOT has begun the process of acquiring the necessary right-of-way for the project to begin construction in 2012. The project remains in the design phase and has an operationally complete date of 2014.

Southwest Washington I-5 Corridor Highlights:

- Two projects are now in the construction phase: I-5 Grand Mound to Maytown - Stage 1 and I-5 Blakeslee Junction to Grand Mound.
- The I-5 Grand Mound to Maytown - Stage 2 project has absorbed some of the final work from the Stage 1 project, and is expected to begin construction soon.
- The last major funded project, I-5 Mellen Street to Blakeslee Junction, will begin construction in 2012.
- For more information, please visit www.wsdot.wa.gov/Projects/I5/.

Southwest Washington I-5 corridors



WSDOT's Capital Project Delivery Programs

Special Report: New Ferry Construction

Project Highlights

- WSDOT accepts delivery of the *Chetzemoka*.
- Construction continues on the second and third Kwa-di Tabil Class ferries.
- Construction highlights this quarter:
  - October: Moved the *Salish* out of construction hall onto drydock.
  - October: Keel laid for the *Kennewick*.
- For more information: www.wsdot.wa.gov/Projects/Ferries/64CarFerries.

WSDOT has received $211.6 million to build the three new, 64-vehicle, Kwa-di Tabil class, ferries that will begin the replacement of its aging fleet. WSDOT has been without a state-owned ferry to serve the Port Townsend/Coupeville (Keystone) route since November 2007.

A look at the cost breakdown

The final cost to construct the first Kwa-di Tabil ferry, *Chetzemoka*, was $78.5 million, about 2% over the original budget of $76.5 million. This cost included a $65.5 million construction contract that was awarded to Todd Pacific Shipyards (Todd) in December 2008, $13 million in contingencies and construction management, and $300,000 refunded by Todd because the vessel was delivered late. WSDOT accepted the delivery of the *Chetzemoka* in September 2010; the vessel is scheduled to begin service on the Port Townsend/Coupeville route in mid-November 2010.

The second and third Kwa-di Tabil ferries, *Salish* and *Kennewick* have a budget of $133.1 million, including a $114.1 million construction contract awarded to Todd in October 2009. Both vessels are substantially under budget at this point. These vessels are scheduled for completion in 2011 and 2012.

Delivery of the *Chetzemoka*

Delivery of the *Chetzemoka* was delayed in summer 2010 while vibration issues with the propulsion system were resolved. The propulsion-control system software was refined to ensure that the propulsion components work together for optimal performance, which eliminated the unwanted vibrations. Todd demonstrated the vessel's capabilities to the U.S. Coast Guard and WSDOT Ferries Division during dock and sea trials after making these adjustments.

WSDOT accepted delivery of the *Chetzemoka* from Todd on September 15, 2010. The vessel was moved to the Ferries Division's Eagle Harbor Maintenance Facility for operational and safety enhancements, and the beginning of crew familiarization and training. In late September, the *Chetzemoka* began making landings at both the Coupeville and Port Townsend terminals to familiarize the crews with the vessel's performance. The vessel is scheduled to make its inaugural sailing on November 14, 2010, between Whidbey Island and Port Townsend.

Second Kwa-di Tabil Class ferry, Salish*, moving out of the construction hall and onto a drydock at Todd Pacific Shipyards.*

Salish construction progress and next steps

Construction is progressing on the *Salish* and *Kennewick* at Todd, Jesse Engineering, and Nichols Brothers Boat Builders. The *Salish* is 65% complete and the *Kennewick* is 20% complete. The *Salish* hull was rolled out of the construction building onto a drydock on October 2, 2010. The superstructure, rudders, and propellers will be installed and the exterior painted. Todd has used lessons learned during construction of the *Chetzemoka* to pre-outfit the piping, machinery, and pilothouses for the *Salish*. The vessel is scheduled to be placed in the water in December and towed to Everett Shipyard for final outfitting. Delivery is scheduled for late spring 2011.

The *Kennewick* has begun taking shape at Todd. The keel was laid on October 13, 2010, and progress on this third Kwa-di Tabil vessel will continue through the winter.

Special Report: Tacoma Pierce County HOV Program Quarterly Update

I-5: Portland Avenue to Port of Tacoma Road – Northbound HOV Stage 1

The Stage 1 project entails roadway work and ground improvements to reconstruct I-5 between Portland Avenue and the Port of Tacoma Road. Construction activities to date include clearing land, excavating ponds, and installing high-visibility fences and silt fences. Crews lowered the profile of Portland Avenue to increase vertical clearance under I-5, by excavating and replacing the roadway, completing the work on October 2-3. Future work in the Stage 1 project will include making ground improvements, building retaining walls, TESC ponds and bridge approach embankments, installing lighting and ITS hardware, and realigning the northbound I-5 exit to SR 167.

I-5: Port of Tacoma Rd. to King Co. Line – HOV

This quarter, crews completed all paving and most other work to build three miles of northbound and southbound HOV lanes on I-5 in Fife. WSDOT opened the northbound HOV lane to traffic on October 2; the southbound HOV lane should be open by the end of October. Remaining work to finish the contract includes installing poles, signals, illumination, and other electrical items, punch-list work, and finishing details.

Late in project construction, hazardous materials were discovered during excavation work on a parcel of land known as the King County Auction Site. The excavation was the first step in building a stormwater and floodplain flow control pond as part of WSDOT's environmental mitigation for the project. Further excavation at the site has been suspended until WSDOT identifies next steps for dealing with the hazardous soils.

I-5/SR 16 Interchange Rebuild: Westbound Nalley Valley

This quarter, construction crews finished installing the shafts, columns, and caps of all connective bridges. The completion of the bridges' substructures now allows crews to focus on superstructure construction. When completed, this project will open a new westbound Nalley Valley viaduct with improved access ramps.

Future ramp connecting northbound I-5 to westbound SR 16.

WSDOT also completed improvements to a 926-foot section of the bicycle/pedestrian Scott Pierson Trail. The finished work included widening, fencing, and regrading a section near South 25th Street. This improved trail section reopened to the public just in time for the annual Tacoma Marathon.

Project Highlights

- 100% paving complete for I-5: Port of Tacoma to King County Line project; northbound HOV lane opened.
- 100% shafts, columns and caps installed in I-5/SR 16: Westbound Nalley Valley project.
- Scott Pierson Trail improvements complete; trail reopened to public just in time for annual Tacoma Marathon.
- Hazardous materials discovered in floodplain flow control mitigation site for Port of Tacoma to King County Line project. Design and construction staff identifying next steps.
- For more information: www.tacomatraffic.com

Westbound Nalley Valley Watch List issues

As reported in the June 2010 *Gray Notebook 38*, correcting a design error in the SR 16 Westbound Nalley Valley project required the reconstruction of the eastbound off-ramp to Sprague Avenue. The removal and lowering of the off-ramp is under construction and is progressing on schedule.

The hazardous soils previously discovered in the Westbound Nalley Valley project have been removed and sent to an appropriate disposal facility permitted to take such materials. The unsuitable foundation soils were removed to a clean fill site.

Costs for the ramp reconstruction ($890,000) were reported last quarter. Part of the ramp reconstruction requires a retaining wall flanking the new ramp. The tops of the walls for about 75 feet on each side of the retaining wall were up to six inches too high and had to be lowered. The contractor's crew used a wet saw to cut the concrete panels, and completed this retaining wall work by the first week of October.

More information will be provided as it becomes available. (See also page 65 in the Watch List.)

WSDOT's Capital Project Delivery Programs

Watch List: Projects with schedule or budget concerns

WSDOT is committed to frequent and accurate "no surprises" reporting of project performance, emphasizing rigorous analysis while communicating in plain language, unencumbered by jargon or insider terminology. As part of that commitment, WSDOT regularly addresses issues that do, or potentially could, affect a project's schedule and budget: they are outlined here in the Watch List. When these issues are resolved, which may take more than one quarter, the project is removed from the Watch List. If new issues arise, an update to the project will be provided in the Update to Watch List section.

The gray box below describes some of the common problems that may affect the successful progress of a project from design through completion; they are listed in the order in which WSDOT might face them, starting in the earliest planning stages and concluding with actual construction.

The summary on page 63 lists projects currently facing schedule or budget concerns with a reference to these over-arching descriptions; a more detailed description of the precise problem or its resolution appears on the following pages. Still more information is presented on the individual project pages on the WSDOT website at www.wsdot.wa.gov/projects. Projects paid for through Pre-Existing Funds are discussed on pages 67-70.

It is important to note that while the number of projects appearing on the Watch List has occasionally grown over time, so have the number of projects under way (we report on the project whether it is under construction or in planning and design phases). By tracking problem projects more closely on the Watch List, WSDOT can keep all its stakeholders informed while evaluating possible solutions.

Coordination

Local concerns: Concerns raised by local communities may require additional, unanticipated, design, right-of-way, or utilities work which, if not resolved, might result in in costs or delays later in construction.
Federal requirements: Funding and project development issues with Federal Highways Administration (FHWA), Federal Transit Administration (FTA), USDOT; workload prioritization and coordination for reviews by US Fish & Wildlife Service, NOAA Fisheries, US Forest Service, etc.
Inter-agency issues: Project may require more collaboration with local jurisdictions, or may require inter-local agreements, such as Memoranda of Understanding (MOUs) or Memoranda of Agreement (MOAs).
Tribal government issues: Consultation with tribes as required by Centennial Accord and specific treaties. Where treaty rights are affected, there may be financial settlements unanticipated in the original project budget.

Environmental

Planning & analysis: Completing essential studies required to comply with the National and State Environmental Policy acts (NEPA/SEPA), the Endangered Species Act (ESA), or other programs may take longer and cost more than anticipated.
Technical issues: The time needed to resolve matters involving archeological discoveries, hazardous materials, stormwater, noise, and hydrology may cause delay.
Mitigation: Negotiating for and designing sites to compensate for impacts to wetlands, floodplains, fish habitat and migration, and so on may involve many other factors from design through construction.
Permitting: New information about a project site, changes in design, or new regulatory requirements may delay permitting. If existing permits must be reworked, it can cause delay or additional expense.

Design

Geological: Studies may reveal unsuitable soil conditions for construction on the proposed route.
Alternatives: Design alternatives may require unanticipated revision as the result of environmental analyses and/or public input.
Design disputes: Communities or other entities may challenge design concepts, requiring additional time spent in design.
Design element changes: Project parameters may change, requiring changes to designs in progress or under construction.

Utilities

Agreements with other jurisdictions: Agreements may take longer to obtain than anticipated.
Utility relocations: Moving power, water, gas, or other utility lines may be more complex than originally expected.

Right-of-Way

Design changes: Project revisions that may require additional land.
Land acquisition: Negotiations with landowners regarding purchase of property may take longer than anticipated.
Land appreciation: Property value increases that exceed projections.
Land use designation changes: Land previously zoned as farmland may have been converted to industrial or commercial use, raising the purchase price.

Construction

Contractor issues: Disputes with contractors or disagreements over contract parameters may delay construction at any point in the job.
Cost increase of materials: Unit costs may increase beyond the set budget due to fluctuations in the marketplace or a failure to estimate costs properly at the design phase.
Materials procurement: Unexpected demand or lack of availability of raw materials required for construction.
Site problems: Discovery of contaminated (hazardous) soils, unsuitable geological conditions, or similar unforeseen issues after construction has begun.
Timing problems: Delays at design or right of way may mean work schedules conflict with events such as fish spawning season.
Weather: Weather unsuitable for construction work will temporarily halt the project.

Litigation

At any point, a problem may escalate if one or more of the parties decides to file a lawsuit.

Watch List: Projects with schedule or budget concerns

Added to Watch List	Project type	Watch List issue
SR 9/212th St SE to 176th St SE, Stage 3 – Add lanes (Snohomish)	Highway	Environmental: permitting
SR 305 Unnamed Tributary to Liberty Bay (Kitsap)	Highway	Construction: site problems
Updates to Watch List		
SR 518/Bridges – Seismic retrofit (King)	Highway	Construction: Cost increase of materials
SR 99/Aurora Ave - George Washington Memorial Bridge – Seismic retrofit (King)	Highway	Design: alternatives
US 12/SR 124 Intersection – Build Interchange (Walla Walla) (aka Burbank)	Highway	Right-of-way: Land acquisition
SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)	Highway	Environmental: permitting; Design: alternatives
SR 28/E End of the George Sellar Bridge – Construct bypass (Douglas)	Highway	Right-of-way: Land acquisition
I-5/SR 16 Interchange – Rebuild interchange (Pierce)	Highway	Design: design element changes; Construction: site problems
SR 161/24th St E to Jovita – Add lanes (Pierce)	Highway	Design: Design element changes; Right-of-way: Design changes
SR 823/Selah vicinity – Reroute highway (Yakima)	Highway	Right-of-way: Land acquisition
Removed from Watch List		
I-5/Grand Mound to Maytown, Stage 2 – Replace interchange (Thurston)	Highway	Design: design element changes
Stanwood – New station, siding upgrade (Snohomish)	Rail	Design: new Federal requirements; Environmental: permitting

Data source: Capital Program Development and Management, WSDOT Regions.

WSDOT's Capital Project Delivery Programs

Watch List: Projects with schedule or budget concerns

Added to Watch List

SR 305/Unnamed Tributary to Liberty Bay – Fish Barrier (Kitsap)

Related project: (330514A) SR 305/Bjorgen Creek – Fish Barrier (Kitsap)

This project, budgeted for $3 million, will replace the existing double culvert between Liberty Bay and an unnamed tributary, locally called Lemolo Creek, which prevents migratory fish from reaching freshwater habitat. The new culvert will improve access to upstream freshwater habitat and spawning grounds.

The project is in the construction phase; the schedule and budget are at risk. To avoid an open cut to SR 305, the new culvert was being installed using the deep bore method. All work at the site halted after the boring mechanism encountered an obstacle and the culvert pipe was crushed. WSDOT and the contractor are developing a way to repair the crushed pipe, and determining the cost for the repairs.

WSDOT has requested a four-week extension from Washington Department Fish and Wildlife (WDFW) to complete the in-water work. Extending the work window from September 30 to October 30 will avoid delaying the project's expected operationally complete date of December 2010, avoiding the expense of maintaining erosion control at the site until summer 2011.

SR 9/212th St SE to 176th St SE, Stage 3 – Add lanes (Snohomish)

This project, budgeted for $87.3 million, will widen SR 9 between 212th St SE and 176th St SE from two to four lanes, construct a raised median, and upgrade traffic signals at 180th St SE and 176th St SE. When complete, it will relieve congestion due to rapid local development, and improve safety on a high accident corridor.

The project is in the design phase; design is about 85% complete. The project schedule is at risk because of the time it will take to acquire the United States Army Corp of Engineers (USACE) permit. The original application was for a nationwide permit; since then, WSDOT has learned that an individual permit is needed because of impacts from existing roadside ditches. The March 2011 advertisement date may be at risk because it takes longer to obtain approval for an individual permit than a nationwide permit. An update will be provided next quarter.

Updates to Watch List

SR 28/E End George Sellar Bridge – Construct bypass (Douglas)

This project, budgeted for $28 million, will construct a bypass route for southbound traffic to improve capacity at the SR 28 and Grant Road interchange, reduce accidents, and benefit freight movement at the east end of the George Sellar Bridge on SR 28. Funding is included for a pedestrian tunnel connection to the Apple Capital Loop Trail along the Columbia River.

The project is in the design phase; the schedule is at risk. As reported in the June 2010 *Gray Notebook 38*, the advertisement date was delayed from July to November, to allow time to acquire one last parcel of land needed for right-of-way. Negotiations have been unsuccessful, and condemnation procedures have begun, with the first hearing set for October 26, 2010. The advertisement date has now been further delayed to December 2010 to allow time for condemnation to proceed.

SR 518/Bridges – Seismic retrofit (King)

Bridges 518/8; 518/9; 518/10; 518/12; 518/13; and 518/14NW.

This project, budgeted for $7.8 million, will retrofit six bridges on SR 518 in south King County so they can better withstand an earthquake.

About 45% of the project's design phase is complete; the budget is at risk. As reported in the June 2010 *Gray Notebook 38*, there has been a cost increase of $900,000 due to column jacketing costs, materials, labor and retrofit work to the crossbeams and superstructures. The project is on schedule to be advertised in March 2011.

The revised total project cost of $8.7 million will be included in WSDOT's 2011 budget request to the Legislature. The project will be held on a list of projects 'pending Legislative review' in the next edition of the *Gray Notebook*.

SR 99/Aurora Ave - George Washington Memorial Bridge - Seismic retrofit (King)

This project, budgeted for $9.3 million, completes the remaining seismic retrofit work on the historically significant George Washington Memorial Bridge. When complete, it will reduce the probability of catastrophic damage to the structure from an earthquake.

Watch List: Projects with schedule or budget concerns

About 75% of the project's design phase is complete; the budget is at risk. The final cost estimate for the design phase is $2 million. WSDOT also updated the construction cost estimate in July 2010 to $14.3 million, based on successfully completing both scale model testing of the fiber-reinforced polymer (FRP)-wrapped bridge columns and seismic analysis of the bridge in the retrofitted condition. The project remains on schedule for advertisement in January 2011.

The updated total cost of $16.3 million will be included in WSDOT's 2011 budget request to the Legislature. The project will be held on a list of projects 'pending Legislative review' in the next edition of the *Gray Notebook*.

I-5/SR 16 Interchange – Replace interchange (Pierce)

Please see page 61 for the full story.

SR 161/24th St E to Jovita – Add lanes (Pierce)

This project, budgeted at $37.4 million, will improve mobility on a busy section of SR 161 in the City of Edgewood. When completed, it will reduce congestion and allow safer, more efficient movement of people and vehicles.

The project is in the design phase; the schedule is at risk. As reported in the June 2010 *Gray Notebook 38*, the advertisement for construction was delayed to November 2010 to allow time to complete right-of-way purchases, utility coordination, and changes to the design that would address temporary erosion control and other construction concerns. WSDOT continues to work on these issues and expects to advertise on time in November.

The risk to the project budget has been resolved. Schedule delays and design work are being managed within the last Legislatively approved budget. The pending right-of-way issues have been resolved and will be completed within the current budget. Current construction estimates are also within budget.

SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)

This project, currently budgeted for $182.4 million, will widen SR 522 to a four-lane highway by constructing two new lanes and five new bridges. When completed, it will improve motorist safety and reduce congestion by doubling the traffic capacity of the old two-lane roadway.

As reported in the June 2010 *Gray Notebook 38*, the schedule for Stage 2 of the project continues to be at risk. WSDOT has delayed the advertisement for this stage to March 2011, to allow time to redesign the Snohomish River Bridge using lighter weight steel girders instead of concrete girders because of soil conditions. WSDOT is still awaiting the Snohomish County shoreline and U.S. Army Corps of Engineers (USACE) permits. Although these permits may not be received until March 2011, WSDOT expects to meet the 2014 operationally complete date. An update will be provided next quarter.

US 12/SR 124 Intersection – Build interchange (Walla Walla)

This project, budgeted for $24 million, will build a new interchange and bridge to replace two existing intersections. Removing the signal-controlled intersections will improve safety, reduce congestion, and enhance the area's economic vitality.

The project is in the design phase; both schedule and budget continue to be at risk as reported in the June 2010 *Gray Notebook 38*. Both advertisement and operational completion have been delayed to allow more time to complete the land exchange with the U.S. Fish and Wildlife Service (USFWS).

The $800,000 increase in the total estimated cost, now revised to $24.8 million, and also reported in the June 2010 *Gray Notebook 38*, is included in the 2011 budget request to the Legislature. The project will be held on a list of projects 'pending Legislative review' in the next edition of the *Gray Notebook*.

SR 823/Selah Vicinity – Reroute highway (Yakima)

This project, budgeted for $11 million, will improve SR 823 to relieve congestion during peak commuting times and provide an alternate route around Selah's business district.

The project is in the design stage: the schedule is at risk. As reported in the June 2010 *Gray Notebook 38*, two right-of-way parcels remained to be acquired. WSDOT has secured one parcel, and will omit the final parcel from construction until acquisition is complete. A delay in obtaining the final parcel will not defer SR 823 lane construction, but will delay construction of about 75 feet of sidewalk. The project is scheduled to be advertised in October 2010.

The project is expected to be operationally complete in July 2012, 13 months later than originally planned.

WSDOT's Capital Project Delivery Programs

Watch List: Projects with schedule or budget concerns

Removed from Watch List

Stanwood – Siding upgrades (Snohomish)

Related project: P20000A Stanwood – New station (Snohomish)

These two projects, budgeted for $21 million, will construct a new train platform to service Amtrak *Cascades* passengers, and upgrade and extend the siding in Stanwood. As previously reported, the Stanwood station has been completed.

The siding upgrade project is being constructed in two stages. The first stage is complete, and involved the track and signal rehabilitation of the existing siding to improve speeds. Stage 2 will extend the siding 13,000 feet to allow modern-length freight trains to access the siding. This includes extending the siding past 102nd Street and closing the Logan Road crossing.

Construction of the siding extension on Stage 2 depended on the approval of a local road closure, the issuance of the environmental permits, and the outcome of USACE cultural resource survey. The local road closure and the cultural resource survey have been successfully resolved. The anticipated USACE 404 permit, reported in the June 2010 *Gray Notebook* 38, was received in August 2010, which allowed BNSF to start the construction on the project. The operationally complete date for Stage 2 is currently scheduled for March 2011.

I-5/Grand Mound to Maytown, Stage Two – Replace interchange (Thurston)

Related projects: (300581A) I-5/Grand Mound to Maytown Stage One – Add lanes

This project, budgeted for $32 million, will widen US 12 between Ivan St SE and Elderberry St SW, replacing the US 12 bridges over I-5 and over the railroad. It will also realign and lengthen on- and off-ramps at the interchange to allow more room for vehicles to safely enter and exit the highway, add signals, and improve driver sight distance. When complete, this project will relieve congestion and improve safety by reducing the risk of collisions.

The project is in the design phase; the schedule was at risk. As reported in the June 2010 *Gray Notebook 38*, WSDOT determined that the staging strategy should be mandated by the contract and additional time was needed to incorporate the strategy into the plans and specification for the contract. Additionally, a portion of the final paving from Stage 1 in the vicinity of the interchange was deleted and added to Stage 2 to facilitate construction staging and prevent scarring on the newly constructed pavement. The advertisement date was delayed from June to August 2010; the issues were resolved and the project advertised in August 2010.

Pre-Existing Funds (PEF) Programmatic Reporting

The Pre-Existing Funds (PEF) program funds a wide variety of capital projects to improve the safety, functionality, and longevity of the state highway system. 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, PEF projects are funded at the program level. Funding is aligned to commitments to address set priorities such as preserving pavement each biennium. Each biennium, new PEF projects are programmed based on prioritized needs and available funds, and the list of PEF projects changes each biennium.

Examples of PEF projects include: pavement preservation and repaving, bridge repairs and replacement, slope stabilization, safety projects such as cable median barriers and rumble strips, environmental retrofit to improve fish passage and stormwater management, and preservation of facilities associated with the highway system such as rest areas.

Continued refinements to PEF project reporting: Budgets for projects under construction

Budget reporting continues to be refined, to reflect the revised project counts. In previous reporting, WSDOT presented the actual-to-estimated value of awarded contracts for the current quarter. Now, the table *PEF project advertisements schedule performance* will show the original value of all projects planned for advertisement in the biennium; the original value of projects planned to advertise through the current quarter; the original value of projects currently under construction; and the current estimated cost at completion for projects under construction.

This method of reporting progress against budget more closely aligns PEF reporting with Nickel and TPA reporting (see pages 42-50).

PEF project performance is reported at two levels

Six individually tracked projects

Six projects are reported individually due to their size or significance (see page 70 for schedule and budget information on these projects).

All other projects

WSDOT reports on:

- Actual versus planned cash flow for the overall PEF program, see below; actual versus planned project advertisements, see page 68; advertisement record, see page 69.
- Before & After results for selected types of projects such as highway safety and congestion relief. (For examples, please see the Highway Safety Annual Report, pp. 5-10, in *Gray Notebook 38,* and the 2010 Congestion Report, pp. 8-15).

166 PEF projects advertised as of September 30, 2010

The 2009-11 Highway Construction Program includes a commitment to advertise 252 Pre-Existing Funds (PEF) projects in the current biennium, valued at $843.7 million. From July 1, 2009, through the quarter ending September 30, 2010, WSDOT planned to advertise 133 PEF projects, valued at $588.8 million.

Of the 133 projects planned for advertisement through this quarter, 16 were delayed to future quarters of this biennium, four were deferred out of the biennium, and two projects were deleted. (See the table *'PEF project advertisements schedule performance,'* on page 68 .)

Of the 17 planned PEF advertisements scheduled for this quarter, five were advertised as scheduled. seven were delayed to later in this biennium, and one project was deferred to a future biennium. Two projects were advanced from a future quarter, but no projects delayed from a previous quarter were advertised; 23 emergent projects were advertised.

The original value for the projects advertised in the quarter is $645.5 million; the current estimated cost at completion for all projects under construction is $572.0 million. (See the table *Value of planned PEF advertisements: 2009-11 biennium*.)

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds (PEF) Projects: Advertisement and financial overviews

Value of planned PEF advertisements: 2009-11 biennium

July 1, 2009 through September 30, 2010; Dollars in millions

	Number	Original value	Current cost to complete
Total PEF advertisements planned 2009-2011	252	$843.7	–
Planned advertisements through September 30, 2010	133	$588.8	–
Actual advertisements through September 30, 2010	166	$645.5	$572.0*

Data source: WSDOT Capital Program Development & Management.

* In cases where WSDOT's estimates contain multiple sources, the PEF reported amount is a calculated percentage based on the contract total value. PEF projects may have Nickel and TPA funding not reported in this section.

PEF project advertisements schedule performance

July 1, 2009 through September 30, 2010

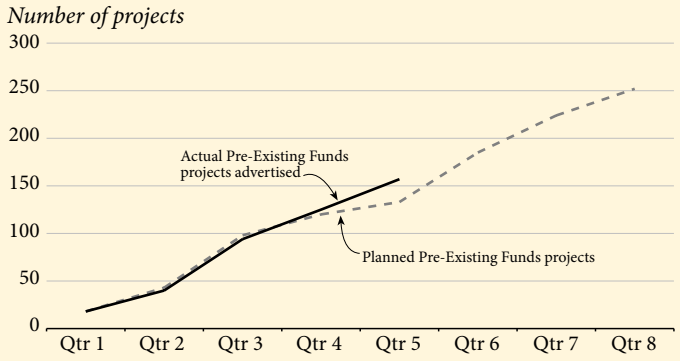
	Number
Projects advertised as scheduled	108
Projects advertised Early	9
Projects advertised Late	10
Emergent projects advertised	30
Total projects advertised	**157**
Projects delayed (delayed within the biennium)	16
Projects deferred (delayed out of the biennium)	4
Projects deleted	2

Data source: WSDOT Capital Program Development & Management.

See page XX for PEF advertisement definitions.

Pre-Existing Funds projects construction program

Planned vs. actual number of projects advertised
2009-2011 biennium, quarter ending September 30, 2010



Data Source: WSDOT Capital Program Development and Management.
Note: As of Quarter 5 (July 1 - September 30, 2010), Original planned project counts have been updated based on the 2010 Supplemental Budget.

Paying for the Projects: Financial information

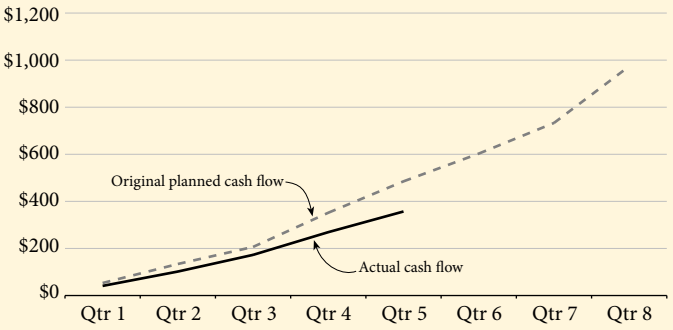
The 2010 Supplemental Budget provides for approximately $944 million in PEF expenditures through the fourth quarter of the biennium. As of September 30, 2010, actual expenditures totaled $702 million, a variance of $242 million, or about 26%, from the biennial plan. The variance for the Highway Construction Program was divided between the Improvement and Preservation programs.

The Preservation Program planned cash flow was $459 million, and actual expenditures were $345 million. This was $114 million, or 25%, under plan.

The Improvement Program planned cash flow was $485 million, and actual expenditures were $357 million. This was approximately $128 million, or 26%, under plan.

Pre-Existing Funds improvement program cash flow

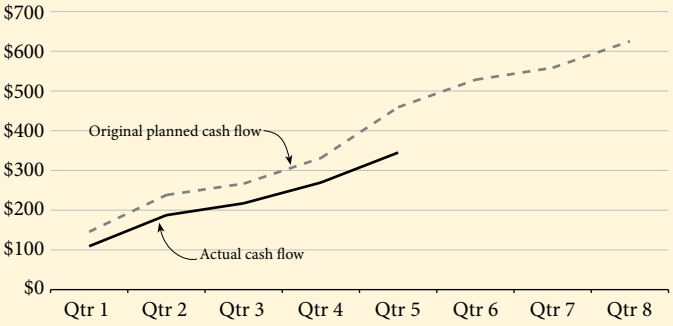
Planned vs. actual expenditures
2009-2011 biennium, quarter ending September 30, 2010
Dollars in millions



Data Source: WSDOT Capital Program Development and Management.
Note: As of Quarter 5 (July 1 - Sept. 30, 2010), Original Planned Cash Flow values have been updated based on the 2010 Supplemental Budget.

Pre-Existing Funds preservation program cash flow

Planned vs. actual expenditures
2009-2011 biennium, quarter ending September 30, 2010
Dollars in millions



Data Source: WSDOT Capital Program Development and Management.
Note: As of Quarter 5 (July 1 - Sept. 30, 2010), Original Planned Cash Flow values have been updated based on the 2010 Supplemental Budget.

Pre-Existing Funds (PEF) Projects: Advertisement record

Pre-Existing Funds (PEF) projects scheduled for advertisement or advertised this quarter

July 1 - September 30, 2010

Project description	Advertised as scheduled
I-5/Interstate Bridge - Miscellaneous Electrical/Navigational Repairs	Late
SR 21/1 Mile N of Manila Creek Rd - Slope Stabilization	Late
SR 105/ Norris Slough - Culvert Replacement	√
SR 28/E End of the George Sellar Bridge - Construct Bypass Advertisement delayed due to property condemnation and other right of way issues.	Delayed
SR 7/Elbe Safety Rest Area - New Facility	√
US 2/43rd Ave SE Vic to 50th Ave SE Vic - Bridge Rehabilitation	Delayed
The advertisement date was delayed from fall 2010 to winter 2010 to avoid costs associated with opening the construction site and then closing it again for the winter. This project requires weather-sensitive materials that cannot be applied in low temperatures.	
SR 7/SR 702 - Install Signal	Delayed
North Central Region Wide RWIS Update	√
US 195/Cashup Flats to Jct SR 271 - Guardrail Improvements	√
SR 20/Red Cabin Creek - Chronic Environment	√
NC Region Guardrail Update - Year 2011	Delayed
SR 410/Twin Creek to FS Rd #73 Intersection - Paving Advertisement date delayed for environmental permit approval and to re-evaluate project paving limits.	Delayed
US 101/0.7 Miles S of Beacon Point Dr - Major Drainage	Deferred
US 101/Port Angeles Signals - Major Electrical Advertisement delayed to address ADA standards compliance issues.	Delayed
SR 117/Tumwater Truck Route - Major Electrical Advertisement delayed to address ADA standards compliance issues.	Delayed
Olympic Region Basic Safety Restoration (09-11) - Safety Restoration	Early
SR 512/108th St E to SR 167 - Install Cable Barrier	Early
Northwest Region Traffic Controller Replacement & Signal Integration	Emergent
I-5 NB/Joe Leary Slough to Nulle Road Vic - Paving	Emergent
SR 202/Tokul Creek Bridge - Scour Repair	Emergent
NCR Traffic Controller Replacement	Emergent
SR 26/Grant County Line to SR 17 - Resurfacing	Emergent
I-5/Martin Way to Vicinity Carpenter Rd - Install Cable Barrier	Emergent
US 101/Simpson Ave Bridge - Bridge Repair	Emergent
I-205/I-5 Clark County Ramps - Paving	Emergent
US 101/0.24 Miles North of Ft Columbia State Park - Culvert Replacement	Emergent
I-90/Indian John Hill Vicinity WB - Pavement Repair	Emergent
SR 20/Republic to JCT US 395 - Chip Seal	Emergent
SR 20/Colville High School to Narcisse Rd - Chip Seal	Emergent
SR 20/Spruce Canyon Rd to Lake Thomas Dr - Chip Seal	Emergent
SR 20/Lake Thomas Dr to Tiger - Chip Seal	Emergent
SR 21/1.4 Miles N of Manila Cr Rd - Slope Stabilization	Emergent
SR 26/Dusty to Colfax - Chip Seal	Emergent
SR 27/Rockford to Freeman - Chip Seal	Emergent
I-90/Spokane Viaduct - Bridge Repair	Emergent
I-90/Vic Geiger Rd to Spokane Viaduct - PCCP Rehab	Emergent

WSDOT's Capital Project Delivery Programs

Pre-Existing Funds (PEF) Projects: Advertisement record

Pre-Existing Funds (PEF) projects scheduled for advertisement or advertised this quarter

July 1 - September 30, 2010

Project description	Advertised as scheduled
I-90/Sullivan Rd to Barker Rd - Additional Lanes	Emergent
SR 127/Big Alkali Rd to Dusty - Chip Seal	Emergent
US 395/Lee Rd to Jct I-90 - Paving	Emergent
US 395/Columbia River Bridge to Boyds - Chip Seal	Emergent

Data source: WSDOT Capital Program Development & Management.

Six individually tracked Pre-Existing Funds (PEF) projects: results through September 30, 2010

Dollars in millions

Project Description	First legislative budget & *year*	Baseline current legislative approved & *year*	Scheduled date to begin preliminary engineering		Scheduled date for advertisement		Schedule date to be operationally complete	
			Date	On time	Date	On time	Date	On time
US 2/Ebey Island Viaduct and Ebey Slough Bridge (Snohomish)*	$32.1 *2002*	$6.2 *2007*	Dec-98	√	Nov-00	√	Dec-03	
• US 2/50th Avenue SE vicinity to SR 204 vicinity – Bridge rehabilitation		$10.8 *2007*	Jul-06	√	Feb-07	√	Sept-07 complete	√
• US 2/43rd Avenue SE vicinity to 50th Ave SE vicinity – Bridge rehabilitation	$26.7 *2009*	$14.0 *2010*	Jan-09	√	Dec-10	Delayed	Dec-11	√ Early
SR 202/SR 520 to Sahalee Way - Widening (King) Project operationally complete February 2008.	$36.9 *2001-03*	$81.2 *2010*	May-98	√	Aug-05	√	Feb-08	√ Early
SR 539/Horton Road to Tenmile Road - Widen to Five Lanes (Whatcom) Project operationally complete November 2008.	$32.0 *2001-03*	$68.3 *2010*	Oct-90	√	Jan-07	√	Nov-08	√ Early
SR 28/E End of the George Sellar Bridge - Construct Bypass (Douglas) Advertisement delayed due to right of way issues.	$9.4 *2004*	$28.0 *2010*	May-04	√	Dec-10	Delayed	Dec-11	√
US 101/Purdy Creek Bridge - Replace Bridge (Mason)	$6.0 *2004*	$10.2 *2010*	Aug-04	√	May-08	Late	Aug-09	Early
Advertisement delayed due to additional design needed to bring Plans up to WSDOT Standards when they were returned from the consultant. Project operationally complete August 2009.								
SR 303/Manette Bridge Bremerton Vicinity - Replace Bridge (Kitsap)	$25.5 *2002*	$82.9 *2010*	Sep-96	√	Mar-10	√	Jan-12	

Data source: WSDOT Capital Program Development & Management.

A glossary of PEF advertisement terms

Advertisement date

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.
A √ mark in the Advertisement record indicates that a project advertised on time within the quarter.

Advanced

A project from a future quarter which has been advertised in the current quarter.

Early

Project with an ad date originally scheduled for the current quarter but occurred in an earlier quarter.

Late

A project that was advertised in the period being reported but which missed the original ad date.

Emergent

A new project that addresses unexpected needs such as emergency landslide repair.

Projects which were not advertised on schedule fall into three categories:

Delayed

A project that has not yet been advertised and which has had the ad date moved out of the quarter being reported to another quarter within the biennium.

Deferred

A project not yet advertised and which has had the ad date moved out of the quarter being reported to a future biennium.

Deleted

A project that, upon review or due to changing circumstances, is no longer required or has been addressed by another project.

Cross Cutting Management Issues

Use of Consultants

Consultants are retained to complete tasks and projects that WSDOT does not have the resources or expertise to perform internally. Two different types of consultant agreements are used: task order agreements and project-specific agreements.

Task order agreements comprise the majority of consultant contracts. Each year, WSDOT assesses the types of work services that it regularly uses, including preliminary engineering, traffic engineering, real estate appraisal and negotiation, land surveying, and transportation studies. Based on needs estimated biennially, the agency advertises for predetermined categories of work and initiates task order agreements with qualified consultants. WSDOT regions then determine if work can be completed using a task order agreement.

Project specific agreements, which are individually advertised by project, are typically used for work that cannot be performed using a task order agreement. For example, WSDOT might use a project specific agreement to design a bridge or an interchange.

From April 1, 2010 to September 30, 2010 (Quarters two and three of calendar year 2010), the net total of new consultant expenditures was $55.7 million for task order agreements, $11.1 million for project-specific agreements, and $25.9 million for general engineering consultant agreements. For a breakdown of the $92.8 million in total expenditures for Q2 of CY 2010 and Q3 of CY 2010, see the consultant expenditures table on the following page.

Task order agreements

Forty-four task order agreements had Nickel project expenditures during this period and total expenditures for services rendered were $2.4 million for 37 prime consultant firms. One hundred nine task order agreements had Transportation Partnership Account (TPA) project expenditures during this period; expenditure totals were $28.9 million for 74 prime consultant firms. The total statewide task order agreement consultant expenditures (excluding Nickel, TPA, and general engineering consultants) for the same period were $24.4 million. For a list of significant expenditures for consultants, see the significant authorizations for task order consultants' table on the following page.

Use of Consultants Highlights

- WSDOT consultant spending totaled $92.7 million between April 1, 2010 and September 30, 2010.
- •Consultants contributed to many major projects including the SR 520 Bridge Replacement, the Columbia River Crossing, and the I-90 Snoqualmie Pass project.
- •WSDOT uses consultants for preliminary engineering, land surveying, real estate negotiation, transportation studies, and other services.

Consultant utilization definitions & examples

Authorization type	Description	Project examples	Service performed by consultant
Task Order Agreements	Consultant performs regularly occurring work in one of multiple categories including preliminary engineering, traffic engineering, real estate appraisal and negotiation, land surveying, and transportation studies work.	U.S. 12 - Wallula to Walla Walla Corridor Study (Nickel and TPA)	David Evans and Associates conducted a preliminary environmental investigation on preferred corridor alignments for U.S. 12 from the Wallula junction to the city of Walla Walla.
General Engineering Agreements	Consultant supervises the planning, design, and program management responsibilities for very large scale mega-projects, or clusters of related projects.	SR 167 Valley Freeway Corridor (Nickel)	Perteet is organizing the corridor project's partnership groups, handling the public involvement process, and evaluating environmental documentation.
Project Specific Agreements	Consultant performs services for a specific project.	SR 520 West Lake Sammamish Boulevard to SR 202 (Nickel)	CH2M Hill was selected as the prime design consultant for stages 3A and 3B of a flyover ramp that will comply with the City of Redmond's stormwater design codes.

Data source: WSDOT Consultant Services Office.

Cross Cutting Management Issues

Use of Consultants

General engineering agreements

Eight high-profile general engineering consultant (GEC) projects had consultant agreements expenditures between April 1, 2010 and September 30, 2010. GEC expenditure totals were $25.9 million, divided between eight primary consultant firms, of which $1.9 million were Nickel funds and $23.9 million were TPA funds. For a breakdown of the projects, see the expenditures for general engineering consultants table below.

Project-specific agreements

From April 1, 2010 to September 30, 2010, new expenditures for project-specific Nickel agreements and/or supplements totaling $1.7 million were divided between 16 prime consultants. New expenditures for project-specific TPA agreements and/or supplements were $7.6 million, divided between 36 prime consultants. All non-Nickel/TPA, project specific, consultant authorizations totaled $1.8 million. The significant authorizations for project-specific consultants table below lists significant expenditures for project-specific agreements.

Consultant expenditures

April 1, 2010 and September 30, 2010, dollars in millions

Type of consultant agreement	Nickel	TPA	PEF	Total
Task order consultant agreements (including GEC agreements)	$4.40	$52.90	$24.40	$81.70
Project-specific agreements/supplements	$1.70	$7.60	$1.80	$11.10
Totals	**$6.10**	**$60.50**	**$26.20**	**$92.80**

Significant authorizations for task order consultants

April 1, 2010 and September 30, 2010, dollars in millions

Project	Consultant	Total expenditures
Columbia River Crossing Project (Nickel, PEF)	David Evans and Associates, Inc.	$9.90
SR 520 TransLake Washington Project (TPA, PEF)	Parametrix, Inc.	$6.10
Alaskan Way Viaduct and Seawall EIS (TPA, PEF)	PB Americas, Inc.	$15.50

Expenditures for general engineering consultants (GEC)

April 1, 2010 and September 30, 2010, dollars in millions

Project	Consultant	Expended this period
GEC Alaskan Way Viaduct & Seawall Replacement Project	Hatch Mott MacDonald	$6.10
GEC I-90 Snoqualmie Pass East – Hyak to Keechelus Dam	URS Corporation	$1.50
GEC Northwest Region Mt. Baker Area	H.W. Lochner, Inc.	$0.00
GEC Northwest Region Mt. Sno-King Area	Aecom USA, Inc..	$0.10
GEC SR 167 Extension	Jacobs Engineering	$0.00
GEC SR 167 Valley Freeway Corridor	Perteet, Inc.	$0.60
GEC SR 520 Bridge Replacement and HOV Project	HDR Engineering, Inc.	$17.50
GEC Tacoma/Pierce County HOV Program	CH2M Hill, Inc.	$0.00
Total		**$25.90**

Significant authorizations for project-specific consultants

April 1, 2010 and September 30, 2010, dollars in millions

Project	Consultant	Total expenditures
I-405 General Engineering Consultant (Nickel, TPA, PEF)	HNTB Corporation	$6.00
Tacoma/Pierce County HOV Program (Nickel, TPA)	CH2M Hill, Inc.	$1.00
SR 99 Bored Tunnel Architectural Services Project (TPA)	NBBJ, LLP	$0.70

Source for all tables: WSDOT Consultant Services Office.

Hot Mix Asphalt

WSDOT tracks both the projected and awarded amounts of hot mix asphalt (HMA) for two reasons. First, the agency projects HMA amounts so that contractors can better anticipate future HMA volumes. This helps private contractors better manage their costs associated with HMA, which ultimately results in more competitive bidding and favorable prices on WSDOT contracts. Second, the agency tracks actual tons awarded against the forecast to measure how well the agency met its work plan.

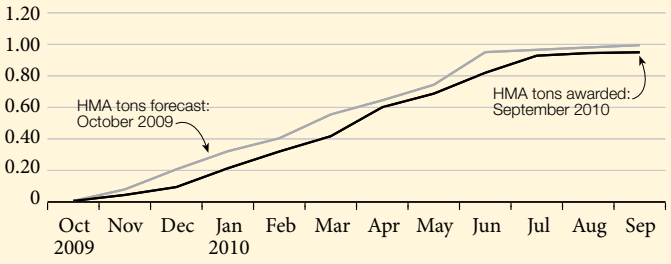
Actual hot mix asphalt tons awarded in 2010 4.6% less than projected

In October 2009, WSDOT forecast that 995,053 tons of HMA would be awarded in construction contracts through September 2010. At the end of September, WSDOT had awarded 949,716 tons of HMA, or 4.6% less than the revised forecast. This represents a difference of 45,337 tons. In 2009, the actual HMA awarded was 9% less than the amount forecast.

The agency did not award 12 construction projects that were included in the forecast, accounting for 203,000 tons of HMA. The difference between the forecast tons and awarded tons was smaller than 203,000 because the agency awarded projects that were not included in the forecast. Most of these additional projects were funded by federal stimulus money that became available due to low bids on other stimulus projects. One was funded by a TIGER grant. The remainder were originally scheduled for advertisement in the future but was advanced. Of the 12 planned projects that were not awarded this year, all are scheduled for award in the next forecasting period, nine of which will be advertised by December 31, 2010.

Hot mix asphalt tons awarded

Actual vs. forecasted, October 1, 2009 - September 30, 2010
Tons in millions



Data source: WSDOT Construction Office.

Hot mix asphalt, forecasted vs. actual tons awarded, 2002-2010

Year[1]	Projected	Actual	% Difference
2002	1,373,4652[2]	1,364,021	-1%
2003	1,417,126	1,825,442	+29%[3]
2004	1,324,218	1,299,377	-2%
2005	1,779,826	1,685,394	-5%
2006	1,213,985	1,126,701	-7%
2007	1,297,601	1,214,544	-6%
2008	1,322,418	1,397,189	+6%
2009	1,535,757[4]	1,402,176	-9%
2010	995,053	949,716	-4.6%

Data source: WSDOT Construction Office.

Data notes: 1 Awarded tons are tracked on an October through September calendar year, providing a better measurement of the work schedule and better planning for the paving industry than the calendar year. Construction projects awarded in the fall typically do not begin work until the next year's construction season begins in the Spring.

2 The projection for 2002 was revised in March 2002 by the Transportation Commission following budget cuts.

3 The 2003 Nickel program was passed after the projection was made for 2003. WSDOT subsequently awarded five projects from the 2003 Nickel program with a combined total of 315,285 tons of HMA.

4 Projected tons awarded for 2009 includes Recovery Act stimulus projects.

Hot Mix Asphalt Highlights

At the end of the 2010 construction season, WSDOT awarded 949,716 tons of hot mix asphalt, which is 45,337 tons, or 4.6% less than forecasted.

WSDOT attributes the gap in awards to 12 projects that were included in the forecast, but not awarded for the 2010 season.

Despite this, projects funded by surplus federal stimulus and TIGER programs helped to make up most of the forecast gap by the 12 WSDOT projects not awarded.

Workforce Level and Training Quarterly Update

Workforce Level and Training Highlights

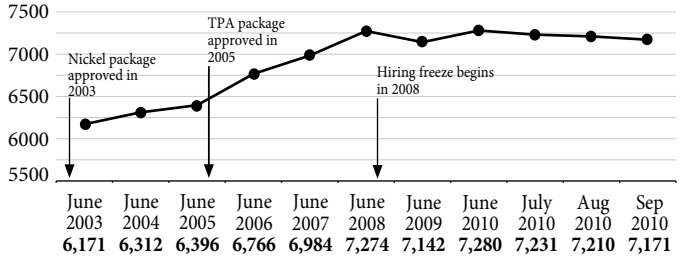
WSDOT employed 109 fewer permanent full-time workers on September 30, 2010 than on June 30, 2010.

Employee training compliance met or exceeded the 90% statewide performance goal for four mandatory courses in September.

Information Security compliance declined to 51% due to the annual refresher requirement.

On September 30, 2010, WSDOT employed 7,171 permanent full-time employees, 109 fewer employees than the previous quarter ending June 30, 2010, mostly due to retirements and resignations. WSDOT employed 59 fewer employees than at the end of September 2009, due in part to a hiring freeze that fills only critical positions. The chart below shows the number of full-time employees since June 30, 2001. The total number of full-time equivalencies (FTEs) will generally exceed the number of permanent full-time employees, as seasonal, permanent, part-time, and non-permanent/on-call workers are funded from FTE allocations.

Number of permanent full-time employees
From June 2003 to September 2010



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

Compliance for most mandatory training courses improve

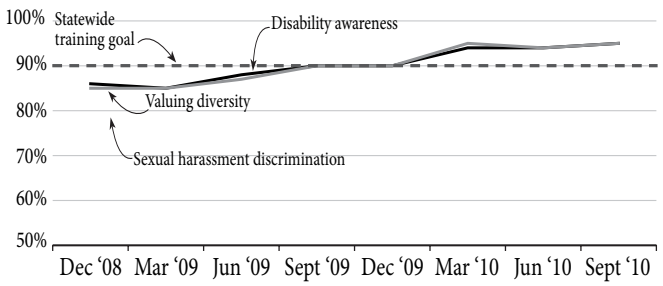
Compliance for required training for all WSDOT workers continues to improve with the exception of two courses that require a periodic refresher, Ethical Standards and Information Security Training. The graphs below show the compliance with the required diversity and policy training courses over the last two years.

Diversity compliance improved

WSDOT has identified new efficient ways to increase diversity training compliance and is now meeting the statewide 90% compliance goal for all three mandatory courses. The agency's automated training management system forecasting reporting has allowed the agency to predict future demands and better deliver training courses when and where they are needed. This new tool and the removal of refresher requirements for the Disability Awareness and Valuing Diversity courses have allowed WSDOT to use resources more effectively.

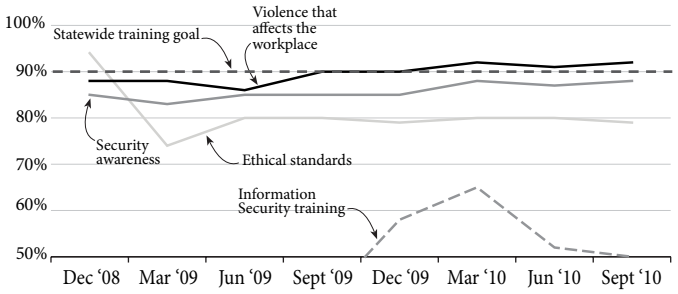
Sexual Harassment/Discrimination compliance was 90% on September 30, 2010, up from 77% compliance a year earlier. Disability Awareness and Valuing Diversity compliance was 95% at the quarter end. In 2008, the Legislature approved a law change that required mandatory refresher training in sexual harassment/diversity every three years for managers and every five years for all employees. Refresher training is not mandatory for the disability awareness and valuing diversity courses.

Required diversity training for all WSDOT employees
By percentage of employees in compliance, Dec. 2008 to Sept. 2010



Data source: WSDOT Human Resources Office, Staff Development.

Required policy training for all WSDOT employees
By percentage of employees in compliance, Dec. 2008 to Sept. 2010



Data source: WSDOT Human Resources Office, Staff Development.

The WSDOT Office of Equal Opportunity continues to produce a quarterly newsletter that focuses on diversity and disability issues. The latest edition focused on "Generations at Work Together" and WSDOT's commitment to diversity. The primary purpose of the newsletter is to make all employees aware of the important role diversity plays in the working environment.

Employees overdue for policy training refreshers

Policy training improved for two courses and declined for two courses in the recent quarter. Compliance for the two courses that require a periodic refresher declined, while compliance improved for violence that affects the workplace and security awareness, which do not require employees to take courses again. WSDOT organizations will determine which employees need updated training and identify employees who have not completed the courses.

While 98% of WSDOT employees have completed the ethical standards course, 79% are in compliance, because 1,435 employees need to take the refresher course that is required every three years. The information security course refresher is required every year. Employees were first required to complete the course in 2009. Though 73% of employees have successfully taken the course, 51% are in compliance because 1,684 have not taken the refresher.

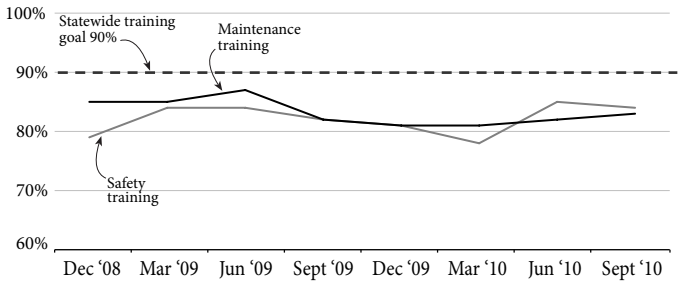
Required maintenance and safety training compliance remained level at 84%

WSDOT employee compliance with statutorily required maintenance and safety training was 84% this quarter, no change from the prior quarter. The safety training compliance level was 84% on September 30, 2010, 1% lower than last quarter, while the maintenance training compliance was 83%, a 1% increase over last quarter. The graph below shows safety and maintenance training compliance between December 30, 2008 and September 30, 2010.

WSDOT's goal is to reach 90% compliance for statutorily required maintenance and safety employee training. Compliance is annually highest in the fall when more employees are available for training. Supervisors and trainers balance the workloads of maintenance staff to ensure training occurs continually while maintaining roads safely.

Maintenance and safety training compliance

By percentage of employees in compliance, Dec. 2008 to Sept. 2010



Data Source: WSDOT Human Resources Office, Staff Development.

Note: The safety and maintenance compliance rates shown in this graph in the June 2010 Gray Notebook 38 were inadvertently reversed. The safety training compliance was 85% and maintenance was 82%.

Crane operation certification remains a priority

WSDOT employees operate mobile cranes for maintenance and inspections on state highways and construction projects. Following the collapse of a tower crane in Bellevue in 2006, the state Legislature adopted a new crane safety law in 2007 which took effect on January 1, 2010. The law and regulations require crane operators to meet experience requirements and pass written and hands-on exams.

WSDOT has identified 55 employees who require mobile crane training and certification. As of September 30, 35 (64%) employees received certification, including 16 employees certified between July 1 and September 30. WSDOT will continue to train employees to meet this certification in order to operate cranes at maintenance and construction sites.

Training compliance improved in three regions

WSDOT tracks statutorily required training compliance for its maintenance workers by region. The table below documents each region's compliance with all the courses listed as a single measure. On September 30, the Southwest region exceeded the 90% goal for safety and maintenance training compliance. Compliance increased in three regions, remained the same in two regions, and decreased in one region from June 30, 2010 to September 30, 2010.

Region maintenance and safety training compliance

Percentage of employees in compliance on Sept. 30, 2010, Goal is 90%

Region	Current quarter percent in compliance	Percent change from last quarter	Biennium average	Goal met
Northwest	78%	1%	74%	
North Central	85%	0%	83%	
Olympic	84%	0%	81%	
Southwest	98%	2%	95%	√
South Central	83%	-4%	85%	
Eastern	89%	1%	91%	

Data source: WSDOT Office of Human Resources, Staff Development.

Tolling Annual Report

Tolling for Stewardship

Tolling Stewardship Highlights

- 75% of drivers crossing the Tacoma Narrows Bridge pay by electronic toll.
- WSDOT expects revenues from the SR 167 HOT lanes to exceed operating costs by spring 2011.
- Tolling on SR 520 is scheduled to begin in 2011.
- New electronic toll payment options projected to reduce collections costs in 2011.

Toll collection to financially support transportation projects is not new to Washington. Fourteen bridges in Washington have been financed with bonds, and toll collections have been used to reimburse either part, or all of the building costs. Examples of previous toll financed bridges include: the SR 104 Hood Canal bridges, the SR 520 Evergreen Point Floating Bridge, the I-90 Lacey V. Murrow Bridge, the SR 303 Fox Island Bridge, and the I-5 Vancouver-Portland Bridge.

Before 1933, Washington was one of only a few states that had not sold bonds to finance transportation projects. With no debt, Washington had financed transportation facilities strictly on a pay-as-you-go basis. However, it has become increasingly difficult to finance large projects though gas tax revenues alone. In 1937, a law was passed creating the Washington Toll Bridge Authority and gave it full powers to finance, construct, and operate toll bridges.

WSDOT uses tolling for both financial stewardship and congestion management

WSDOT uses tolling as a financing strategy and as a congestion management tool. Tolling on the Tacoma Narrows Bridge is primarily for financial reasons and is used to pay back bonds that were used to pay for construction. The SR 167 HOT lanes pilot project is used primarily for congestion management. The HOT lanes allow single occupancy vehicles to pay a toll to use the HOT lane, improving travel times for all vehicles traveling the corridor. Tolling on the SR 520 bridge, I-405 corridor, and Columbia River Crossing will help manage congestion through variable pricing as well as finance construction.

Toll rates: Tacoma Narrows Bridge

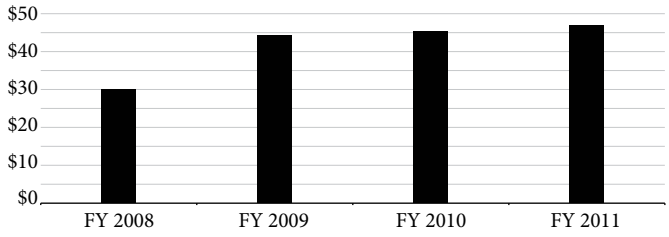
For a typical 2-axel passenger vehicle

Year	Cash	Electronic
2010 (Current)	$4.00	$2.75
2007 (Original)	$3.00	$1.75

Data source: WSDOT Toll Division.

Tacoma Narrows Bridge annual toll revenue

Dollars in millions; FY 2008 - FY 2011



Data source: WSDOT Toll Division.

Note: The actual annual toll revenue is based on the 2010 financial plan and September 2010 forecast. The TNB toll was implemented on 7/16/2007; the actual revenue in FY 2008 is based on 11.5 months of data.

Tolling on the new Tacoma Narrows Bridge

When the new Tacoma Narrows Bridge (TNB) opened in July 2007, WSDOT began tolling operations on a bridge in Washington for the first time in almost 20 years. Bridge users are able to stop at a toll booth to pay the toll or set up a *Good To Go!* account to pay their tolls electronically.

The Tacoma Narrows Bridge Citizen Advisory Committee (CAC) was appointed by the governor in 2006 to provide recommendations on toll rates to the Washington State Transportation Commission. This nine-member committee is composed of permanent residents of the bridge area, and is required by law to make toll rate recommendations to the Transportation Commission. The current cash toll rate is $4.00 and the electronic rate (paid through *Good To Go!* accounts) is $2.75, these toll rates will remain in place until at least June 2011.

Out of around 14 million toll transactions, 75% of drivers crossing the TNB use electronic tolls with 85% of morning commuters having electronic toll accounts. In Gig Harbor, 96% of households have *Good To Go!* accounts.

In the future, the TNB is expected to experience lower operational costs due to new tolling technology (see p. 78). In FY 2010, $11.2 million was devoted to operations and

Tolling for Mobility / Future Washington Toll Facilities

maintenance while an additional $34.9 million went towards debt service, and nearly $600,000 was collected from toll violations on this bridge.

SR 167 HOT Lanes

The SR 167 HOT lanes pilot project is half-way through its four-year term. The first two years of the project have yielded significant results – both for the drivers who access the HOT lanes and for those who use the general purpose (GP) lanes. For mobility performance information, see page 47 in the 2010 Annual Congestion Report.

The Transportation Commission adopted variable toll rates for SR 167 ranging from $0.50 to $9. The tolls are adjusted based upon an algorithm that is set to maintain speeds in the HOT lane at 45 mph during peak hours for 90% of the time. Four possible events contribute to toll rate increases:

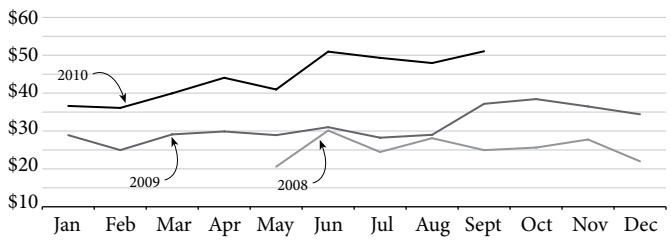
- The volume in the HOT lane increases
- The rate of volume increase in the HOT lane increases
- The speed in the HOT lane decreases
- The rate of speed decrease the HOT lane increases

Currently, the HOT lanes exceed the requirements, achieving the required speed over 99% of the time. As of April 2010 the average toll paid continues to float between $0.75 and $1 per trip.

HOT lane revenue increased 33% in the second year, generating about $420,400 in gross revenue from May 1, 2009 through April 30, 2010. During the first year, the system averaged $26,380 per month. The second year's average monthly revenue has grown to $35,030. More specifically, from June through August of 2010, revenue increased by 88% compared to a similar period in 2008. Revenue increases can be partially attributed to more people using the HOT lanes, optimal pricing strategy, and a reduction in expenditures from adjusting enforcement, transaction processing, and operational costs. WSDOT expects revenues to exceed operating expenses by spring 2011.

SR 167 HOT lanes monthly revenue

Dollars in thousands; May 2008 - September 2010



Data source: WSDOT Toll Division.

This artist rendition shows a tolling gantry on the SR 520 bridge.

Future toll facilities in Washington

Tolling on SR 520 to begin in mid-2011

In the spring of 2011, WSDOT will begin tolling on the SR 520 bridge using all-electronic tolling. Electronic tolling eliminates bottlenecks caused by traditional tollbooths and allows for improved traffic flow. Tolls from the SR 520 bridge will contribute about $1 billion in funding to the project. These tolls will help pay for the new bridge scheduled to open in 2014.

Potential for express toll lanes on the I-405 corridor

In May 2009, the Washington State Legislature directed WSDOT to conduct a traffic and revenue study including potential funding for future improvements and high occupancy toll or express toll lanes on I-405. WSDOT found that express toll lanes are an effective strategy to manage congestion and optimize performance and can provide additional revenue to help fund further improvements in the corridor. Moving forward with the implementation of express toll lanes on I-405 will require State Legislative authorization, Federal approval, and Legislative designation of SR 167 as a permanent toll facility expanded south to Puyallup.

Tolling on the I-5 Columbia River Crossing studied

In 2009, the Legislature directed WSDOT to evaluate tolls as a means to finance the Columbia River Crossing (CRC) project and report its findings in 2010. A Tolling Study Committee was convened to evaluate traffic and funding information to better understand the traffic effects, funding contribution, and public awareness about the project.

It was found that commuters have mixed opinions on tolling the CRC, while the freight and business community is generally in favor. The tolling scenarios examined could raise between $940 million and $3.36 billion in funding from tolls; if tolling begins early, an additional $330 million could be raised, for any of the scenarios studied.

Tolling
Annual Report

Electronic Tolling / Tolling Operations Performance Measures

Washington's *Good To Go!* electronic toll system

Good To Go! the state's electronic toll collection program. It has been in use on the Tacoma Narrows Bridge since July 2007 and on the SR 167 HOT lanes since May 2008. In the spring of 2011, WSDOT will expand the *Good To Go!* program when all electronic tolling begins on the SR 520 bridge.

New toll payment options are coming in 2011

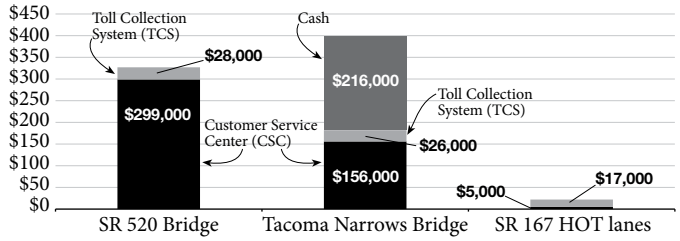
With the introduction of all-electronic tolling in the SR 520 corridor, the Legislature approved new payment options for the Tacoma Narrows Bridge. A pay-by-mail system will allow drivers without *Good To Go!* accounts to bypass toll booths and receive a bill in the mail. With this new system, these drivers will have up to 80 days to pay their toll bill before being issued a $40 citation. Drivers will also have the option to set up a *Good To Go!* account linked to their license plate rather than a transponder (also called photo tolling). An additional fee has been proposed to cover costs associated with processing these transactions.

New toll payment options expected to reduce toll collection costs

The introduction of photo tolling is expected to reduced the cost of toll operations in Washington. Looking at the projected cost of toll collections on SR 520, the Tacoma Narrows Bridge, and SR 167 for 2011, it can be observed that cash transactions are much more costly than electronic toll transactions. Implementation of photo tolling on the TNB is expected to reduce operations costs by about $173,000 a month for a total savings of $1.5 to $2 million dollars in 2011. Even taking these reductions into account, the monthly cost of toll collection on the SR 520 bridge is expected to be about 18% less than that of the TNB while serving twice as many daily users.

Projected 2011 monthly toll collection costs

Dollars in thousands



Data source: WSDOT Toll Division.

Note: Projected toll costs based on daily transactions/facility, assuming 90,000/day for SR 520, 40,000/day for Tacoma Narrows Bridge, and 4,000/day for SR 167.

Toll system and operations performance metrics

WSDOT works closely with the toll operations contractor, *TransCore*, to ensure performance-based goals are met and to conduct structured tests of toll systems under strict contractual parameters for the Tacoma Narrows Bridge. *TransCore's* contract with WSDOT includes metrics for electronic toll collection, vehicle classification, and accuracy within the overall system.

In addition to the system operations testing, an additional set of performance metrics is reviewed by *TransCore* and WSDOT monthly to verify that tolling, as a program and service, delivers a system that provides better traffic management, accurately records transactions and reconciles financial records, and communicates professionally with customers in a timely manner.

WSDOT plans to report performance data from the *TransCore* contract in next quarter's edition, *Gray Notebook 40*.

WSDOT chooses new vendor to help manage operations for all Washington toll facilities

WSDOT recently selected Electronic Transactions Consultants Corporation (ETCC) as the vendor to provide back office operations for all toll facilities in Washington. Phased implementation by ETCC will delay the start of tolling on the SR 520 bridge two weeks from mid-March to the beginning of April 2011. The new customer service center (CSC) is still scheduled to open as planned in January 2011. Photo tolling on the Tacoma Narrows Bridge will be delayed three months from January to April 2011, allowing ETCC to implement the new photo tolling system on the TNB and SR 520 bridge at the same time.

Tolling customer satisfaction survey

WSDOT conducted a telephone and online survey in 2010 to gauge the opinions of those who travel the Tacoma Narrows Bridge (TNB) and SR 167. The survey polled both existing *Good To Go!* customers and those who use one of the tolled facilities but don't have accounts. Highlights included:

- TNB users agreed more with tolling to finance construction than tolling for traffic management.
- SR 167 users with a *Good To Go!* accounts and carpoolers agreed equally with tolling to fiance construction and tolling for traffic management.

Over half of SR 167 users agreed that:

- HOT lanes allowed them to make a faster trip when general purpose lanes are congested.
- Allowing single drivers to use carpool lanes by paying a toll is a good idea.
- HOT lanes should be opened on other freeways in our region.
- The SR 167 HOT lanes should have a toll and should not be open to all drivers for free, at all times.

For the quarter ending September 30, 2010

Project Starts

SR 303 Manette Bridge rehabilitation (Kitsap)

The SR303 Manette Bridge has been an icon in the Bremerton area for the past 80 years, but all those years have taken their toll on this structure. With rehabilitation out of the question, WSDOT and contractors Manson-Mowat jointly began a two-and-a-half year, $57.8 million project this August to replace the structure. The new Manette Bridge will be constructed just south of the existing bridge. It will be 15 feet wider than the old structure, providing wider shoulders to improve traffic flow and a larger, more pedestrian-friendly walkway. The addition of a new roundabout in Manette will further facilitate mobility.

Manette Bridge Replacement design on SR303 (Kitsap).

I-5, SR 161, SR 18 interchange project (King)

WSDOT, along with local, state and national leaders, broke ground Aug. 18 on an interchange project in Federal Way – the Triangle Project. This project will revamp the interchange of I-5, SR 18 and SR 161 to smooth traffic flow and ease congestion. The current I-5/SR 18 interchange was built more than 45 years ago with a cloverleaf design that cannot accommodate current traffic volumes. The current ramps cause cars to weave, which not only slows traffic but also increases collision potential. This will be a multi-phase project; phase one will create two new flyover ramps connecting I-5 to SR 18 and new ramps to and from 348th Street. Also included is a new weigh-in-motion station on southbound I-5.

SR 529 Ebey Slough bridge (Snohomish)

Crews broke ground on a three-year, $50 million project to replace the 85-year-old, SR 529 Ebey Slough Bridge with a four-lane, fixed-span steel bridge. The new bridge will have two lanes in each direction, with separate bicycle lanes and sidewalks on each side. It will be a taller, "fixed-span" bridge, rather than a "swing-span" bridge. The existing bridge swings on its axis to allow marine traffic to pass, a process that typically takes about 10 minutes and causes vehicle traffic delays. The new bridge will help reduce congestion by handling more vehicle traffic. It will also reduce the need for costly repairs and eliminate the cost of staffing the old, moveable bridge.

I-5 Widening through Tacoma (Pierce)

WSDOT crews began widening and improving I-5 from Portland Avenue to the Port of Tacoma on Aug. 2. This "pre-work" opens the door for future improvements that will ultimately help improve traffic flow on I-5 through Tacoma. Crews are widening and retrofitting the I-5 bridges at Portland Avenue and Bay Street to meet seismic design standards and support embankments for new bridges spanning the Puyallup River. In addition to widening the I-5 bridges, the project realigns the northbound I-5 exit to SR 167, adds a high-performance median barrier at Portland Avenue, and installs traffic sensors and cameras to provide the public real-time traffic information. WSDOT will also build retaining walls to prepare for the future Puyallup River bridges. The work is scheduled to be completed in late 2011.

I-405 Renton Stage 2 Widening (King)

When the new Benson Road South Bridge was built over I-405 during the Renton Stage 2 Widening project, crews were able to remove the old bridge in July to accommodate new lanes on I-405. Removing the old bridge required completely closing I-405 between SR 167 and the Maple Valley Highway (SR 169) in Renton for 33 hours beginning on July 10. The Renton Stage 2 project will add capacity on I-405 to help traffic flow and improve freeway access by adding a new lane in each direction on I-405 from SR 167 to SR 169.

Crews are also building a new half-diamond interchange at Talbot Road to help reduce congestion at nearby interchanges with SR 167 and the Maple Valley Highway. The new interchange includes an on-ramp from Talbot Road to northbound I-405 and an off-ramp from southbound I-405 to SR 515.

Crews are preparing to remove the old Benson Bridge. The new bridge, seen in the background with its railing, is already carrying traffic across I-405.

For the quarter ending September 30, 2010

New SR 532 bridge (Snohomish)

WSDOT opened the new SR 532 bridge between Stanwood and Camano Island to traffic on Aug. 13. The bridge is part of a 10-mile SR 532 corridor that carries 20,000 vehicles a day, spans two counties and runs through the heart of Stanwood. This largest piece of the SR 532 corridor project will help improve safety, reduce choke points and preserve important transportation infrastructure along SR 532. The new bridge has wider lanes and shoulders, is built to current earthquake standards, has a lower profile to provide better sight distance, and has new stormwater treatment facilities to reduce impacts of runoff on water quality and wildlife habitat. When this $84 million project is completed in mid-2011, drivers will see changes to 10 miles of highway including truck climbing lanes, new turn lanes, bus pull outs, new sidewalks and new driveways along SR 532.

Project Completions

New miles opened for US 12 four-lane highway (Walla Walla)

WSDOT opened eight miles of new US 12 lanes from Frenchtown vicinity to Walla Walla in July. (See Completed Projects, p. 56.)

Rockfall prevention on SR 14 (Skamania)

WSDOT completed a rockfall prevention project on SR 14 in the Columbia River Gorge, making the route safer for more than 3,800 daily travelers. The $3.8 million SR 14 Rockfall Mitigation White Salmon Vicinity project removed potentially dangerous rock, soil, and other debris from slopes above SR 14 near Dog Mountain and White Salmon. Between March and September, contractor crews blasted and carved away more than 31,000 cubic yards of rock and soil. Crews also installed rock bolts and cable netting in both locations to further stabilize the slopes and angled the slope near Dog Mountain away from the highway. To further protect drivers, crews built a 30-foot-wide catchment ditch where rocks can accumulate and be cleared away before they become obstacles. The SR 14 Rockfall Mitigation White Salmon Vicinity project is part of WSDOT's ongoing efforts to mitigate unstable slopes on highways across the state.

Public Transportation

Communities cheer for new transit option

A new option for Northeast Washington travel was cause for celebration on Sept. 18 when dignitaries and residents from Spokane to Kettle Falls came out to cut the ceremonial ribbon for a brand new intercity bus service – the Gold Line. The new service was named for the region's historic mining industry, and was made possible by a federal grant and matching local funds from Greyhound Bus Lines. The Gold Line's 26-passenger buses open the doors to Northeast Washington's rich natural landscapes and offer an efficient and comfortable way for locals to travel between Kettle Falls, Colville, Chewelah, Deer Park, and Spokane, with connections to Spokane International Airport and other transportation hubs.

Travel Washington, WSDOT's intercity bus service, began Gold Line service on Sept. 8. It is Travel Washington's fourth intercity bus line, providing convenient and accessible travel options for rural communities and people with special needs.

WSDOT Public Transportation Division Director Katy Taylor welcomed Kettle Falls Mayor Dorothy Slagle and other officials to celebrate WSDOT's newest Travel Washington bus line in Kettle Falls.

Ferries

New Deputy Chief with Ferries Division

Capt. George Capacci was named Deputy Chief of Operations and Construction for WSDOT's Ferries Division. He oversees operations, terminal engineering, and vessel maintenance, preservation and engineering. He began his new position on August 16th and reports to Assistant Secretary David Moseley.

Capt. Capacci served 20 years in the U.S. Coast Guard and more recently was vice president of Fleet Operations for B.C. Ferries and general manager for the Alaska Marine Highway System. Since 2009, he has been the Washington State Ferries Division North Region port captain. He has a Masters of Public Administration from The George Washington University and a Bachelor of Science in General Engineering from the U.S. Coast Guard Academy.

For the quarter ending September 30, 2010

Rail

Amtrak Cascades train to Vancouver, B.C. reaching one-year mark with soaring ridership and high demand

After one year in operation, the second Amtrak Cascades train to Vancouver, B.C. exceeded its ridership expectations and recorded its best month in July, with nearly 25,000 passengers. From the day service began Aug. 19, 2009, through July 31, 2010, ridership for the second Amtrak Cascades train totaled more than 221,000. Ridership on the original train to Vancouver, B.C. also increased dramatically, more than 21 percent compared to 2009. To encourage even greater ridership between the state of Washington and British Columbia, travelers were offered a 25 percent ticket discount on Amtrak Cascades travel to Vancouver, B.C. during September.

The second daily Amtrak Cascades train operated as a pilot program through September 2010, with proposed plans for the service to continue if the Canada Border Services Agency decides to allow the train to pass without additional security fees.

Washington applies for additional High-Speed Intercity Passenger Rail funding

To expand high-speed intercity passenger rail along the I-5 corridor, WSDOT applied for $80 million in additional grants for the Pacific Northwest Rail Corridor. Any additional grant money will allow Washington to make critical infrastructure improvements to the high-speed rail system, which will improve mobility in congested areas along the rail corridor, provide transportation options other than driving, create and preserve jobs, foster economic growth, and improve air quality across our state. WSDOT submitted nine applications for the additional funding.

The Federal Railroad Administration (FRA) accepted applications for $2.1 billion in grants to continue the development of high-speed intercity passenger rail corridors. In addition, the FRA will make another $245 million available for individual construction projects with a corridor. Grant awards are expected to be announced in fall of 2010.

Traveler Information and Safety

WSDOT launches new Smarter Highways

In early August, drivers on I-5 near Seattle had their first chance to check out WSDOT's new Smarter Highways technology in action. The new, overhead signs are mounted every half-mile above northbound I-5 between Boeing Access Road and I-90.

New Smarter Highways *signage dynamically controls traffic using integrated systems and a coordinated response to real-time roadway conditions.*

The signs will automatically alert drivers to change lanes if an incident blocks traffic ahead, or warn them to adjust their speed before reaching slower-moving traffic. The new signs will help reduce rear-end collisions, allow drivers to exit earlier to reach alternate routes, and give drivers advance warning so they can change lanes well before blocking incidents like stalls or collisions.

WSDOT is giving drivers a new reason to use their Bluetooth in Vancouver this summer

WSDOT began a pilot project this summer using Bluetooth technology to provide more information about travel times on southbound I-205 through the Glenn Jackson Bridge roadway project in Oregon. The system offers drivers information on how long it will take them to travel from one location to another on southbound I-205. In July, Oregon DOT began the first of seven weekend lane closures on the I-205 Glenn Jackson Bridge.

BlueTOAD (Bluetooth Travel-time Origination And Destination), a device developed by TrafficCast, uses Bluetooth technology to generate approximate travel times and highway speed. The system works without identifying the owner of a Bluetooth device. BlueTOAD offers travel times by measuring how long it takes a sample number of Bluetooth devices to go from one location to another. WSDOT then posts the travel times and congestion-related information on a southbound I-5 variable message sign.

For the quarter ending September 30, 2010

WSDOT introduces new mobile applications for smartphone users

WSDOT made it even easier for smartphone users to "know before you go" with a new mobile application for iPhone and Android launched in time for the Labor Day holiday. The new application keeps real-time traffic conditions always at hand.

With the new application, iPhone and Android users will have access to WSDOT's Web-based travel information including:

- Ferries – schedules, travel alerts and routes
- Mountain passes
- Seattle traffic cameras
- Puget Sound highway travel times
- Canadian border wait times
- WSDOT Blog
- Twitter
- Flickr photos

New iPhone mobile application showing a Seattle-area flow map.

WSDOT installs new Hood Canal Bridge traffic cameras

WSDOT and contractor Signal Electric, Inc. of Kent began construction on Aug. 16 on a project to install cameras at nine locations on SR 3 and SR 104 approaching the Hood Canal Bridge. The online cameras will be available on WSDOT's website in October and will provide additional real-time travel information and allow drivers to check traffic backups in the area related to Hood Canal Bridge openings near Exit 9, located just north of the I-5/I-205 interchange.

Announcements, awards and events

Local transportation projects receive "Awards of Excellence" designation

Innovative and environmentally sensitive transportation projects received high honors as recipients of the 2010 Award of Excellence. This annual awards program, presented by the Federal Highway Administration (FHWA) and WSDOT, recognizes federally-funded local agency transportation projects that achieved excellence in safety enhancements, construction, innovative design, environmental sustainability, and community involvement.

The award categories and this year's winners are as follows:

- Best City Award: City of Deer Park – Crawford Avenue Phase V Reconstruction Project
- Best County Award: Snohomish County – Sauk River Bridge No. 414 Replacement Project:
- Best Special Award: City of Leavenworth – Icicle Station Project
- Director's Award: Clallam County – Elwha River Bridge Replacement Project

Platform construction for the "Best County Award" winning Icicle Station Project in Leavenworth.

Gray Notebook Subject Index

Calendar year	Edition number / date (Washington state fiscal year & quarter)			
2001	1 / Mar 31, 2001 (FY01 Q3)	2 / June 30, 2001 (FY01 Q4)	3 / Sept 30, 2001 (FY02 Q1)	4 / Dec 31, 2001 (FY02 Q2)
2002	5 / Mar 31, 2002 (FY02 Q3)	6 / June 30, 2002 (FY02 Q4)	7 / Sept 30, 2002 (FY03 Q1)	8 / Dec 31, 2002 (FY03 Q2)
2003	9 / Mar 31, 2003 (FY03 Q3)	10 / June 30, 2003 (FY03 Q4)	11 / Sept 30, 2003 (FY04 Q1)	12 / Dec 31, 2003 (FY04 Q2)
2004	13 / Mar 31, 2004 (FY04 Q3)	14 / June 30, 2004 (FY04 Q4)	15 / Sept 30, 2004 (FY05 Q1)	16 / Dec 31, 2004 (FY05 Q2)
2005	17 / Mar 31, 2005 (FY05 Q3)	18 / June 30, 2005 (FY05 Q4)	19 / Sept 30, 2005 (FY06 Q1)	20 / Dec 31, 2005 (FY06 Q2)
2006	21 / Mar 31, 2006 (FY06 Q3)	22 / June 30, 2006 (FY06 Q4)	23 / Sept 30, 2006 (FY07 Q1)	24 / Dec 31, 2006 (FY07 Q2)
2007	25 / Mar 31, 2007 (FY07 Q3)	26 / June 30, 2007 (FY07 Q4)	27 / Sept 30, 2007 (FY08 Q1)	28 / Dec 31, 2007 (FY08 Q2)
2008	29 / Mar 31, 2008 (FY08 Q3)	30 / June 30, 2008 (FY08 Q4)	31 / Sept 30, 2008 (FY09 Q1)	32 / Dec 31, 2008 (FY09 Q2)
2009	33 / Mar 31, 2009 (FY09 Q3)	34 / June 30, 2009 (FY09 Q4)	35 / Sept 30, 2009 (FY10 Q1)	36 / Dec 31, 2009 (FY10 Q2)
2010	37 / Mar 31, 2010 (FY10 Q3)	38 / June 30, 2010 (FY10 Q4	39 / Sept 30, 2010 (FY11 Q1)	

Edition ranges (e.g. 3-12) include first and last edition in the range. All editions can be accessed at:
www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Gray Notebook Subject Index

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Gray Notebook Subject Index

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Gray Notebook Subject Index

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Gray Notebook Subject Index

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Gray Notebook Subject Index

*Note: Some performance measures for *Gray Notebook 35* & *39* are featured in the stand-alone annual Congestion Report, available online at www.wsdot.wa.gov/Accountability/Congestion/

Americans with Disabilities Act (ADA) Information

Americans with Disabilities Act (ADA) Information

Persons with disabilities may request this information be prepared and supplied in alternative formats (large print, Braille, cassette tape, or on computer disk) by calling the Washington State Department of Transportation Office of Equal Opportunity (OEO) at (360) 705-7097. Persons who are deaf or hard of hearing may may contact OEO through the Washington Relay Service at 7-1-1.

Civil Rights Act of 1964, Title VI Statement to Public

WSDOT ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin or sex in the provision of benefits and services resulting from its federally assisted programs and activities. For questions regarding WSDOT's Title VI Program, you may contact the Department's Title VI Coordinator at (360) 705-7098 or (509) 324-6018.

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 and travel times
- 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 www.wsdot.wa.gov

For more information about performance measurement and reporting, visit www.wsdot.wa.gov/accountability

Prepared by the Strategic Assessment Office of the Washington State Department of Transportation.
310 Maple Park Ave SE, Olympia, WA 98504.