Washington State Department of Transportation

The Gray Notebook

GNB 37

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

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Secretary of Transportation

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Executive Summary

Performance highlights in this edition of the *Gray Notebook*

This edition of the *Gray Notebook* presents information on WSDOT's performance for the quarter ending March 31, 2010, as well as seven annual and three semi-annual reports. Selected highlights from this edition include:

- **Truck freight volumes in 2009 began to rebound to pre-2008 levels, but other freight modes report mixed performance in 2009 and 2008**. In 2009, marine shipments were down 12.5%, but Washington grain and produce rail car usage both improved. In 2008, total rail freight shipments were down .25%, but total air freight shipments increased by 5%. The Truck Freight Performance Measure pilot project will help WSDOT identify freight bottlenecks in the Puget Sound region as well as major cross-state truck corridors. WSDOT will continue to develop strategic business directions for the new transportation policy goal addressing Economic Vitality set by the Legislature in March 2010 (see page 45). (*Trucks, Goods & Freight Annual Report*; pp. 46-54)
- **More than 21.8 million visitors made use of the state's Safety Rest Areas, an increase of 7% over 2008.** Level of Service scores for 33 maintenance activities saw the first drop since 1999, from a B to a B-, attributable to a reduction of 10% in janitorial and maintenance services. (*Safety Rest Areas annual safety report*, pp. 7-8; *annual preservation report*, pp. 10-11)
- **Even though the relatively mild El Nino winter was followed by heavy late-season snowfall, WSDOT maintained an A Level of Service score.** Less time required for avalanche control and plowing allowed WSDOT's maintenance crews to achieve up to 25% more roadway maintenance tasks. (*Post Winter Annual Report*; pp. 12-13)
- **WSDOT's new stormwater permit takes effect in 2010, with substantially increased stormwater management responsibilities.** The new permit expands coverage to more than 100 urbanized areas, increases the number of highway miles covered by 40%, and calls for many new maintenance, monitoring, mapping, tracking, and reporting activities. (*Water Quality Annual Report*; pp. 32-41)
- **As of March 31, 2010, WSDOT has delivered a total of 264 Nickel and Transportation Partnership Account (TPA) projects valued at $3.710 billion**, on target with the funding provided in the 2009-2011 Transportation Budget. This total project number, which is higher than last quarter's reported 240, has been adjusted to include all completed projects, including those no longer listed in the Budget as well as those previously counted under a programmatic "bucket" line item (such as fish passage barriers, bridge seismic retrofits, etc).
  At quarter end, March 31, 2010, WSDOT had completed three projects, 60 projects were under construction, and an additional 11 projects and three subprojects were scheduled to be advertised by September 30, 2010. 89% of all Nickel and TPA projects combined were completed early or on time and 91% were under or on budget. (See the *Beige Pages* for a quarterly report of WSDOT's *Capital Project Delivery Program;* pp. 61-70)
- **More than 200 American Recovery and Reinvestment Act (Recovery Act) highway projects were awarded to contractors by the end of March, including 99 that have been completed.** WSDOT has received $590 million in Recovery Act funds for High-Speed Intercity Passenger Rail projects, and $35 million in TIGER grants for the North Spokane Corridor projects. The *Special Report* includes March employment data on how Washington's Recovery Act projects are creating and preserving jobs. (pp. 42-48)

On this quarter's cover (from top):

WSDOT honors workers who died in the line of duty while reminding the public to "give 'em a brake" in work zones.

A 13' tall snow blower clears the road at Chinook Pass.

The newest addition to the Ferries fleet, the Chetzemoka, is tugged to Everett for interior fittings.

WSDOT's new stormwater permit addresses issues such as the management of run-off at this I-405 construction site near Bothell.

Rail – both freight and passenger – is a high priority for Washington.

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12 :: The annual **Highway Maintenance Post Winter** report includes the effects of late-season snowfall.

18 :: The annual **Aviation** report covers grant pass-throughs and record numbers of aircraft registrations.

25 :: Amtrak *Cascades* quarterly **Rail Update** reports a record gain in ridership of 22% over 2009 numbers.

32 :: This quarter's environmental reporting leads off with a new introduction to **Water Quality** issues, especially around the new stormwater permit.

46 :: WSDOT addresses a new policy goal – Economic Vitality – with the annual **Trucks, Goods, & Freight** report.

56 :: New aspects of reporting in **Recovery Act-funded Projects** include high speed rail and TIGER.

61 :: The **Beige Pages** include an updated dashboard of progress on the current biennium's budget.

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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 second report will be published in March 2009.

The Attainment Report is available 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. 99-105) to find earlier coverage; all previous editions are available online at www.wsdot.wa.gov/accountability.

WSDOT Strategic Plan

WSDOT's 2009-2015 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 2009-11 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 2009-11 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: 2007 & 2008)	1.00	0.94	1.00	✓	↑	The rate of highway fatalities continues to decline (a lower rate is better)
Rate of **sprains and strains / hearing-loss injuries** per 100 WSDOT workers[1] (quarterly measure: FY10 Q2, FY10 Q3[7])	3.0/ 0.4	2.4/ 0.4	2.4/ 0.4	✓	↔	Both goals met for the quarter, but agency is not on track to meet FY 10 goals
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, calendar years: 2007 & 2008)	97.0%	97.0%	97.0%	✓	↔	Performance level meets goal - trend remains steady
Mobility (Congestion Relief)						
Highways: annual weekday **hours of delay** statewide[2] (annual measure: calendar years 2006 & 2008)	37 million	32 million	N/A	N/A	↑	Delay reduction of 13% due to gas prices, economic downturn, and completed mobility projects
Highways: Average clearance times for **major (90+ minute) incidents** on 9 key western Washington corridors (quarterly: FY10 Q2, FY10 Q3[7]))	154 minutes	173 minutes	155 minutes	---	↓	The high percentage of fatalities and truck-related incidents contributed to increased clearance times
Ferries: Percentage of trips departing on-time[3] (quarterly, year to year: FY09 Q3, FY10 Q3[7])	97%	91%	90%	✓	↓	WSF exceeds goal; new initiatives are under way to continue improving on-time performance
Rail: Percentage of **Amtrak *Cascades*** trips arriving on-time[4] (quarterly, year to year: FY09 Q3, FY10 Q3[7])	66%	59%	80%	---	↓	Increased demand and new service affected performance
Environment						
Cumulative number of WSDOT **stormwater treatment facilities** constructed or retrofitted[5] (annual measure: calendar years 2008 & 2009)	850	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	↑	Twelve additional retrofits completed in 2009.
Stewardship						
Cumulative number of Nickel and TPA **projects delivered, and percentage of on-time** (quarterly: FY10 Q2, FY10 Q2[7])	240/ 88%	264[8]/ 89%	90% on-time	---	↔	Currently at the peak of the Nickel and TPA programs - performance is steady
Cumulative number of Nickel and TPA **projects completed and percentage on-budget** (quarterly: FY10 Q2, FY10 Q3[7])	240/ 87%	264[8]/ 91%	90% on-budget	---	↔	Currently at the peak of the Nickel and TPA programs - performance is steady
Variance of total project costs compared to **budget expectations**[6] (quarterly: FY10 Q2, FY10 Q3[7])	over-budget by 0.4%	under-budget by 0.08% [8]	on-budget	✓	↑	Total Nickel and TPA construction program costs are within 1% of budget

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 (usually 50 miles per hour)
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 Facilities in Clark, King, Pierce, and Snohomish counties.
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. FY10 Q3 refers to the quarter ending March 31, 2010.
8 See page 61 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 34 p. 5
		Rate of traffic fatalities per 100 million miles traveled	annual	GNB 34 p. 6
		Percent reduction in collisions before and after state highway improvements	annual	GNB 32 pp. 5-7
		Number of recordable workplace injuries and illnesses	quarterly	GNB 37 pp. 2-4

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 34 pp. 16-17
		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 35 pp. 12-15
		Reliable travel times on the most congested state highways around Puget Sound	annual	GNB 35 pp. 12-15
		Percentage of commute trips while driving alone	annual	GNB 27 p. 92
		Average length of time to clear major incidents lasting more than 90 minutes on key highway segments	quarterly	GNB 37 pp. 22-24
		Ferry ridership	quarterly	GNB 37 p. 27
		Ferry trip reliability	quarterly	GNB 37 pp. 28-29
		Percent of ferry trips on-time	quarterly	GNB 37 pp. 28-29
		Amtrak *Cascades* ridership	quarterly	GNB 37 p. 25
		Percent of Amtrak *Cascades* trips on time	quarterly	GNB 37 p. 26

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 p. 34-36
		Number of WSDOT stormwater treatment facilities constructed or retrofitted	annual	GNB 37 pp. 38
		Number of vehicle miles traveled	annual	GNB 31 p. 41
		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 37 pp. 61-67
		Recovery Act-funded project reporting	quarterly	GNB 37 pp. 56-60

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 37 pp. 61-67
				GNB 37 pp. 56-60

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

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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.

In this section

Quarterly Update: Worker Safety 2
Highway Corridor Safety Annual Report 5
Safety Rest Areas Annual Safety Report 7

See also

Safety Rest Areas: Preservation Aspects Annual Report 10
Incident Response 22
Workforce Training 93

Earlier safety-related articles

Highway Safety, GNB 30, 32, 34, 35
Bicycle & Pedestrian Safety, GNB 36

Worker Safety Quarterly Update

WSDOT employees: Rates of injuries and illnesses

Worker Safety Highlights

- WSDOT continues to implement regional mitigation plans for reducing sprains and strains and hearing loss.
- 25% of WSDOT regions are on track to meet the new strains/sprains goal.
- OSHA recordable injuries/ illnesses down compared to Q3 2009 by about 19%.
- The agency has redesigned training for workers involved in tree clearing activities to reduce risks.
- WSDOT will continue to emphasize the critical role of management in ensuring worker safety.

WSDOT has a strong commitment to improving the safety of its employees as they perform their jobs. In 2006, WSDOT established a goal of zero workplace injuries by 2019. Significant progress has been made toward this goal and maintaining improved safety requires daily attention, both by managers and front-line workers. During the 2009-2011 biennium, WSDOT is focusing on sprains, strains, and hearing loss – the most frequent injury types across the agency.

Results of WSDOT safety performance goals for 2010 fiscal year

During the third quarter of state fiscal year 2010, two of eight organizational units (25%) were on track to meet the new sprains and strains goal. Of the three organizational units that have conducted audio testing to date, none are on track to achieve the new hearing loss reduction goal. Audio testing is conducted over the course of the year .

WSDOT analyzing new injury reduction and mitigation plans

To reduce injuries, WSDOT regions and divisions have prepared injury reduction and mitigation plans. Implementation of the plans will be monitored and adjusted over time to improve results. While some improvement is evident, in general organizational units are not on track to meet the new injury reduction goals. WSDOT is analyzing these preliminary results and will report in a future *Gray Notebook*.

Number of OSHA-recordable injuries/illnesses lower compared to the same quarter a year ago

WSDOT has a total of 274 OSHA-recordable injuries and illnesses through this quarter of FY2010, compared to 285 in the same period in FY2009. For the third quarter of FY2010, WSDOT incurred a total of 81 OSHA-recordable injuries, compared to 100 in the same quarter in FY2009. The following is a breakdown of the third quarter injuries by department:

Highway maintenance workers

Highway maintenance workers reported 37 injuries, 46% of all injuries agency-wide. This was three more than the previous quarter and nine fewer than the same quarter one year earlier. There were 418 days away from work associated with these injuries; 22 were sprain/ strain injuries.

Highway engineering workers

Highway engineering workers reported nine injuries, three of which were sprain/ strain injuries, representing 11% of all injuries agency-wide. This was four fewer than the previous quarter and three fewer than the same quarter one year earlier. Workers lost 16 workdays due to these injuries.

Administrative staff

There were eight injuries to WSDOT administrative staff, the same number as the previous quarter and five more than the same period one year earlier. There were no lost workdays associated with these injuries. Four injuries involved sprains/strains.

Ferry system

Ferry workers reported 27 injuries for the third quarter, 33% of all injuries agency-wide. This was four less than the previous quarter and 12 fewer than the same period one year earlier. Workers lost 182 workdays due to these injuries, 16 of which were sprain/strain.

OSHA-recordable injuries and illnesses

Regional injury reduction activities highlighted in mitigation plans

- Increasing field visits by supervisors and safety staff.
- Continuing emphasis on accident prevention by training stakeholders on preparation and use of Pre-activity Safety Plans and safety training on high risk work activities.
- Conducting new employee safety orientation.
- Encouraging pre-work Stretch & Flex exercises.
- Preventing musculo-skeletal injuries by having new employees view Ergonomics Awareness video.
- Performing noise exposure dosimetry to obtain objective data for determining appropriate level of noise protection.
- Using injury and vehicle collision data to advance accident prevention activities.
- Improving management involvement in ensuring their workers' safety.

Notable accomplishments

Ferries has modified its accident investigation protocols. A thorough investigation of the accident by safety staff and worker's supervisor must be conducted immediately. This immediate attention to accident causation and care of injured workers are designed to communicate to workers that WSF is serious about accident prevention and concerned about the well-being of its workers.

Eastern Region has reduced its OSHA-recordable injuries 48% over the same period in the last fiscal year, and reduced its sprains and strains injuries by 33% over the same period.

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

Results of audio testing to date, March 31, 2010

Organizational unit	FY 2009 results	FY 2010 goal	On-track to achieve FY 2010 goal?
Northwest Region	0.3	0.4	Testing not complete
North Central Region	0.4	0.4	Testing not complete
Olympic Region*	0.9	0.4	No
South Central Region*	2.1	0.4	No
Southwest Region	1.6	0.4	Testing not complete
Eastern Region	0.7	0.4	Testing not complete
All regions combined	**0.9**	**0.4**	**Testing not complete**
Ferry System	0.9	0.4	Testing not complete
Headquarters*	0.1	0.0	No
Agency-wide	**0.7**	**0.4**	**Testing not complete**

Data source: WSDOT Safety Office.

Audio testing is conducted over the course of the year. Fiscal year 2010 results will be published in a future *Gray Notebook*.

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

Quarterly rate January-March 2010 and cumulative rate October 2009-March 2010

Organizational unit	FY 2009 results	FY 2010 goal	Rate of injuries – Q3 FY 2010 (Jan – Mar 2010)	Cumulative rate through Q3 FY 2010 (Oct 2009 – Mar 2010)	On track to achieve FY 2010 goal?
Northwest Region	2.7	2.2	2.3	2.8	No
North Central Region	2.9	2.2	2.9	4.0	No
Olympic Region	2.8	2.2	2.7	2.1	Yes
South Central Region	2.7	2.2	3.1	3.2	No
Southwest Region	1.8	2.2	2.5	1.9	Yes
Eastern Region	3.5	2.2	3.7	3.2	No
All Regions combined	**2.7**	**2.2**	**2.7**	**2.7**	**No**
Ferry System	5.9	4.7	4.4	4.9	No
Headquarters	0.5	0.4	0.9	1.2	No
Agency-wide	**3**	**2.4**	**2.7**	**2.9**	**No**

Data source: WSDOT Safety Office.

Worker Safety Quarterly Update

Return to Work and Worker Wellness programs

Return to Work Unit

The Return to Work Unit assists injured employees in recovering from a workplace injury and to return to work more quickly. Goals of the program include:

- Improving communication with the injured worker to insure the right medical care is provided,
- Working with medical providers and vocational counselors to monitor recovery,
- Developing return-to-work options when appropriate,
- Informing supervisors about the status of recovery and the prognosis for the future, and
- When appropriate, facilitating independent medical exams to assist in claim closures.

WSDOT Wellness

In December 2009, the WSDOT Wellness Program submitted an application to the Health Care Authority (HCA) for participation in the Washington Wellness Worksite Collaborative (W3). In January 2010 WSDOT was accepted into the W3 program along with five other state agencies.

The purpose of the W3 is to implement the Washington Wellness Worksite criteria in order to provide measureable improvement in employee health and health-related performance. Participating agencies partnering with HCA will move through the changes necessary to create a healthy work culture and meet the criteria for the Washington Wellness Worksite designation.

What is a Washington Wellness Worksite?

A Washington Wellness Worksite must meet a set of criteria to establish a healthy work culture. The criteria are a group of standards that, when performed together, increase the likelihood for improved workforce health and productivity.

How does the agency benefit?

- Proven and supported methodology for improving workforce health and productivity.
- Work is focused on meeting criteria for Washington Wellness Worksite designation.
- Washington Wellness provides leadership and support at little to no cost. In addition, small grants are available to participating agencies.

WSDOT Headquarters, Eastern, and Southwest regional employees (2,189) are included in the initial designation process. The W3 program started in March 2010 and ends in June 2011; at that time, WSDOT will have attained designation as a Washington Wellness Worksite.

Highway Corridor Safety Program Annual Report

Program Overview

The goal of the Corridor Safety Program (CSP) is to reduce fatalities and serious injuries on the most problematic corridors. The program is a joint effort between WSDOT and the Washington Traffic Safety Commission (WTSC). Many partner agencies are also involved, including the Washington State Patrol, county public works and sheriffs offices, and city public works and police departments. The CSP works to reduce collisions on roadways using low-cost, near-term, engineering solutions integrated with partnerships in enforcement, education, and emergency services (the "four E's" – see the June 2009 *Gray Notebook* 34, page 7). To date, 30 corridor safety projects have been completed statewide. Five additional projects are under way, two of which will be complete by June 30, 2010 (see table below).

Corridor selection and development

Statewide collision data is used to identify the best candidates for corridor safety projects. On state routes, fatal and serious injury crash rates per mile can be calculated, along with rates per million vehicle miles traveled. For proposed corridors on local roadways managed by agencies such as cities and counties, WSDOT analyzes statewide data to compare the frequencies of fatal and serious injury collisions city by city, county by county. Further analysis of those local agencies with the most frequent incidents then shows the roads within their jurisdiction with the most significant numbers of fatal and serious injury crashes.

Corridor safety program projects
Projects currently under way as of March 31, 2010

Project	County
112th/Chkalov/Gher streets in Vancouver	Clark
US 2 from Everett to Stevens Pass	Snohomish, King
SR 99 in north Seattle	King
County roads in the SR 9 to I-5 corridors	Skagit
SR 27/278 from Spokane Valley to Rockford	Spokane

Source: Washington Traffic Safety Commission.

Each corridor project is coordinated within the community, as local leadership develops a steering committee that can oversee activities for the life of the program. To ensure effectiveness, the program requires the involvement of local governments, interested citizens, businesses, schools, and any other agencies that have an interest in improving the safety of the corridor. The WTSC's local Target Zero managers, strategically stationed around the state to coordinate safety activities, are a key resource.

Implementation of low-cost improvements

The Corridor Safety Program helps identify cost-effective solutions to safety problems that contribute to higher-than-normal collision rates. While extensive (and expensive) corridor redesigns can correct deficiencies and reduce collision rates, more often, the combination of low-cost engineering solutions, targeted traffic enforcement, and greater community awareness of the safety issues will produce the much-needed near-term results for selected corridors. In the past, WSDOT has deployed a variety of engineering solutions for the program, including rumble strips, intelligent transportation signals/systems (ITS), enhanced guardrail, and roadside enhancements. These simple, yet proven enhancements go a long way to reducing fatal and serious injury collisions on selected corridors.

For urban corridor safety projects: Re-timing and coordinating signalized intersections for better traffic progression and providing pedestrian refuge areas (allowing a pedestrian to cross each half of the roadway separately) could prove to be the most effective low-cost engineering solutions. Corridor safety projects have also engaged real-time warning systems (such as crosswalks with motion-activated flashing lights) to notify drivers when pedestrians are crossing the road.

Corridor Safety Program Highlights:

Since 1991, 30 corridor safety projects have been successfully completed.

There are currently five active corridor safety projects across the state.

Before and After analysis of these projects show they are effective at reducing both overall collisions (6%) and serious/fatal collisions (29%) while the project is active and then complete.

Corridor safety projects targeting alcohol related collisions show a 14% reduction in collisions.

For up-to-date information on the five active corridor safety projects, visit the program's website at www.corridorsafetyprogram.org/

Highway Corridor Safety Program Annual Report

Before & After Results

For rural corridor safety projects: Run-off-road collisions and un-signalized intersection related collisions are some of the most common crashes. Safety improvements such as enhanced guardrail, rumble strips, increasing the size of the stop signs, providing stop ahead signs, or using ITS loops placed in the roadway to warn drivers that vehicles are waiting to cross the road ahead are some of the low-cost engineering solutions to improve rural corridor safety.

Typically, corridor safety projects spend 6-12 months in the planning stage, developing a specific action plan for how to address the identified problems. Once planning is complete and a project begins, most will run for about two years. Implementation of countermeasures is monitored throughout the project's life. Success is determined by safety benefits, measured in reduced collisions.

The corridor safety program tracks the reduction in total collisions, total injuries, alcohol-related collisions, and fatal and serious injury collisions (which remain the focus of the program). Project Before and After analyses compares three years of data from before a project begins to the two years of the active project life. Once a corridor safety project has been completed, crash data is tracked for that project on an ongoing basis. (Some of the first projects completed now have more than 17 years of 'after' data.)

Before & After Results

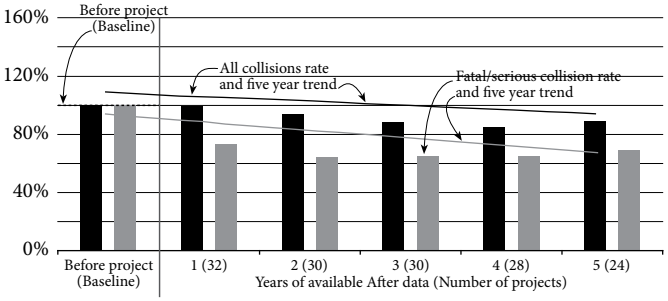
WSDOT and WTSC conduct Before and After analysis on all projects as part of the Governor's directive to evaluate the effectiveness and benefits of highway safety projects. After 17 years, program results are positive: all collision types are down 6% on average, with fatality and serious injury collisions (the main target of these projects) down 29% on average. Alcohol-related collisions are reduced by 14%, and total injuries by 11%.

The long-term reductions in total collisions and fatal and serious injury collisions for past projects show the effectiveness of the corridor safety program. As years go by without the continued focus on education and added enforcement, total collisions tend to increase. Program-wide data show that for five years, total collisions tend to remain below levels that occurred before a project began (two active years of the active project plus three additional years). After that, total collisions gradually increase above levels found before a project began, which is typically expected with increased volumes of traffic on the road.

However, program wide data also show that fatal and serious injury collisions never reach pre-project levels. This is true from year one of the active project (with 32 projects having at least one year of after data) to 17 years after a project began.

Before and After data: annual collision vs. fatal/serious collision rates

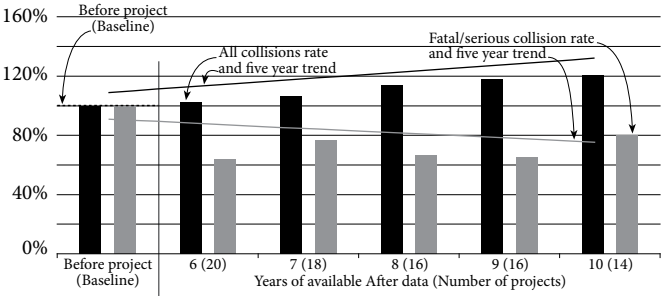
Traffic safety corridor projects with one to five years of collision data



Data source: WSDOT Traffic Safety Office.

Before and After data: annual collision vs. fatal/serious collision rates

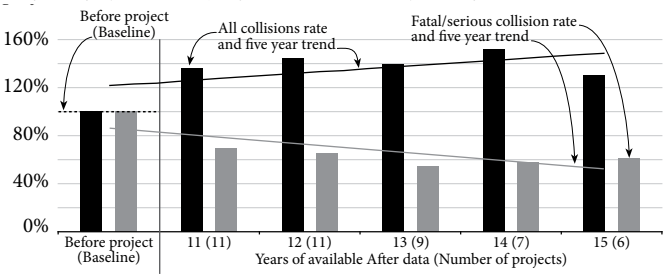
Traffic safety corridor projects with six to ten years of collision data



Data source: WSDOT Traffic Safety Office.

Before and After data: annual collision vs. fatal/serious collision rates

Traffic safety corridor projects with 11 to 15 years of collision data



Data source: WSDOT Traffic Safety Office.

Annual Visitor Figures

WSDOT currently operates 47 safety rest areas statewide: 28 on the interstate system and 19 on state highways. These facilities allow fatigued drivers to get off the roadway to refresh themselves by napping, stretching, and occasionally enjoying refreshments. In 2009, there were 1,072 collisions in Washington attributed to fatigued driving, 3% fewer collisions than in 2008 (1,104 collisions). However, the estimated societal cost of the 2009 collisions was $104 million, a 22% increase over the estimated societal costs for collisions in 2008 (estimated at $85 million). Target Zero, Washington state's Strategic Highway Safety Plan, includes distracted and drowsy driving as one of four targeted, primary objectives in reducing collisions and improving highway safety.

Safety Rest Areas see overall increase in visitor numbers for 2009

The 2009 safety rest area user data indicates the network of safety rest areas saw a net gain in visitation. The number of visitors statewide increased by 7% in 2009 (21.78 million users, an increase of 1.51 million users) over figures for 2008 (20.27 million users). In 2008, visitation was down 3% from 2007, which was attributed to the downturn in the economy and the rapid rise in fuel prices that discouraged discretionary trips.

Safety Rest Area Highlights:

- Visitation is, on average, up 7% statewide for 2009 compared with 2008.
- Eighteen facilities saw a gain in visitors in 2009 over 2008, with increases from 4% to 78%.
- For facilities condition ratings, see pp. 10-11.

Safety Rest Area visitor data

Number of visitors by rest area, change between 2009 & 2008

Total visitors (Statewide)					2008: 20,273,428		2009: 21,788,595		Δ: 1,515,167
Safety rest area	**County**	**2008**	**2009**	**Change**	**Safety rest area**	**County**	**2008**	**2009**	**Change**
I-5 Gee Creek NB & SB	Clark	1,216,878	1,657,471	440,593	I-90 Schrag EB & WB	Adams	1,498,903	758,253	-740,650
I-5 Toutle River NB & SB	Cowlitz	2,902,811	2,053,066	-849,745	I-90 Sprague Lake EB & WB	Lincoln	1,158,564	1,238,185	79,621
I-5 Scatter Creek NB	Thurston	988,047	1,205,494	217,447	U.S. 2 Nason Creek	Chelan	447,592	469,881	22,289
I-5 Maytown SB	Thurston	667,401	1,533,000	865,599	U.S. 2 Telford	Lincoln	287,884	352,225	64,341
I-5 SeaTac NB	King	883,962	1,778,280	894,318	SR 8 Elma EB	Grays Harbor	315,929	413,273	97,344
I-5 Silver Lake SB	Snohomish	474,919	270,463	-204,456	SR 12 Bevin Lake	Lewis	162,963	216,704	53,741
I-5 Smokey Point NB & SB	Snohomish	1,516,303	1,158,196	-358,107	SR 14 Chamberlain Lake	Klickitat	249,674	386,157	136,483
I-5 Bow Hill NB & SB	Skagit	2,009,043	1,931,233	-77,810	SR 17 Blue Lake[1]	Grant	6,377	29,280	22,903
I-5 Custer NB & SB	Whatcom	755,185	755,184	-1	SR 24 Vernita	Benton	96,042	201,882	105,840
I-82 Selah Creek EB & WB	Yakima	609,427	607,782	-1,645	SR 26 Hatton Coulee	Adams	275,953	78,487	-197,466
I-82 Prosser	Benton	618,479	818,484	200,005	SR 28 Quincy Valley	Grant	119,350	140,966	21,616
I-90 Indian John Hill EB & WB	Kittitas	1,499,162	1,783,875	284,713	U.S. 195 Horn School	Whitman	184,410	269,808	85,398
I-90 Ryegrass EB & WB	Kittitas	827,439	795,334	-32,105	SR 401 Dismal Nitch	Pacific	103,833	130,659	26,826
I-90 Winchester EB & WB	Grant	305,531	664,300	358,769	SR 504 Forest Learning Center[1]	Cowlitz	91,367	90,674	-693

Data source: WSDOT Facilities Office.

Data note: Eight of the 47 facilities are not included because these sites are not set up to track water usage: I-90 Travelers Rest, I-90 Price Creek EB, SR 2 Iron Goat, SR 12 Alpowa Summit EB & WB, SR 12 Dodge Junction, SR 21 Keller Ferry, and SR 26 Dusty.

1 Indicates a seasonally operated facility.

Benefits of Safety Rest Areas

For 2009, 10 facilities experienced fewer visitors compared to 2008: the largest decrease was the I-5 Toutle River safety rest area, the most popular of the state's facilities, which saw a 41% decline (849,745 fewer users). However, 18 facilities experienced increased visitation, ranging from 4% at the U.S. 2 Nason Creek safety rest area to 78% at the SR 17 Blue Lake safety rest area. The I-5 SeaTac northbound safety rest area saw the largest increase in the number of users, with 849,318 additional visits in 2009 vs. 2008 (a 50% increase).

Visitor data is calculated annually with water usage figures from each facility. Water usage is a more reliable way to measure how many people use a facility, rather than relying on vehicle counts, which are taken sporadically and are more prone to error. (For more information, please see pp. 48 of *Gray Notebook* 21.)

Safety rest areas aid highway safety by combating fatigue and distraction

Both national and state efforts to improve highway safety incorporate safety rest areas to address fatigued and distracted drivers. Fatigue was identified as one of the most pressing issues in the recent '*Most Wanted List of Transportation Safety Improvements for 2009-2010*' published by the U.S. Department of Transportation's National Transportation Safety Board. The National Cooperative Highway Research Program (NCHRP) also advocates several safety strategies to address fatigued drivers with its 2009 updates to the report, '*A Guide for Reducing Crashes Involving Drowsy and Distracted Drivers*.' The NCHRP update emphasizes the use and improvement of safety rest areas, and addresses security, service, and accessibility issues to promote their use.

At the state level, safety rest areas are one of the 11 strategies identified in *Target Zero* for addressing drowsy or distracted drivers. Specifically, WSDOT operates safety rest areas in order to:

- **Reduce fatigue-related collisions**,
- **Reduce collisions related to parked vehicles on highway shoulders**, those who will be encouraged to use the safety rest areas include commercial drivers parking freight vehicles for federally required resting periods, and drivers who park on the shoulder to attend to their vehicles, and
- **Reduce inattention-related collisions**, safety rest areas offer safer places for drivers to read maps, use cell phones, or eat snacks or meals.

Truck parking facilities are increasing

The *2007-2026 Washington Transportation Plan* (www.wsdot.wa.gov/planning/wtp/), recommends that WSDOT address truck parking capacity on state highways. Reducing the number of trucks parked illegally in unsafe areas such as highway ramps and shoulders, chain up/down areas, and at weigh stations can help improve overall highway safety for all drivers. WSDOT's Safety Rest Area and Freight Systems Divisions continue to work with state, regional, and local governments, law enforcement agencies, and industry representatives to develop solutions and identify funding sources for truck parking improvements in high-demand areas around the state.

Cost-effective improvements add 26 spaces for trucks

The I-5 Scatter Creek safety rest area, identified in the *2005 Truck Parking Study* as a site that consistently exceeds capacity, added room for 22 more trucks in early 2009, bringing the number of truck parking stalls on site to 37. Truck parking spaces were also added to the I-90 Schrag eastbound and westbound safety rest areas located near Moses Lake by making minor modifications to the parking lot. A large planter bed on the truck parking side was removed and the areas were re-striped to make four more spaces available for commercial drivers and recreational vehicle users.

These two projects increased the total truck parking spaces at WSDOT's 47 safety rest areas by 26 to a total of 580.

A new commercial truck parking space was added to the I-5 northbound Scatter Creek safety rest area in Thurston County.

Safety Rest Area preservation

For 2009 performance information related to the preservation and maintenance of safety rest areas, see pp. 10-11..

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

Asset Management: Safety Rest Areas 10

Post-Winter Annual Report 12

Ferries Vessel & Terminal Preservation Update 14

See also

Safety Rest Areas Annual Safety Report 7

Special Report: Federal Recovery Act-funded Projects 56

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Bridge Assessment Annual Report, GNB 34

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Asset Management: Pavement Conditions Annual Report, GNB 36

Highway Maintenance Annual Report, GNB 35

Safety Rest Areas
Annual Preservation Report

Facility Inventory and Condition Ratings

Safety Rest Area Preservation Highlights

The Level of Service rating for WSDOT's safety rest areas declined from a B in 2008 to a B- in 2009.

87% of safety rest area users surveyed reported their experiences to be either "very good" or "good."

User surveys indicate that Safety Rest Area customers would like to see additional restrooms and shorter wait times.

In 2009, WSDOT began a $100,000 Americans with Disabilities Act renovation effort for selected facilities.

Above: Artist's rendering of the future SR 7 Elbe safety rest area.

Condition ratings for 43 safety rest areas

*Number and percentage of safety rest areas in each category**

Condition	Number	Percentage
Good (meets standards)	8	19%
Fair – High (minimal deficiencies)	7	16%
Fair – Mid (adequate condition)	11	26%
Fair – Low (multiple deficiencies)	16	37%
Poor – (multiple major deficiencies)	1	2%

Data source: WSDOT Facilities Office.

*Data note: Only 43 of 47 facilities were evaluated. See page 11 for more information.

Safety rest areas can reduce or prevent the effects of fatigue by providing a facility for travelers to stop and rest before the monotony of highway driving starts to impact their driving – and the safety of other motorists on the roadway. This article reports on the maintenance, preservation, and improvement of WSDOT's safety rest areas in 2009.

Overview of WSDOT's safety rest area facilities

Feature	Count	Feature	Count
Safety rest areas	47: 28 Interstate, 19 non-Interstate	On-site sewage treatment systems	40
Acres	694	RV dump stations	20
Buildings	93	Truck parking stalls	580
On-site drinking water systems	30	Passenger parking stalls	1,560

Safety rest area maintenance performance drops from a B to a B-

WSDOT's Maintenance Accountability Process (MAP - see pp. 16 of *Gray Notebook 36* for more information) measures the performance of highway maintenance activities. For safety rest areas, MAP scores are generated from semi-annual surveys from the customer's perspective that determine the Level of Service (LOS) based on site and building cleanliness and functional facility components such as hand dryers, dispensers, RV dump stations, and appearance.

Since 1999, WSDOT has been able to maintain a B rating for its facilities LOS, indicating that facilities are in "good" condition. For 2009, the rating dropped to a B-, which is mostly attributable to a 10% decrease in the categories of janitorial services and site condition. Because facilities personnel are not on-site 24 hours a day, the timing of the surveys could also have played a role in the janitorial services score. The lower scores can also be attributed to aging site infrastructure such as deteriorating sidewalks and pavement. Less frequent mowing and weed control due to budget and personnel constraints could have also affected the conditions score and LOS.

Facility condition ratings

WSDOT conducts facility condition assessments every two years. In 2008, WSDOT reported that most of the rest areas are in "fair" to "good" condition. This trend continues after the recent 2010 condition assessment, with 19% in "good" condition and 79% in "fair" condition. Forty-three of the 47 facilities were evaluated. The sites not evaluated – U.S. 2 Iron Goat, SR 12 Dodge Junction, and SR 26 Mader Dusty – consist of pre-cast concrete vault toilets. The fourth site, SR 21 Keller Ferry Safety Rest Area, has restroom facilities built into an existing WSDOT maintenance facility.

WSDOT plans to replace two of the lowest rated safety rest area buildings during the 2009-2011 biennium. The SR 24 Vernita safety rest area building is rated as "poor," while the I-82 Selah Creek eastbound Safety Rest Area is rated as "fair-low." Both safety rest areas are located in WSDOT's South Central maintenance region.

Customer Feedback and Facility Projects

Safety Rest Area satisfaction drops slightly

In 2009, 495 visitors at safety rest areas filled out comment cards providing valuable feedback to WSDOT regarding their experience at the facility. Eighty-seven percent (87%) of the cards returned indicated an overall experience of "very good" to "good", a slight decline from the 92% recorded in the 2008 comments. Accolades for the free coffee program and the cleanliness of the restrooms topped the list of compliments.

User satisfaction with safety rest area facilities

Rating	2008	2009
Very good	49%	44%
Good	43%	43%
Satisfactory	7%	8%
Unsatisfactory	<1%	5%

Data source: WSDOT Facilities Office.

The 8% that reported "satisfactory" cited appreciation for the facility, but indicated a need for additional rest rooms and the placement of vending services for those sites with none. The remaining 5% of the comments indicated dissatisfaction with the cleanliness of the rest rooms, lack of traveler information, inadequate pet areas, and facility closures. Aging facilities, the difficulty in keeping deteriorating equipment clean and operational, and a reduction in staffing may have also contributed to lower satisfaction ratings. Some regions do not have dedicated safety rest area staff, but have workers with duties spread over several facilities. When negative comments are focused on a particular facility, that information is relayed to the appropriate regional operations staff, and corrections are made when feasible. Critical issues are addressed immediately.

2009 Americans with Disabilities Act review

The Safety Rest Area Program, in coordination with WSDOT's Office of Equal Opportunity, performed an assessment of all safety rest areas to identify the facility components that are not in compliance with the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The assessment described actions needed to address problems and provided a cost estimate for each item.

WSDOT identified $100,000 in funds from its 2009-2011 fiscal maintenance and preservation budgets to be used to complete the retrofits, bringing them into compliance with the ADAAG. WSDOT expects to complete repairs by the end of the current fiscal biennium (May 2011).

Replacement, preservation, improvement, and planning projects

Continuing to implement strategies from the *Safety Rest Area Strategic Plan* developed in 2008, WSDOT plans to address deficiencies at existing facilities first, look for opportunities to enhance existing facilities next, and then look to expand the program by adding new sites if partnership opportunities arise. The one new safety rest area planned for construction in the 2009-2011 biennium is SR 7 Elbe Safety Rest Area, which has grant funding associated with the project. Additional projects and plans for the current 2009-2011 biennium include:

SR 24 Vernita Safety Rest Area - Building replacement

Construction for a new building is scheduled for summer 2010. The new building will have 10 restroom stalls, with five for women, four for men, and one new unisex restroom stall. The project will also renovate deteriorating parking areas.

I-82 Selah Safety Rest Area eastbound – Building replacement

Design for the I-82 eastbound building replacement is under way; the process includes a U.S. Building Council's Leadership in Energy and Environmental Design (LEED) review to look at incorporating sustainable buildings and on-site components as the budget will allow. The new building will include 14 restroom stalls: eight for women, five for men, and a new unisex restroom.

Statewide roof renovations

Roof renovations are planned at U.S. 2 Nason Creek, I-5 Scatter Creek, and the SR 26/U.S. 395 Hatton Coulee safety rest areas to address roofs that are past their intended life span. Unsafe conditions arise when there is compact snow on the roofs of both Nason Creek and Hatton Coulee facilities in eastern Washington. Additional gutters to direct drainage away from sidewalks are planned for all three locations.

SR 7 Elbe Safety Rest Area – Construct new facility

Construction of the new SR 7 Elbe Safety Rest Area is scheduled for spring 2011. This project will adapt a historic structure and will integrate sustainable features to reduce energy use.

Safety rest areas annual safety report

For performance information focusing on safety strategies for safety rest areas, please see pp. 7–8.

Highway Maintenance Annual Post Winter Report

Post-Winter Highlights:

- Level of service receives "A" rating for winter 2009-2010.
- Expenditure for deicer and snow removal down as El Niño causes warmer temperatures and fewer snow-events this winter.
- Essential non-snow-related maintenance work is completed in February and early March.
- Cold, wet and snowy weather in April triggers avalanche missions in both Snoqualmie and Stevens Passes.

Washington was spared the severe storm pattern of the winters of 2007-2008 and 2008-2009, which brought near-record snowfalls and flooding events. Instead, the 2009-2010 winter season displayed all of the characteristics associated with a typical El Niño winter.

The winter season began with cold temperatures throughout the state and snow storms in both eastern Washington and the Cascade Mountain passes. While higher elevations and the east saw snow, the lowlands of Western Washington experienced a wet November that gave way to a 10-day, record-low cold spell in early December.

In January, a more typical El Niño pattern moved into the state, leading to unseasonably warm weather in many areas, followed by much less snow than usual in February and most of March. The warming trend wound down in late March, as significant snowfall reappeared in the passes and continued through mid-April.

Rain-and-freeze cycles disrupt WSDOT road-clearing efforts

Although western Washington had a relatively uneventful winter, especially compared to previous years, eastern Washington and the passes experienced cold, wet-weather cycles that made keeping the roadways bare a challenge for WSDOT maintenance crews.

This series of rain-and-freeze cycles, which occurred in December and January in eastern Washington and the mountain passes, required fairly heavy use of deicers despite warmer than normal conditions. Such weather requires more frequent applications of anti-icers or deicers, due to the dilution of previously applied material by rain and freezing fog. However, El Niño's warming effect on the state was clear: by mid-April 2010, WSDOT had used 54,000 tons of chemical deicer, compared to 81,000 tons used in the winter of 2008-2009.

Winter's parting shot: heavy late-season snowfall

While snowfall had been average or below for the season, the last week of March and the first weeks of April demonstrated that winter was not quite over yet. Heavy, wet, late-season snow storms in the Cascade Mountain Passes brought mountain snow accumulations closer to historical averages. The 12-day period between March 29 and April 10 produced 70" of snow at Snoqualmie Pass, 64" at Stevens Pass, and 78" at White Pass. By far the most significant snowfalls of the entire year, these storms accounted for additional avalanche missions on Snoqualmie Pass and the first avalanche missions of the season on Stevens Pass.

The table below shows differences in total snow accumulation at the three major cross-state mountain pass highways for the winters of 2008-09 and 2009-10, through March 31 of each year.

Total accumulated snowfall recorded at mountain pass highways
2009-2010 measurements (in inches) compared to previous year snowfall

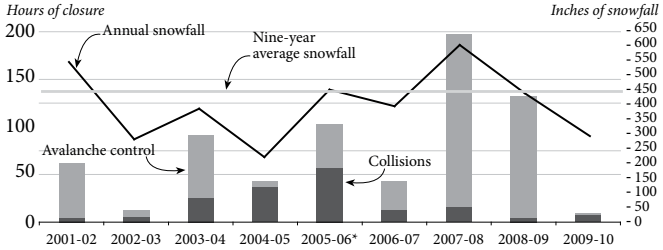
	Winter 2008-2009		Winter 2009-2010	
Location	**Total snowfall as of December 31**	**Total snowfall as of March 31**	**Total snowfall as of December 31**	**Total snowfall as of March 31**
U.S. 2 Stevens Pass	136"	393"	169"	322"
I-90 Snoqualmie Pass	138"	379"	127"	234"
U.S. 12 White Pass	183"	433"	113"	217"

Data source: WSDOT Maintenance.

The two graphs on the following page show the relationship between snowfall at Snoqualmie Pass and I-90 closures caused by avalanche control or collisions. As a result of the warmer weather this winter, the number of closures in 2009-2010 was well below average for all factors. Closure data compare favorably to that of the 2004-2005 winter, which had less snow but more closures for collisions.

Eastbound I-90 Snoqualmie Pass winter closures

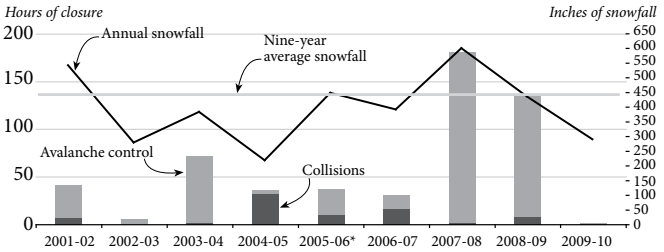
Hours of closure due to avalanche control vs. collision
Compared with seasonal snowfall and and nine-year running average



* Does not include 2005-06 rock fall closures - (EB) 42 hours.
Data source: WSDOT Maintenance Office.

Westbound I-90 Snoqualmie Pass winter closures

Hours of closure due to avalanche control vs. collision
Compared with seasonal snowfall and and nine-year running average

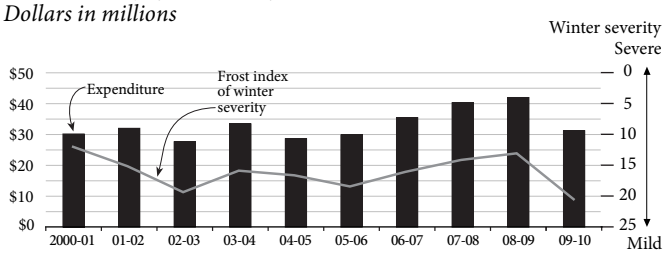


* Does not include 2005-06 rock fall closures - (WB) 56 hours.
Data source: WSDOT Maintenance Office.

Another indicator of winter severity is WSDOT's snow and ice expenditures. In the graph below, winter severity is measured using the statewide frost index.

Winter severity and snow and ice expenditures

Winter severity (frost index) from November 1 to March 31
Dollars in millions



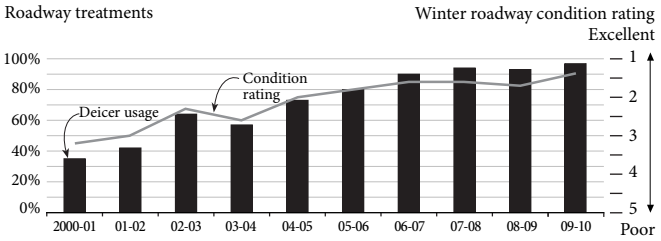
Data source: WSDOT Maintenance Office.

Performance grade for level of service: A

The level of service provided for the winter of 2009-10 remained in the "A" range. This level of service is defined as allowing minimal snow or ice buildup on roads, bare pavement attained as soon as possible at the end of storms, and rare delays in travel. The following graph shows that as WSDOT continues to select deicers as a principal roadway treatment material, the level of service for roadway condition has improved.

Statewide deicer use and winter roadway condition ratings

Percentage of roadway treatments using deicer, 2000-2001 through 2009-2010



Data source: WSDOT Maintenance Office.
Note: Winter season is November 1 - March 31.

Fewer avalanche control activities required

Avalanche control is the deliberate triggering of an avalanche under specific conditions in order to minimize natural avalanches occurring unexpectedly. After two consecutive years of near-record avalanche control activities, the need for avalanche control greatly diminished this season. Only five avalanche missions, requiring 10 detonations and 513 lbs of explosives, were performed on Snoqualmie Pass, and two late-season avalanche missions were performed on Stevens Pass, limiting the number of pass closures required for this activity. The stability of the snowpack on both Snoqualmie and Stevens passes largely accounted for the reduction in the number of missions.

El Niño offers challenges – and some benefits

While WSDOT's maintenance crews stand ready to address whatever bad winter weather conditions exist on the state's roads, the generally milder El Niño winter in 2009-2010 meant that less time was needed clearing avalanches in the passes and plowing snow-clogged highways.

In conditions such as this, crews can address other necessary maintenance work. From January through March 31, 2010, crews were able to perform additional activities over and above planned winter work.

Type of maintenance work performed	Percent of work achieved over plan
Drainage (clearing culverts, ditches, catch basins)	25%
Roadside maintenance	19%
Bridge (repairs, cleaning)	9%
Traffic-related (signals, signs, ITS)	8%

Source: WSDOT Maintenance Office.

Washington State Ferries
Ferry Vessel & Terminal Preservation

Ferries Vessel Preservation

Ferry Vessel & Terminal Preservation Highlights

85% of ferry vessel vital systems and 53% of other systems are designated good or fair, when rated against their standard life cycles.

85% of ferry terminals components are in good or fair condition.

WSDOT's Ferry System is part of the state's highway system and a regional mass-transit provider. It provides a critical link to communities separated by water or long driving distances, and is essential to the movement of people and goods in the Puget Sound. WSDOT places high priority on preserving terminals and vessels, and is working with the Governor and Legislature to find long-term solutions to Ferries' preservations needs.

WSDOT transitioning to terminal and vessel condition ratings

WSDOT is transitioning to reporting terminal and vessel asset preservation data using condition ratings as directed by the state legislature and office of financial management as with other capital asset preservation programs, Ferries' reports must be filed annually. Terminal condition reporting is almost fully implemented: 98% of terminal systems can be reported on. The process for reporting vessel condition is under development; the vessel system life cycle assessment used in this edition is an interim measure.

WSF vessel system life cycle status definitions

Status	Description
Good	More than 10% of standard life cycle remaining.
Fair	Has not reached the end of its standard life cycle but only has 10% or less remaining.
Poor	Has reached the end of its standard life cycle but is only past the end of it by 10% or less.
Sub-standard	Has reached the end of its standard life cycle and is past the end of it by more than 10%.

Source: WSDOT Ferry System.

Vessel preservation performance

WSDOT uses a life cycle approach to assess the preservation status of vessel systems and measure performance in reducing preservation needs.

The WSDOT Ferry System tracks the life cycle status of vessel systems in terms of how close each system is to the end of its standard life cycle interval. The life cycle assessment table (below) shows the number of vessel systems designated "good," "fair," "poor," or "substandard," rated on how close each is to the end of its standard life cycle (described in the definitions table). Ratings of "poor" or "substandard" do not indicate that the system is unsafe, but that it should be more closely evaluated to determine its preservation needs. At the end of the third quarter of the 2009-2011 biennium (March 31, 2010), 73% of the fleet's systems are designated "good" or "fair."

There are two categories of vessels systems. Category 1 systems are designated in law by the U.S. Coast Guard (USCG) as "vital to the protection of people, the environment and the vessel." All other vessel systems are designated Category 2. As of March 31, 2010, 85% of Category 1 systems are designated as "good" or "fair." For Category 2 systems, 53% are designated "good" or "fair."

Vessel system life cycle assessment

As of March 31, 2010	# of systems	Good	Fair	Poor	Substandard
Category 1 systems					
Communication, navigation, lifesaving systems	451	80%	1%	12%	6%
Major mechanical/electrical systems	104	87%	7%	7%	0%
Piping systems	60	63%	5%	8%	23%
Propulsion systems	245	90%	2%	2%	6%
Security systems	34	100%	0%	0%	0%
Steel structural systems	40	70%	0%	15%	15%
All Category 1 systems	**934**	**83%**	**2%**	**8%**	**7%**
Category 2 systems					
Major mechanical/electrical systems	139	48%	9%	4%	40%
Passenger and crew spaces	58	47%	5%	5%	43%
Piping systems	80	34%	3%	9%	55%
Steel structural systems	116	50%	4%	10%	35%
Structural protection systems	176	57%	0%	13%	31%
All Category 2 systems	**569**	**49%**	**4%**	**9%**	**38%**
All vessel systems	**1,503**	**70%**	**3%**	**8%**	**19%**

Data source: WSDOT Ferry System.

Note: These assessments are under review and will be replaced with condition ratings in 2011.

Ferries Vessel Preservation

Inspectors also assess vessel systems by types of system: communication-navigation and life saving equipment, major mechanical and electrical equipment, piping systems, passenger and crew spaces, propulsion systems, security systems, steel structures and structural protective systems. The Vessel System Life Cycle Assessment table on the previous page shows the status of all these types of systems. All types of Category 1 systems have a higher percentage designated "good" or "fair" than any type of Category 2 system. This reflects WSDOT's emphasis on preserving USCG-designated "vital" systems.

Planned vessel preservation activities will reduce backlog of repair projects

State law requires that WSDOT create a strategic plan for reducing backlogs of ferry vessel repair projects. The performance measures for the Ferries vessel preservation activity measure the outcome of investments directed at reducing these backlogs. The table below shows preservation needs projected through the end of the 2009-2011 biennium, projected reductions of these needs resulting from planned preservation investments, and progress in achieving planned reductions in needs based on biennium-to-date investments.

Preservation needs are measured in terms of the percentage of vessel systems that have reached the end of their standard life cycles weighted by life cycle model cost factors. Preservation needs consist of the backlog of preservation needs existing prior to the 2009-2011 biennium plus additional preservation needs for systems that reach the end of their life cycles in the 2009-2011 biennium. Planned preservation investments will offset some of the needs projected to exist by the end of the biennium. This vessel preservation performance measure shows the biennium-to-date progress in achieving the planned backlog reduction.

Planned vs. actual reduction in Ferries capital preservation investments

In percentage of the weighted value of systems past their standard life cycles
Third quarter, 2009-2011 biennium; Actual reductions are July 1, 2009 – March 31, 2010

	System preservation needs			Planned reductions		Actual reductions	
	Backlog prior to 2009-11	Additions to backlog in 2009-11	Backlog at end of 2009-11 before reductions	Planned backlog reduction in 2009-11	Planned backlog at end of 2009-11	Reductions as of Q3 2009-11	Status of backlog at the end of Q3 2009-11
Category 1 systems							
Communications, navigation, lifesaving systems	17%	8%	25%	-8%	17%	-1%	24%
Major mechanical/electrical systems	8%	7%	15%	-5%	10%	0%	15%
Piping systems	28%	7%	36%	-4%	32%	0%	36%
Propulsion systems	6%	1%	8%	-4%	3%	-1%	7%
Security systems	0%	0%	0%	0%	0%	0%	0%
Steel structural systems	29%	2%	31%	-13%	18%	-3%	29%
All Category 1 systems	**12%**	**3%**	**15%**	**-6%**	**9%**	**-1%**	**14%**
Category 2 systems							
Major mechanical/electrical systems	23%	18%	41%	-13%	28%	0%	40%
Passenger and crew spaces	36%	27%	63%	-29%	34%	-3%	60%
Piping systems	60%	15%	74%	-17%	57%	-1%	73%
Steel structural systems	37%	8%	45%	-4%	40%	0%	45%
Structural protection systems	51%	7%	58%	-19%	39%	-6%	52%
All Category 2 systems	**40%**	**16%**	**56%**	**-19%**	**37%**	**-3%**	**53%**
All vessel systems	**28%**	**10%**	**38%**	**-13%**	**25%**	**-2%**	**36%**

Data source: WSDOT Ferry System.

Ferries Vessel and Terminal Preservation

If no vessel preservation investments are made during the biennium, 38% of the weighted value of the systems will be operating beyond their standard life cycles. Of this need, 28% accumulated prior to the 2009-2011 biennium and 10% of this need will be added during the 2009-2011 biennium. Planned preservation investments will reduce preservation needs by 13%, which will reduce fleet-wide preservation needs from 38% to 25%. Actual biennium-to-date preservation investments through March 31, 2010, have reduced the end of biennium preservation backlog from 38% to 36%.

Ferries terminals preservation

WSDOT operates 20 ferry terminals and a repair facility, comprised of 755 separate components. The Washington State Bridge Inventory System and the Office of Financial Management Facilities Inventory System is used to evaluate the condition of all ferry terminal and repair facility components. All critical components of super- and sub-structures are included in the evaluation, such as landing aids (wingwalls and dolphins), vehicle transfer span systems, overhead loading systems, trestles, bulkheads, pavements, buildings and passenger-only facilities.

Terminal components are assessed based on four condition ratings: "good," "fair," "poor," and "substandard." (The "substandard" condition rating is unique to Ferries system. It does not mean the system is unsafe, but is in greater need of preservation.) The rating system evaluates the level of deterioration, damage, and compromised functionality of terminal components before giving them a structural condition rating.

Following the last annual inspection cycle, 98% of terminal systems now have condition ratings. The table below shows the condition levels of terminal components as of January 2010, when 85% of terminal systems were in good or fair condition, 15% were in poor or substandard condition.

The majority of structures that are rated "poor" or "substandard" in the WSDOT assessment are vehicle transfer spans and landing aids such as wing-walls and dolphins. Many of the landing aids are deteriorating, creosote-soaked, wood pilings that are susceptible to rot from being immersed in salt water.

WSDOT's plan is to replace such systems with concrete and steel structures to improve the usable life-span of these components, and to reduce marine contamination by removing creosote sources from the water.

WSF structural condition rating for terminal systems
January 2010

System	# of systems	Good	Fair	Poor	Sub-standard	Not rated
Landing aids[1]	179	58%	17%	13%	12%	0%
Vehicle transfer spans	210	31%	53%	14%	1%	0%
Overhead loading systems	66	56%	35%	9%	0%	0%
Trestle & bulkheads	72	29%	64%	6%	1%	0%
Pavement	77	55%	31%	5%	4%	5%
Buildings	136	43%	51%	1%	0%	6%
Passenger only facilities	15	40%	53%	7%	0%	0%
Total average	**755**	**44%**	**41%**	**9%**	**4%**	**2%**

Data source: WSDOT Ferry System.
1 Includes dolphins and wingwalls.

WSF bridge structural condition definitions

Category	Description
Good	The structure is performing as designed with all elements functioning as intended.
Fair	All primary structural elements are sound but may have deficiencies such as crushed timbers, deterioration, and some section loss of anchor chain.
Poor	There is moderate deterioration of some of the elements due to section loss or rotten and crushed timbers, and moderate loss of anchor chain are present.
Sub-standard	There is advance deterioration due to section loss of steel elements, rotten or crushed timbers, broken or leaning pilings, broken hardware, and severe section loss of anchor chain. Flotation structure may be compromised.

Source: WSDOT Ferry System.

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.

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Rail: Amtrak Cascades Quarterly Update 25
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Earlier mobility-related articles

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Commute Options, GNB 33

Aviation Annual Report

Grant Programs

Aviation Highlights

- For the first round of aviation grants for the 2009-20011 biennium, WSDOT awarded grants to 41 different projects.
- Federal, state, and local contributions brought the value of awarded grants to $12.4 million.
- WSDOT exceeded its goal for aircraft registration for FY 2010, registering 95% of active aircraft in Washington.
- WSDOT helped to lead and coordinate 144 search and rescue operations across Washington in 2009.
- Federal funding is now available to conduct a statewide runway pavement condition assessment in 2011.

Avey Field State Airport is a WSDOT-managed airport, and one of only three airports that cross the U.S.-Canadian border, as shown above. To the right is U.S. 395, which becomes British Columbia Provincial Highway 395 after the border crossing.

Each year, WSDOT Aviation's Local Airport Aid Grant Program provides financial assistance to many of the state's 138 public airports. Through this program, WSDOT leverages millions of dollars in federal grants by using a relatively minimal amount of state and local match contributions. WSDOT typically awards two rounds of grants per biennium. Any municipality or federally-recognized tribe that owns a public-use airport can apply for a grant. These public airports are critical links within the state's transportation network, and the grant program funds projects that strengthen aviation infrastructure in the areas of pavement, safety, maintenance, security, and planning.

WSDOT fiscal year 2010 aviation grants
By funding source

Funding source	Total funding
Federal	$11,102,058
State	$889,393
Local (matching)	$453,401
Total funding	**$12,444,852**

Data source: WSDOT Aviation.

During the first round of 2009-2011 biennium grants, WSDOT awarded $889,393 to 35 airports for 41 different projects. Despite a significant projected decline in aviation revenues, WSDOT was able to use approximately $288,606 to leverage $11.2 million in federal funds, bringing the combined state, local and federal grand total to more than $12.4 million.

The maximum amount WSDOT can award to an individual sponsor in a single grant is $250,000. WSDOT requires a minimum local match of 5%. Local matches can be in cash or in-kind volunteer labor and materials; however, the airport sponsor will be required under state law to maintain certain records documenting the value of the in-kind donations.

WSDOT's aviation grant programs

WSDOT uses a matrix and scoring table from its *WSDOT Airport Aid Grant Procedures Manual* to evaluate grant applications that meet the minimum requirements. The methodology allocates state grant funds in two categories: airport type and project type.

Allocation of funds by airport type

WSDOT Aviation grants help to support airports that do not have a federal National Plan of Integrated Airport Systems designation (or, non-NPIAS airports). These non-NPIAS airports are unable to receive normal federal funding, and so they make up approximately 55% of the airports that receive WSDOT Aviation grant funding. The remaining 45% of grants allocated are NPIAS airports.

Allocation of funds by project type

Once funds are allocated by airport type, they are further subdivided into three categories:

- 75% for pavement projects,
- 15% for safety projects, and
- 10 % for maintenance, security and planning projects.

Each project is then prioritized according to a corresponding system of points based on the particular project type. Some projects may be worth five points, while others may be worth 15 or 20 points. Points are also awarded based on several

Grant Programs and Pavement Conditions

WSDOT fiscal year 2010 grants
Number of projects and total funding by category

Category	Number of projects	Total funding
Pavement	25	$10,036,019
Safety	11	$1,976,918
Maintenance, planning, or other	4	$442,426
Security	1	$6,500
Runway safety	0	$0
Total projects and funding	**41**	**$12,461,863**

Data source: WSDOT Aviation.

additional considerations, such as whether a project has community support, local match funding or economic development potential. Once points are assigned, projects are ranked on the WSDOT Airport Aid Grant list and top-scoring projects are recommended for funding. Projects submitted for airport aid grants come from the airport's *Capital Improvement Plan*. Airports then provide WSDOT with details and information to maintain a project webpage, similar to those for WSDOT's other capital project webpages.

Runway safety grants

The Runway Safety Grant program was a subset of the Airport Aid Program. Designed to raise awareness of runway safety issues at airports, the program required airport sponsors to hold an education forum on runway safety for pilots in order to be eligible for up to $2,500 for items that have a direct correlation to increased runway safety, such as markings, signs, aviation radios, and vehicle beacons. As of 2010, this special grant program has been discussed with all airports that could potentially be interested, and grants disbursed. Airports may continue to apply for funding for items that can improve runway safety through the regular grant process.

Security grant program

Following the events of September 11, 2001, WSDOT established a Security Grant Program in 2002 to aid general aviation airports in creating an airport security plan. Since general aviation airports have a number of characteristics that make them prone to potential security risks, including unsupervised access or unsecured fueling areas, they must be protected from two types of threats: first, the possibility of an aircraft being turned into a weapon, either by the authorized pilot or by someone who takes over the aircraft; and second, deliberate sabotage, including the potential that a bomb or explosive device might be placed on an aircraft.

To encourage effective aviation security throughout Washington state's network of airports, WSDOT encourages airports to develop an airport security plan. An effective plan should include the airport tenants, public safety and emergency services agencies, pilots and/or aircraft owners, airport employees and local law enforcement. After completing the plan, an airport sponsor is eligible for up to $5,000 of Security Grant funds to support projects that enhance airport security such as fencing, gates, lighting or cameras.

Grant information available online

To view tables of grants awarded for fiscal year 2010, please visit: www.wsdot.wa.gov/Accountability/Publications/PerformanceDocuments.htm#graynotebook. For more information on the grant process, visit WSDOT Aviation online: www.wsdot.wa.gov/aviation/grants/.

Airport runway pavement condition assessment planned

In 2005, WSDOT completed a statewide pavement study (Airport Pavement Management System) to assess the condition of runways, taxiways, and aprons. Of the 139 public-use airports at the time, 96 were included in the study. The 43 airports not included in the study were those with unpaved landing strips, or airports that conduct their own pavement studies such as Seattle-Tacoma, Tri-Cities, Spokane, and Bellingham. The 2005 study found that 77% of the pavement surveyed was in "good/fair" condition, while 23% had deteriorated to "poor" condition.

The pavement study supports WSDOT's Airport Pavement Management System and the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems. In

Planes parked by a hangar, in preparation for a WSDOT practice search and rescue drill.

Aircraft Registration and Search and Rescue

May 2010, WSDOT Aviation will complete a consultant selection process for the next pavement study, develop a scope of work with the selected consultant, and secure funding from the FAA. The last statewide pavement analysis took two years to complete. However, FAA funding may limit the amount of work in 2010. Pavement inspection at all airports is typically conducted during the summer months, followed by data analysis and report preparation during the fall and winter. The 2008 pavement study was postponed after a decision by the FAA to not fund the three-year update was made due to the federal agency's own budget limitations. The condition of the statewide system of pavements will be available to report in 2011.

Aircraft registration continues to rise

State law requires that all airworthy general aviation aircraft be registered with WSDOT's Aviation division. Aircraft registration fees directly support WSDOT's airport preservation, maintenance and improvement programs and grants. Aircraft registration is due annually January 1.

In 2003, the Legislature authorized changes to state law (R.C.W. 47.68.250) that allowed aircraft registrations to include penalties for past-due registrations. WSDOT mails two reminder letters to each aircraft owner and attempts to contact individuals via e-mail or telephone, if possible, as a final reminder before issuing penalties.

A final collection process is under way for past-due accounts from 2006 to 2009. FAA and WSDOT's internet registration lists were merged to determine the final number of outstanding accounts. Certified registered letters were mailed to aircraft owners with delinquent registrations by March 17, 2010. Aircraft owners have 30 days to respond.

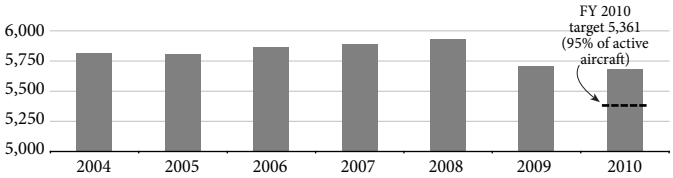
WSDOT continues to exceed registration goals

Aircraft registration numbers increased during the past 10 years and continue to increase annually. In 2003, registrations exceeded 2002 totals by nearly 23% after WSDOT introduced its online registration payment system. WSDOT sends letters to every aircraft owner in its registration database, as well as to those that are new to the FAA database, as a reminder to either register or file an exemption.

WSDOT ended the 2009 aircraft registration year with 5,957 active aircraft in its system. WSDOT's goal was to register at least 90% (5,361) of active aircraft for FY 2010. As of March 25, 2010, 5,684 aircraft (95% of active aircraft) were registered, exceeding the goal well before the close of FY 2010 on June 30, 2010.

Number of aircraft registrations, 2004 - 2010

Annual number of registrations, including FY2010 target



Data source: WSDOT Aviation.

Search-and-rescue responses

WSDOT's Aviation division is required under state law to manage all air search-and-rescue operations within the state and coordinate the use of aviation assets for disaster relief efforts. WSDOT closely coordinates search and rescue operations with all available resources and agencies, including the Washington State Patrol, Washington Emergency Management Division, U.S. Coast Guard and the U.S. Air Force Rescue Coordination Center. WSDOT also uses volunteer resources from Washington Air Search and Rescue, the Civil Air Patrol, and county sheriffs' departmental search-and-rescue programs across the state.

WSDOT 2009 search and rescue operations

Type of response	Number of responses
Emergency locator transmitters	74
Full scale search and rescue missions	2
Overdue aircraft	5
Aircraft incidents	58
Fatality incidents	5
Total incidents	**144**

Data source: WSDOT Aviation.

WSDOT Search and Rescue Mobile Operations Trailer during a search and rescue operation at Sanderson Field airport in Shelton.

Long Term Air Transporation Study

For information about the conclusion of this study and its recommendations, please see pp. 97

Traveler Information Semi-Annual Update

WSDOT provides real-time traffic and travel information to the public through several systems: the 5-1-1 telephone information system, the Traffic and Travel Information website, online communication services such as Twitter, highway advisory radio broadcasts, and variable message signs. Using these tools, the public can access a broad range of products, from traffic camera images and road closure notifications to rest area locations and weather information.

5-1-1 call volume down during mild winter

Due to a mild El Niño winter, calls to the hotline from October 2009 through March 2010 totaled just under 1.1 million, down 35% from last winter's record call volume of 1.7 million. (For more about winter highway conditions, see the Post-Winter Report, pp. 12-13.)

With the exception of October and November, monthly call volumes for the 2009-2010 winter were often only half that of recent winters. Despite this lower volume, in February 2010 total calls to the traveler information hotline since its inception surpassed 10 million. Call volumes in September were higher than normal because the 5-1-1 hotline was being spammed by an automatic dialing service number.

SR 410 landslide affects call volumes

On October 11, a major landslide wiped out a section of SR 410 outside of Naches, necessitating the closure of 47 miles of highway. (For more about the Nile Valley landslide, see the Project Spotlight on page 77.) The proximity of cross-state highways led to a large number of travelers seeking 5-1-1 information. In response, WSDOT's 5-1-1 telephone menu announced SR 410 details before listing the normal menu options. Calls about the landslide and closure meant that the hotline received roughly 200,000 more calls than usual in October, and 190,000 more calls than usual in November.

WSDOT 5-1-1 numbers shift to new source

In June 2009, the software vendor that provides 5-1-1 services for WSDOT made a change in its connections for incoming phone calls. This inadvertently affected the reliability of data, and consequently has meant that WSDOT is unable to report call data as it had been prepared in the past. In the future, WSDOT will report data derived from WSDOT's own phone system, through the system's own 'vector directory' (VDN) numbers. These numbers are the most accurate way to report calls to the 5-1-1 system, while being able to consistently replicate data in the future.

The previous system was able to produce reports on call volumes by type of information requested; unfortunately, WSDOT's own telephone system is not able to extract that level of detail. Since WSDOT is no longer using the software vendor data for the total number of calls, the agency will continue to report on type of information requested, but as a percentage of calls and not by absolute numbers.

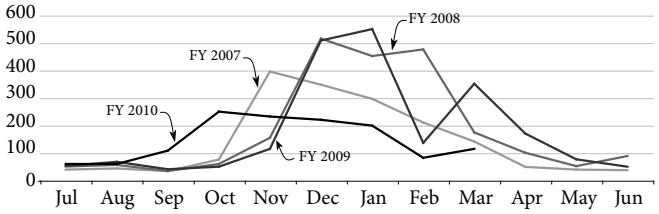
Traveler Information Highlights

Calls to 5-1-1 hotline from October to March down 35% from last winter due to mild El Niño weather.

WSDOT changes server software for 5-1-1.

Total calls to WSDOT's travel information service

Four year trend: FY 2007-2010, in thousands of calls



Data source: Vector directory numbers, WSDOT Traffic Office.

Note: From January 2005, 1-800-ROAD and 206-DOT-HWY numbers connected directly to 5-1-1; these calls are reported in 5-1-1 call total.

Winter-season 5-1-1 hotline calls by category

Percentage of total calls from October to March

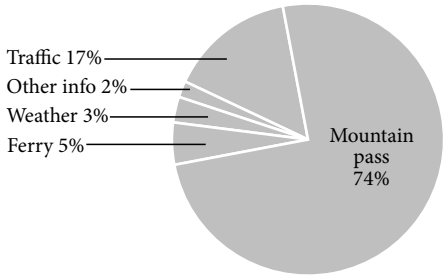
Information requested	2006-2007	2007-2008	2008-2009	2009-2010
Traffic	17.2%	15.5%	19.0%	16.7%
Mountain pass	74.5%	75.3%	69.0%	73.7%
Ferry	2.3%	2.0%	2.9%	4.7%
Weather	2.9%	2.8%	3.1%	3.0%
Other	3.1%	4.4%	6.0%	2.0%

Data source: Avaya INI, WSDOT Traffic Office.

Note: "Other" includes queries about weather, public transit, rail, airlines, and other states.

Traveler information requested

Percent of total 5-1-1 calls, October-March 2010



Data source: Avaya INI, WSDOT Traffic Office.

Incident Response Quarterly Update

Incident Response Highlights:

In Q1 2010, the program cleared 11,644 incidents, 14.1% more incidents than responded to in Q4 2009.

The average incident clearance time in Q1 2010 was 12.1 minutes.

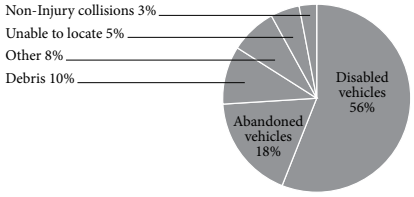
The mission of WSDOT's Incident Response (IR) program is to safely and quickly clear traffic incidents on state highways, minimizing congestion that can lead to secondary collisions. IR roving units, which operate during peak traffic periods, also offer a variety of free assistance that reduces motorists' exposure to risk, such as providing fuel and jump starts, changing flat tires, and moving blocking vehicles safely off the roadway. IR responders are trained and equipped to assist Washington State Patrol (WSP) troopers at collisions and other traffic emergencies. Available for call out 24 hours a day, seven days a week, 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/.

Number and percentage of responses by category

Q1, January 1, 2010 - March 31, 2010; 11,644 incidents

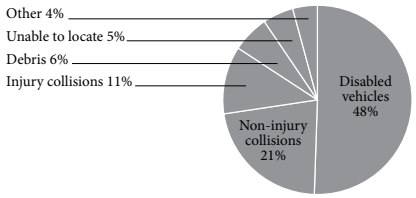
Incidents lasting less than 15 minutes (8,887)

Fatality, injury and police activity were less than 1% (not shown). There were 13 fires and 5 harzardous materials events involved incidents in additon to or as a result of above incidents. 12 incidents involved WSDOT property damage, and 223 were located in work zones.



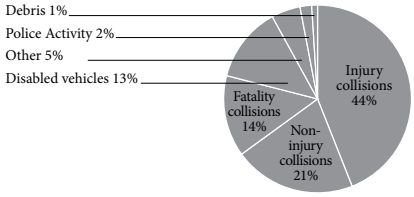
Incidents lasting 15 to 90 minutes (2,656)

Police activity and fatality collisions were less than 1% (not shown). There were 81 fire, and 8 hazardous materials involved incidents in addition to or as a result of above incidents. 145 incidents involved WSDOT property damage, and 187 were located in work zones.



Incidents lasting 90 minutes and longer (101)

There were 11 hazardous materials and 21 fire-involved incidents in addition to or as a result of above incidents. 43 incidents involved WSDOT property damage, and none were located in work zones.



Data source: WITS, WSDOT Traffic Office

Annual average clearance time and total incidents responded to by IR program, 2005-2009

Clearance time in minutes

Year	Average clearance time	Total number of incidents
2005	17.6	58,150
2006	17.3	59,274
2007	16.1	52,536
2008	13.4	47,579
2009	13.4	43,786

Data source: WITS, 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.

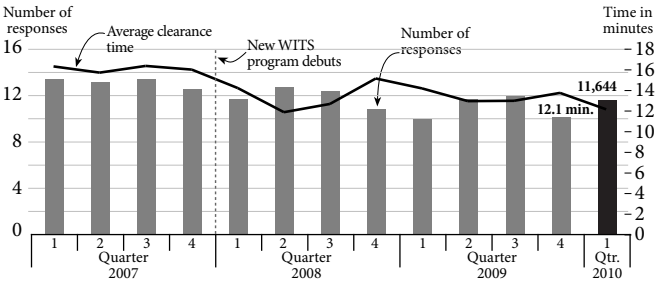
Incident Response Program cleared more incidents in less time during Q1 2010

In the first quarter of 2010, WSDOT's Incident Response team cleared 11,644 incidents with an average clearance time of 12.1 minutes. This clearance time is down 10.9% from last quarter's clearance time of 13.7 minutes, and down 13.5% from 14.1 minutes in the same quarter of 2009. The number of incidents responded to in Q1 is up 14.6% from last quarter's 10,163 incidents, and up 16.9% from the 9,961 incidents attended in Q1, 2009. It is too soon to say if this is evidence of a long-term upswing in responses, or just a short-term increase. WSDOT will continue to monitor the trend through 2010.

Number of responses and overall clearance time

January 1, 2007 - March 31, 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. In Q1 and Q2 2007, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total. From Q1 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.

Number of responses declines since peak in 2006

Despite the increase in incidents this quarter, the number of incidents responded to by WSDOT's Incident Response program has been slowly declining since it peaked in 2006. The initial drop in 2007 was related to a loss of responders when

Fatality Incidents, Program Trends, and Over 90 Minute Incidents

government grant funding ran out. The program lost four responders as a result: two state patrol cadets and two privately contracted tow truck operators.

In response to the high fuel prices and the economic recession, the number of responses has continued to drop in 2008 and 2009. The spike in fuel prices in 2008 decreased vehicles on the road as well as vehicle miles traveled, and WSDOT temporarily reduced normal roving patterns as a fuel-saving measure (roving schedules have since returned to normal as fuel prices have stabilized). Meanwhile, the economic recession that began in late 2008 has had a two-fold effect on the program: first, there was – and continues to be – less traffic on the road to cause incidents, and second, staffing for the Incident Response program has been constrained by the hiring freeze on state employment and overtime restrictions. The latter makes it difficult to provide coverage when responders take medical or other types of leave. As the economy recovers, it is expected that the number of responses will increase again.

Vancouver Olympics increases incident responses

The Vancouver Winter Olympics in February created an unusually large amount of traffic crossing the border between the U.S. and Canada. More than 223,000 vehicles crossed northbound into Canada during the Games, 20% above the seasonal average, while nearly 268,000 crossed southbound. WSDOT's Incident Responders were placed strategically near the border routes (I-5, SR 543, SR 539, and SR 9), helping more than 1,300 drivers roughly twice the seasonal average.

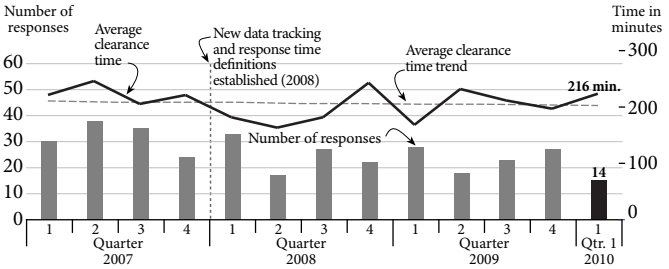
Low number of fatality responses statewide in Q1 2010

In the first quarter of 2010, the WSDOT IR Team responded to 14 fatalities statewide. This is the lowest number of fatalities that WSDOT has responded to in the past four years. Although this could indicate a decrease in fatalities on the road, it also might indicate that WSP has not called upon WSDOT's Incident Response for help in clearing some of the fatality collisions that they attend. The average fatality clearance time was 216 minutes, slightly above the 2007-2009 average of 205 minutes for fatality clearance times.

Elsewhere, however, the mild 2009-2010 winter season led to fewer incidents on state highways.

Number of responses and average clearance time of fatality collisions

January 1, 2007 - March 31, 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's target reductions in the duration of over-90-minute incidents duration

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 GMAP program, Governor Gregoire charged the two agencies with lowering the average duration of these over-90-minute incidents. In 2009, WSDOT and WSP met the Governor's target of 155 minutes for the average duration of long blocking incidents on nine key highways, with the average annual duration for GMAP incidents coming in at 154 minutes. The two agencies continue to pursue this target in 2010.

Average over-90 minute incident duration on nine key corridors high in 2010 compared to 2009

During the first quarter of 2010, 61 over-90-minute incidents occurred on the nine key routes, producing an average duration of 173 minutes for the quarter. This is an unusually high average duration (the highest since 2007) for an unusually low number of total incidents (there was an average of 82 incidents a quarter for 2008 and 2009).

An analysis of the data shows 39% of road blocking incidents lasted well beyond the 90 minute goal – from three to six hours – and three of incidents were more than six hours long. Forty-one percent of incidents involved commercial motor vehicles (CMV) and 59% involved either a fatality or serious injury. The presence of trucks, fatalities, and serious injuries can require specialized equipment to remove large vehicles and excessive debris, specialists trained to clean up of hazardous material spills, and extra time to investigate and manage serious injuries and fatalities. Incidents involving trucks had been in decline in 2009, but now appear to be on the rise again. This quarter also

Incident Response Quarterly Update

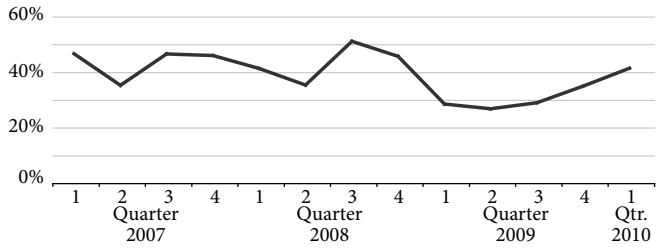
Over-90 Minute Incidents

saw a number of incidents involving wrong-way drivers, pedestrian suicides, hit-and-run collisions, and collision victims trapped inside their vehicles.

All of these factors tend to cause more complex recoveries and increase delays. At the direction of the Governor, WSDOT and WSP are performing a review of best practices along with an in-depth analysis of factors influencing clearance times. The results of this analysis will be reported to the Governor in August 2010, and in future *Gray Notebook* editions.

Percentage of commercial motor vehicles involved in over 90-minute blocking incidents on the nine key GMAP corridors

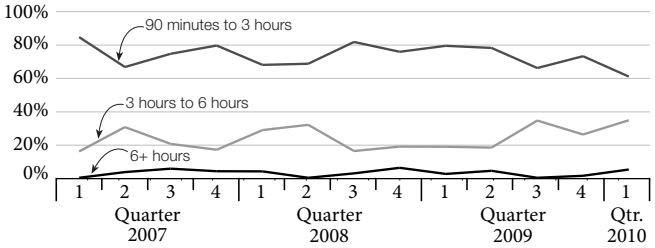
January 1, 2007 - March 31, 2010



Data source: WSDOT Traffic Office and WSP.

Duration of blocking incidents by duration and frequency

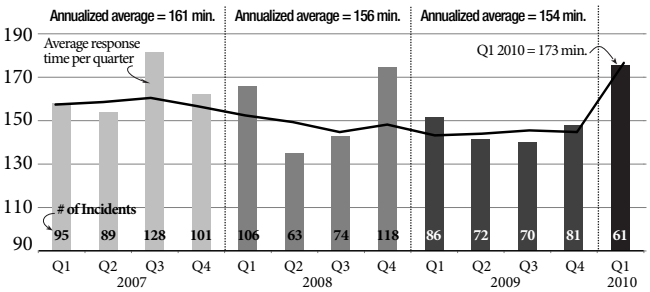
For incidents lasting 90 minutes to three hours, three hours to six hours, and six-plus hours (extraordinary incidents)
January 1, 2007 - March 31, 2010



Data source: WSDOT Traffic Office and WSP.

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

January 1, 2007 - March 31, 2010
Number of responses per quarter vs. annualized average duration in minutes



Data source: Washington State Patrol and WSDOT Traffic Office.

Note:The nine GMAP corridors are I-5 (from Oregon border to British Columbia border), I-90 (from Seattle to North Bend,) I-405, SR 18 (from Federal Way to I-90), SR 16 (from Tacoma to Purdy), SR 167, SR 520, SR 512, and I-205.

Reducing the average duration of over-90 minute incidents on key western Washington corridors

Many events create blockages on state highways. In order to be held accountable for the appropriate highway events, WSDOT and WSP carefully screen the incidents in the GMAP dataset to meet certain criteria. First, incidents must be on one of the nine key congested highways and under the control of the WSP, as opposed to a local law enforcement agency. Second, they must block a lane or ramp for 90 minutes or longer. Collisions, disabled vehicles, debris on the road, and occasional incidents such as fires make up the bulk of traffic incidents in the dataset.

Events or activities that are not traffic-related are removed from the dataset. Typical non-traffic incidents include maintenance activities, such as bridge repairs, and public safety issues such as natural disasters or security threats. In the latter case especially, the agencies only reopen the road when it is safe for travel.

Three extraordinary incidents

January 1, 2010 - March 31, 2010

Date	Location	Duration (in minutes)	Details
January 16, 2010 10:58 PM	SR 512 @ MP 9.2	373	Fatality hit-and-run. Multiple-car collision, including motorcycle.
January 20, 2010 02:37 AM	I-5 @ MP 231	569	Semi truck roll-over with leaking fuel. Cargo needed to be unloaded before being moved and extensive spill removal required.
March 13, 2010 11:50 PM	I-5 @ MP 80	376[1]	Three car roll-over collision with serious injuries. Causing driver suspected impaired by drugs and alcohol, fled the scene on foot.

Data Sources: WSP Field Operation Bureau and WSDOT Traffic Office.
[1]Times were adjusted to reflect daylight savings time.

Passenger Rail: Amtrak *Cascades*

Amtrak *Cascades* service is jointly funded by Amtrak and the states of Washington and Oregon. Amtrak funds one round trip between Portland and Seattle, Oregon funds two round trips between Eugene and Portland, and Washington funds two round trips between Seattle and Portland, one round trip between Portland and Vancouver, B.C., and one round trip between Seattle and Vancouver, B.C. The table and pie chart show ridership proportional to funding entity.

Washington is one of 13 states to provide operating funds to Amtrak for intercity passenger rail service. Amtrak *Cascades* train operations span 466 miles of rail between Eugene, Oregon and Vancouver, B.C. Amtrak uses five European-designed, Talgo trains for daily operations. Three are owned by Washington State and two by Amtrak.

Amtrak *Cascades* ridership by funding partner
Quarter 1 ridership in 2008-2009-2010

Funding partner	Round trips funded	Quarter 1 Jan - March 2008	Quarter 1 Jan - March 2009	Quarter 1 Jan - March 2010
Washington	4	111,577	100,859	128,054
Oregon	2	27,610	24,957	26,427
Amtrak	1	25,842	24,322	29,292
Total ridership		**165,029**	**150,138**	**183,773**

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.

Rail Performance Highlights

Ridership set a new record in Q1 of 2010 and is up 22.4% compared to Q1 of 2009.

On-time performance for the quarter declined 7.7% compared to the same quarter in 2009.

Ticket revenues increased 43% compared to the same quarter in 2009.

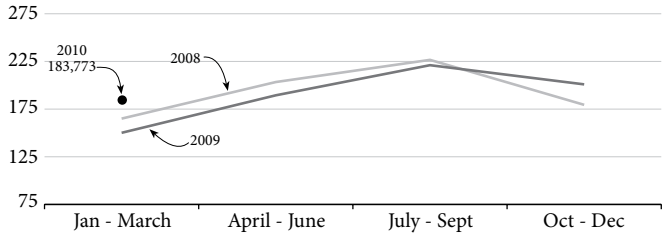
For information on Recovery Act high-speed passenger rail funding, see p. 59.

First quarter ridership sets new record, up 22.4% from same quarter in 2009

State-supported Amtrak *Cascades* service demonstrated record growth in ridership during the first quarter of 2010. Ridership was 183,773, which represents a 22.4% increase compared to the first quarter of 2009 and the highest ridership for the first quarter in the history of this service. A portion of the ridership growth is due to an additional train to and from Vancouver, B.C., that began in August 2009, which included first time direct train service out of Portland, OR. A total of 32,091 passengers rode the second Amtrak *Cascades* train between August 2009 and March 2010.

Compared to 2009, Amtrak *Cascades* ridership grew each month in the first three months of this year. January ridership was 55,989 – an increase of nearly 26%. In February, ridership rose to 60,745 for the month, for a 34% increase over 2009. This growth in ridership was due largely to the 2010 Olympic Games held in Vancouver, B.C. March recorded the highest ridership for the quarter at 67,039 – an 11% increase over 2009. For details on Amtrak *Cascades* and the 2010 Olympics, see the December 2009 *Gray Notebook,* p. 32.

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

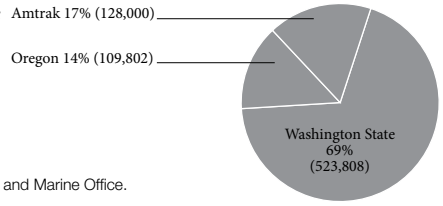


Data source: Amtrak and WSDOT State Rail and Marine Office.
Note: Ridership for Washington-funded trains only.

Rail
Quarterly Update

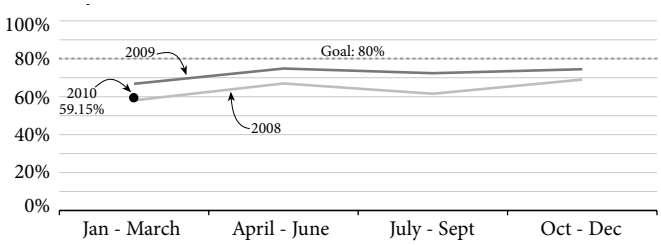
Passenger Rail: Amtrak *Cascades*

Amtrak *Cascades* ridership by funding entity
Calendar year 2009



Data source: WSDOT State Rail and Marine Office.

Amtrak *Cascades* on-time performance
Percent of trains on time, 2008-2010



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

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

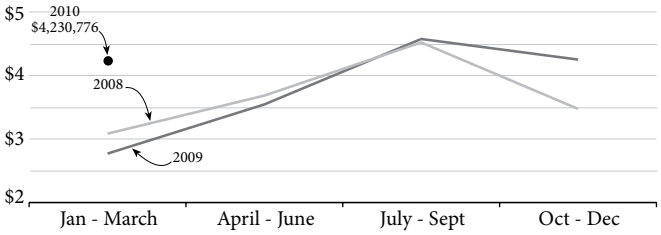
Average on-time performance down compared to same quarter in 2009

On-time performance for Amtrak *Cascades* trains was 59.15% for the first quarter of 2010 compared to 66.81% in the first quarter of 2009, a decrease of 7.7%. The on-time performance goal for Amtrak *Cascades* trains is 80%.

Ticket revenue up 43% compared to 2009

During the 1st quarter of 2010, ticket revenues for Amtrak *Cascades* trains rose 43%, when compared to the same period in 2009. As ticket revenue and ridership are closely correlated, record ridership this quarter explains much of the increase in ticket revenues.

Amtrak *Cascades* ticket revenues 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.

Amtrak Cascades on the Everett-Edmonds-Seattle route.

Washington State Ferries Quarterly Update

Ridership and Farebox Revenue

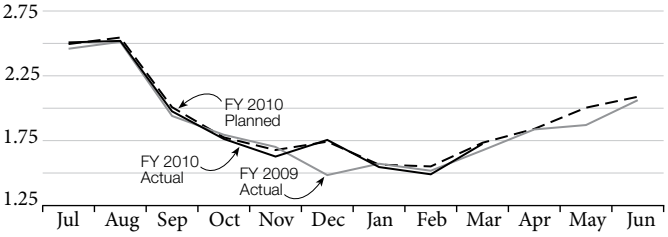
Washington State Ferries (WSF) serves as both an extension of the state's highway system and as a regional mass-transit provider. It provides a critical link to communities separated by water or longer driving distances, and is essential to the movement of goods and people in the Puget Sound region.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

Ridership levels remain below projected levels

For the third fiscal quarter of FY 2010 (January 1–March 31), 4.8 million people traveled on the ferry system. Ridership was 2.6% below projected levels, or 129,000 fewer riders than planned (4,889,016). The gap between planned and actual ridership occurred in each month during the quarter, with 19,000 fewer riders than planned in January, 61,000 fewer in February, and 49,000 fewer in March. It is likely ridership will continue to lag behind planned levels until the economy is growing at a sustained level and the public chooses more discretionary travel, including ferry travel. As compared to the same quarter in FY 2009, WSF ridership was essentially the same with a decrease of 3,700 riders this quarter.

WSF ridership by month

Actual ridership to date vs. planned ridership fiscal year 2010, compared with actual ridership for fiscal year 2009
Ridership in millions



Data source: WSDOT Ferry System.
Data note: Ridership for FY 2010 is year-to-date.

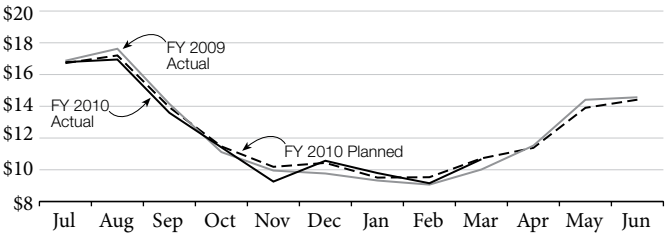
Farebox revenue remains below projected levels, but greater than one year ago

For the third fiscal quarter, WSF farebox revenue was $29,606,955. This is 0.5% below projected levels for the quarter, or $147,764 less than planned ($29,754,719). Fiscal year-to-date, WSF farebox revenue is 1.4% below projected levels, or $1,547,578 less than planned. As with ridership, it is expected farebox revenue will continue to lag behind projected levels until the economy improves.

Compared to the same quarter in FY 2009, WSF farebox revenue is 7.2% higher. Two factors have contributed: a 2.5% fare increase in October 2009, and an increased emphasis on reducing fare evasion at ferry terminals (see page 30 for more information on fare evasion at ferry terminals).

WSF farebox revenues by month

Actual farebox revenue vs. planned farebox revenue for fiscal year 2010, compared with actual farebox revenue for fiscal year 2009
Dollars in millions



Data source: WSDOT Ferry System.

Washington State Ferries Highlights:

- This quarter, 4.8 million passengers rode WSF, which was 2.6% fewer riders than expected.
- Farebox revenues were $26.6 million, 0.5% below plan for the quarter.
- Service reliability improved, as the missed trip reliability average improved to 1.3 missed trips from 3.0 in the previous quarter.
- The ferry system completed 99.7% of the 39,000 scheduled sailings for the quarter.
- On-time performance decreased slightly to 92%, but still exceeding the department's goal of 90%.
- The average sailing delay for the ferry system improved to 2.5 minutes from 3.0 minutes for the previous quarter.
- Customer complaints increased for the first time in three quarters, with an average of 5.5 complaints for every 100,000 riders.
- Customer complaints on employee behavior and ticketing issues were two of the largest increases.

Washington State Ferries Quarterly Update

Service Reliability

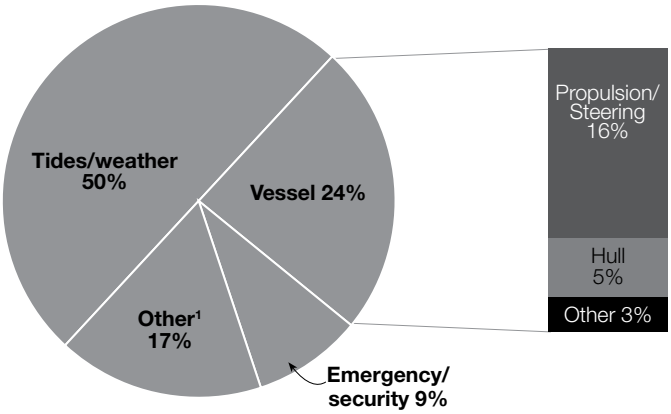
Number of missed trips decreases from the same quarter one year ago

The 'missed trip reliability' average for the third quarter was 1.3 missed trips a year. Compared to the previous quarter, there were 2.0 fewer missed trips than the 3.3 missed trips a year, from the second quarter of FY 2010. Compared to the same quarter one year ago, there were 0.4 fewer missed trips this quarter than during the third quarter of FY 2009 (1.7 missed trips one year ago).

WSF's missed trip reliability index measures trip reliability averages, and is annualized based on quarterly data, assuming 400 trips a year for each commuter. In the third quarter of FY 2010, 39,077 regular service sailing trips were scheduled. Of those trips, 151 were cancelled and 29 were replaced, resulting in a total of 38,955 during the quarter (39,077 scheduled – 151 cancelled trips + 29 replacement trips = 38,955 net trips).

The ferry system had a 99.7% overall service reliability rating for the quarter. All routes had a service reliability rating above 99% except the Port Townsend – Keystone route, which had an overall service reliability average of 95%. This route crosses Admiralty Inlet, which is known for its strong tidal currents, fog, and high winds. When conditions worsen, they can exceed the operational capabilities of the M/V *Steilacoom II* – the leased ferry WSF is currently using for this route. Previously, the Steel Electric vessel class, now retired, were exclusively utilized on this route, but were also known to struggle with the inlet's conditions. A new vessel, the M/V *Chetzemoka*, is being constructed to permanently service this route, and will be better suited to sailing conditions, helping to minimize future delays and cancellations. (See pp. 77 for more information on new vessel construction.)

Reasons for trip cancellations
Third quarter, fiscal year 2010



Data source: WSDOT Ferry System.
1 Twenty-five trips categorized as "Other" did not fit established trip cancellation categories. These cancellations consisted primarily of the removal of the M/V *Steilacoom II* for a required U.S. Coast Guard annual inspection (14 cancellations), and boat moves and related issues that resulted from the removal of the M/V *Sealth* on January 5 and 6 due to mechanical problems (7 cancellations).

Missed-trip reliability comparison

	Third quarter (January 1 - March 31), fiscal year 2009			Third quarter (January 1 - March 31), fiscal year 2010		
Route	**Number of missed trips[1]**	**Missed trip index (average)[2]**	**Overall reliability average[3]**	**Number of missed trips[1]**	**Missed trip index (average)[2]**	**Overall reliability average[3]**
San Juan Domestic	18	1.2	99.7%	17	1.1	99.7%
International Route (Sidney, BC)	0	0.0	100.0%	0	0.0	100.0%
Edmonds - Kingston	0	0.0	100.0%	2	0.2	100.0%
Fauntleroy - Vashon - Southworth	19	0.8	99.8%	14	0.6	99.9%
Keystone - Port Townsend	86	20.1	95.2%	76	17.6	95.8%
Mukilteo - Clinton	3	0.2	99.9%	0	0.0	100.0%
Pt. Defiance - Tahlequah	13	1.7	99.6%	6	0.7	99.8%
Seattle - Bainbridge Island	9	0.9	99.8%	1	0.1	100.0%
Seattle - Bremerton	17	2.7	99.3%	6	0.9	99.8%
TOTAL	**165**	**1.7**	**99.6%**	**122**	**1.3**	**99.7%**

Data source: WSDOT Ferry System.
Data note: 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 FY 2009.

1 'Number of missed trips' is the difference (net) between the number of cancelled trips and the number of replaced trips.

2 'Missed trip index' is based on the number of missed trips per year for one commuter making 400 trips per year, including a departure and return trip on the same day, or 200 days per year. In previous editions of the *Gray Notebook*, this measure was referred to as the 'trip reliability index'.

3 The overall reliability average is calculated by dividing the recorded number of net trips (scheduled trips - cancelled trips + make-up trips) divided by the number of scheduled trips.

Service Reliability

On-time percentage declines compared to quarter one year ago

WSF's system-wide on-time performance for the third fiscal quarter decreased by 5.2% as compared to the same quarter one year ago (91.5% of trips on-time for the third quarter of FY 2010 versus 96.7% of trips on-time for the third quarter of FY 2009). In terms of sailing delay the system-wide average was the same as the same quarter one year ago (2.5 minutes). Compared to the previous quarter, on-time performance decreased by 1.9%. In terms of sailing delay, the system-wide average decreased from 3.0 minutes for the second quarter of FY 2010 to 2.5 minutes during the current quarter – an improvement of thirty seconds (0.5 minutes).

WSF has formed a team that meets frequently to determine reasons for poor on-time performance, route by route and terminal by terminal, considering issues such as traffic loading and unloading and ferry time schedules. In the 2010 Legislative Session, Ferries received $50,000 to develop better technology for the reporting of on-time performance information which will aid in the review of on-time performance issues.

A trip is considered delayed when a vessel does not leave the terminal within 10 minutes of the scheduled departure time. WSF calculates its on-time performance rating using an automated tracking system located on each of its vessels that records when a vessel leaves the dock. If a vessel is recorded as leaving the dock within 10 minutes of the scheduled departure time, then the trip is considered 'on time'. The average sailing delay is an aggregate of the departures recorded as leaving past the on-time window during each quarter. It is important to note that WSF's on-time performance rating is calculated on the number of trips recorded by its automated tracking system; however, marine and atmospheric conditions may prevent a trip from being detected when the vessel leaves the terminal.

The M/V Walla Walla departs from Colman terminal to Bremerton.

On-time performance comparison

	Third quarter (January 1 - March 31), fiscal year 2009			Third quarter (January 1 - March 31), fiscal year 2010		
Route	**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	5,872	94.1%	2.6 minutes	5,273	87.0%	3.0 minutes
International Route (Sidney, BC)	8	87.5%	4.5 minutes	9	75.0%	4.7 minutes
Edmonds - Kingston	4,493	95.9%	3.0 minutes	4,023	89.8%	3.3 minutes
Fauntleroy - Vashon - Southworth	9,693	97.1%	2.6 minutes	8,789	91.2%	2.4 minutes
Keystone - Port Townsend	N/A[3]	N/A[3]	N/A[3]	1,578	92.9%	2.3 minutes
Mukilteo - Clinton	6,429	98.2%	2.1 minutes	6,160	96.3%	1.7 minutes
Pt. Defiance - Tahlequah	1,162	97.7%	2.8 minutes	3,099	88.7%	3.3 minutes
Seattle-Bainbridge Island	3,936	97.8%	1.3 minutes	3,757	92.7%	1.4 minutes
Seattle - Bremerton	2,473	96.1%	3.2 minutes	2,521	94.5%	2.3 minutes
TOTAL	**34,288**	**96.7%**	**2.5 minutes**	**35,209**	**91.5%**	**2.5 minutes**

Data source: WSDOT Ferry System.

Data note: 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 FY 2009.

1 Number of actual trips represents trips detected by the automated tracking system. It does not count all completed trips during the quarter.

2 The 'Average delay from the scheduled sailing time' is the duration between the 10 minute "window" and when a vessel is detected as leaving the terminal.

3 The Port Townsend - Keystone route is currently being serviced by a non-WSDOT ferry (M/V *Steilacoom* II) which is being leased from Pierce County. During the third quarter of fiscal year 2009, the vessel was not equipped with the automated tracking system and could not report on-time performance.

Washington State Ferries Quarterly Update

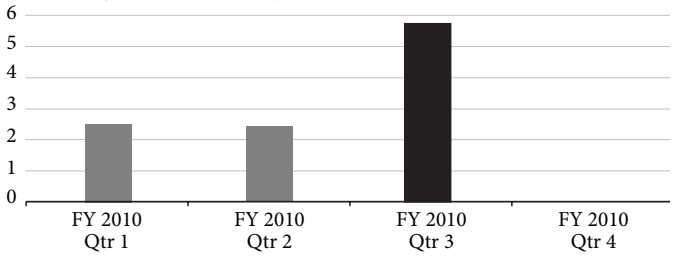
Customer Feedback

Customer complaints increase for the first time in three quarters

During the third fiscal quarter, the rate of complaints more than doubled as compared to the previous quarter. The complaint rate in the third quarter was 5.5 complaints per 100,000 passengers as compared to 2.4 complaints per 100,000 passengers for the previous quarter. Compared to one year ago, complaints were 2.4 more per 100,000 passengers (3.1 per 100,000 passengers in the third quarter of FY 2009).

Average number of complaints per 100,000 riders

First through third quarters of fiscal year 2010

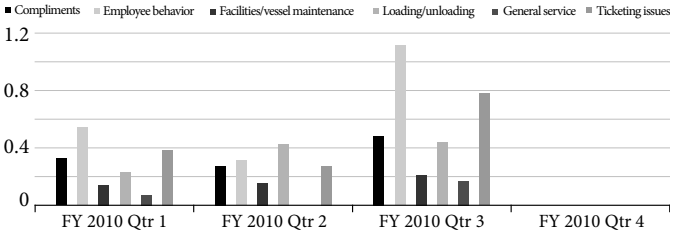


Data source: WSDOT Ferry System.

For the six major categories of customer feedback (see the bar chart below), each received more complaints than the previous quarter except loading/unloading. Jumps in complaint rates were particularly high in the areas of employee behavior and for ticketing-related issues. In the third quarter of FY 2010 WSF's customer information department revised the process by which customer complaints about employee behavior are recorded. It is believed that an increased sensitivity to and a greater emphasis on recording complaints about customer behavior has resulted in the increase in recorded complaints for the quarter. The department will continue to monitor this issue to verify the cause of increases in complaints about employee behavior. Complaints related to employee behavior are taken seriously and any complaint results in a meeting between the employee and his or her supervisor to determine if corrective action is needed. The rise in ticketing complaints was due primarily to a planned update of the software used in WSF's electronic fare system (*Wave2Go*) that resulted in users having difficulties with their electronic fare media.

Common complaints per 100,000 riders

First through third quarters of fiscal year 2010



Data source: WSDOT Ferry System.

WSF's customer feedback methodology

WSF monitors customer complaints, comments, and compliments in order to evaluate its service within 30 categories. The department uses a quality ratio to measure the number of service complaints per 100,000 customers. This measure is used to make accurate performance comparisons over time and to compare against other transportation service providers.

Washington State Ferries investigates fare evasion activities at system terminals

WSF is reducing opportunities for fare evasion at all of the system's terminals. In particular, WSF is focusing on specific terminals where fare-jumping is easier due to the physical configuration of the terminal.

There is potential for fare-jumping at several of the terminals on the eastern side of Puget Sound and at Anacortes. WSF is considering terminal improvements that would reduce the opportunities for passengers to evade a fare to board a vessel. At Anacortes, WSF is looking at systems to ensure that all vehicle passengers are paid for and that vehicles go only to the island destination for which they've paid.

New installations and ticket selling policies help

For example, WSF discontinued the sales of discounted senior and disabled tickets at vending kiosks. WSF knew that a portion of these tickets were being purchased and used by ineligible passengers. After sales of these special fares at kiosks ended, sales of such tickets dropped across the ferry system. To reduce fare evasion at Coleman Dock in Seattle, WSF installed turnstile gates to prevent unpaid passenger entry into the holding area, and these gates will be activated in the fourth quarter of FY 2010.

In some situations WSF uses handheld scanners wirelessly connected to the electronic fare system to verify that tickets are valid. In the past, connectivity of the devices was unreliable, and when the scanners were temporarily "offline," it was possible for passengers to present expired tickets for boarding. By improving connectivity of the devices, the use of expired tickets to board vessels has dropped dramatically. In March, WSF estimated that only one in a thousand travelers successfully cheated the system by this method and boarded a vessel without paying a fare.

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

Water Quality Annual Report 31
New Stormwater Permit 33
Stormwater Treatment Facilities 38
Construction Site Water Quality 39
Construction Site Erosion Control 40
Wetlands Preservation Annual Report 42

See also

Quarterly Report on Capital Projects (Beige Pages) 61

Earlier environment-related articles

Endangered Species Act Annual Report, GNB 33
Special Report: NEPA, GNB 33
Special Report: Climate Change, GNB 34
Programmatic Permits, GNB 34

Water Quality Annual Report

Water Quality Highlights

New Stormwater Permit (page 33). This article addresses the new statewide stormwater permit that was issued to WSDOT in 2009 by the Department of Ecology. New facilities and measurement requirements are called for, and will be reported in future editions of the *Gray Notebook*.

Stormwater Treatment Facilties and Management (page 38). This article addresses the facilities constructed prior to the new stormwater permit issued in 2009.

Construction Site Water Quality (page 39). This article addresses sample measurements taken from projects with in-water work.

Erosion Control (page 40). This article addresses the performance of selected projects against Best Management Practices for preventing erosion.

WSDOT's extensive work on water quality attests to its strong commitment to maintain and improve environmental quality. The articles on the following pages address four major aspects of WSDOT's water quality work: stormwater management, including the impact of a new permit issued in 2010; erosion control preparedness at construction sites; construction site monitoring; and stormwater treatment facility construction.

Future *Gray Notebook* reporting

Previous *Gray Notebook* (GNB) water quality articles focused on erosion control preparedness at construction sites, construction site monitoring, and stormwater facility construction. With the issuance of the new permit, the content of future GNB stormwater articles will change to reflect new performance indicators. These may include tracking progress in such key areas as: stormwater features inventorying and mapping, the extent of the highway system fitted with stormwater controls, stormwater pollution prevention plan implementation, and stormwater facility maintenance. Periodic special focus articles may address innovations in stormwater management, stormwater-related monitoring and research efforts, and other topics.

Stormwater management under the new 2010 permit

WSDOT manages 40,000+ acres of impervious surfaces that generate stormwater runoff. WSDOT's stormwater management responsibilities have increased substantially as a result of a new permit adopted in 2010. It expands coverage to more than 100 urbanized areas, including some in eastern Washington; the number of regulated state highway centerline miles has increased 40%, from 1,140 to 1,600 miles. WSDOT must implement a vast array of maintenance, monitoring, mapping, tracking, and reporting activities, while stormwater runoff treatment and control facilities must be built to more stringent standards. Finally, stormwater retrofit of existing pavement is mandatory on most highway improvement projects in the Puget Sound basin, subject to engineering feasibility evaluations and cost-effectiveness thresholds.

Stormwater treatment facility construction

WSDOT operates and maintains more than 2,100 stormwater treatment facilities statewide. In 2009, 171 new facilities were constructed. The number of facilities built in any year is driven by project funding, construction schedules, technical requirements, and regulatory approval.

Construction site monitoring

WSDOT is required to obtain permits on construction activities that may result in discharges into waters or wetlands, and monitor compliance. In 2009, 105 of 108 (97%) samples were in compliance with permit requirements. The three non-complying samples involved earthwork next to streams. In each case, corrective actions were taken to ensure compliance.

Erosion control at construction sites

WSDOT works in partnership with contractors to prevent erosion at construction sites using best management practices (BMPs) such as installing erosion control blankets, planting grass, and building ponds, in accordance with erosion and sediment control plans. WSDOT conducts weekly project inspections to track performance, and, each fall, evaluates plan effectiveness to identify areas for improvement. Inspections in 2009 revealed improvements in some areas of performance, but decline in several critical areas, including slope protection. WSDOT is improving its proactive planning for slope protection, and working to improve training and technical support to contractors.

Stormwater Permitting: A new permit, new responsibilities

Managing stormwater generated from WSDOT's transportation facilities helps fulfill the agency's environmental stewardship commitment and regulatory requirements. Statewide, WSDOT operates more than 7,000 centerline miles of highway. When rest areas, maintenance yards and shops, ferry terminals, and park and ride lots are included, the total area of WSDOT's paved surfaces covers about 40,000 acres.

Stormwater management reduces pollutants in Washington's streams and rivers, contributes to Puget Sound and salmon recovery efforts, and reduces downstream flooding and erosion. Most of WSDOT's highway infrastructure, including drainage systems, was built long before the enactment of environmental protection laws such as the federal Clean Water Act and the Washington Water Pollution Control Act. Current federal and state regulations require WSDOT to obtain permits to operate its stormwater systems. WSDOT's stormwater permit requires that highways and other transportation facilities be designed and maintained to minimize pollution and potential damage to stream banks and downstream properties. It also sets forth expansive monitoring and reporting requirements. Working cooperatively with federal, state, and local agencies, WSDOT has developed a comprehensive stormwater program that is among the most comprehensive and stringent in the nation.

New permit significantly expands geographic coverage and stormwater management responsibilities

WSDOT's first stormwater permit, issued in 1995, covered three counties – Snohomish, King, and Pierce – and two cities, Seattle and Tacoma. Clark County was added to the permit in 1999. Federal and state stormwater management requirements were increased substantially in 1999, expanding geographic coverage and adding many new responsibilities. Since that time, WSDOT has worked with the state Department of Ecology (Ecology) to develop management approaches to meet the new requirements. In February 2009, Ecology issued WSDOT a new permit, which was challenged in court. A settlement was reached in January 2010, and a modified permit was issued in May 2010. A more detailed history of the permit, as well as discussion of the permit appeal, are provided on pages 36 and 37.

The new permit expands coverage to 100 urbanized across the state, including some in eastern Washington. State highway centerline miles covered by the permit have increased 40%, from 1,140 miles to 1,600 miles. The permit also covers nine Total Maximum Daily Load (TMDL) areas and establishes stringent management, monitoring, and reporting requirements.

Major permit elements

In addition to expanded geographic coverage, the 2009 permit reflects changes in regulations, advancements in stormwater treatment technology, and the evolution of WSDOT's stormwater management practices. These changes will be incorporated into WSDOT's Highway Runoff Manual and Stormwater Management Program Plan. The major elements of the new permit are described below and summarized in the table on page 34.

New stormwater detention facility in construction as part of the new auxiliary lane on northbound I-405 near Bothell

Stormwater Permitting Highlights

WSDOT manages more than 40,000 acres of impervious surfaces that generate stormwater runoff.

WSDOT's stormwater management responsibilities have increased substantially as a result of a new permit issued in 2009. The new permit:

- expands coverage to 110 urbanized and TDML areas statewide
- increases regulated centerline miles by 40%
- requires new maintenance, monitoring, mapping, tracking, and reporting activities
- requires facilities be designed and built to more stringent standards
- mandates stormwater retrofits on most highway improvement projects in the Puget Sound basin, if feasable and cost effective.

Stormwater Permitting

2009 permit implementation costs

Implementing the new permit will require additional resources beyond those WSDOT is currently devoting to managing stormwater. New resources are required to implement the inspection and maintenance, system inventory, monitoring, illegal connections, water cleanup plan, and reporting requirements.

An ecology embankment on SR 14.

Comparison of major requirements: 1995 and 2009 WSDOT stormwater permits

	1995 Permit	2009 Permit	Change in level of effort required
Area coverage			
counties and cities	6	110	↑
centerline state highway miles	1,140	1,600	↑
Maintenance			
inspect and maintain stormwater facilities	required – no frequency prescribed	required annually – 2,150 facilities and growing	↑
inspect and maintain catch basins	not required	required annually – more than 25,000 catch basins, increasing	↑
develop and implement Stormwater Pollution Prevention Plans	not required	required: maintenance facilities, rest areas, park & ride lots, ferry terminals	↑
Monitoring			
approval of monitoring plan	not required	required	↑
number of monitoring sites	6	20	↑
number of samples analyzed	830	4,620+	↑
sediment and toxicity testing	not required	required	↑
Mapping			
map stormwater system and drainage features	not required	required	↑
Tracking & reporting			
track stormwater maintenance activities	not required	required	↑
develop reporting databases	not required	required	↑
report acres of impervious surface retrofitted	not required	required	↑
report illegal discharges and connections into WSDOT stormwater facilities	required	required	↔
submit progress report	required	more comprehensive reporting required on annual basis	↑
Stormwater standards and retrofits			
build stormwater systems to standard	required	required – more stringent standards	↑
retrofit all existing pavement as part of highway improvement projects	not required	required in Puget Sound basin	↑

Source: WSDOT Environmental Services Office.

Stormwater Permitting

Permit coverage

The new permit expands coverage to 110 urban areas across the state, including some in eastern Washington. State highway centerline miles covered by the permit have increased 40%, from 1,140 miles to 1,600 miles. The permit also covers nine Total Maximum Daily Load (TMDL) areas and establishes stringent management, monitoring, and reporting requirements.

Maintenance & management

WSDOT is now responsible for annual inspection and maintenance of all stormwater management facilities. Previously, most were maintained on an "as needed" basis or when they required repair. WSDOT must also develop and implement stormwater pollution prevention plans for maintenance facilities, ferry terminals, park and ride lots, and rest areas.

A monitoring station.

Monitoring

The 2009 permit increases monitoring requirements five-fold compared to the prior permit. This includes monitoring at more locations, for more water quality parameters, and performing sediment and toxicity evaluations. The permit specifies where, how, and when samples are to be collected. WSDOT will monitor a number of highway, rest area, ferry terminal, and maintenance facilities to characterize stormwater runoff. In addition, a number of stormwater runoff treatment and control facilities will be evaluated for performance.

Mapping

Under the new permit, WSDOT must inventory and map its stormwater management facilities on an on-going basis as additional facilities are located and built. Facilities documentation includes:

- Associated drainage areas
- Catch basins
- Stormwater conveyances (i.e., open ditches and storm sewer pipelines carrying water away from roadway surfaces and bridges)
- Outfalls where runoff enters a variety of receiving waters including Puget Sound, lakes, rivers, streams, ponds and wetlands
- Runoff treatment and flow control facilities
- Connections from and into WSDOT's stormwater system

A stormwater facilities inventory database to house and manage this information is currently under development. Finally, WSDOT will enhance its notification, documentation, and reporting procedures for illegal connections into WSDOT's storm sewer system. WSDOT regions will be more actively involved in identifying these connections.

Tracking & reporting

The 2009 permit expands reporting requirements significantly. Annual progress reports must be submitted to Ecology each fall, including information on the status of permit compliance, and an assessment of the effectiveness of WSDOT's Stormwater Management Program. Separate annual stormwater monitoring reports providing the status on the permit's required monitoring activities and any data collected must also be prepared and submitted to Ecology.

Unlike the previous permit, the 2009 permit specifies a series of reportable performance indicators and requires information on the status of water cleanup plan implementation, including WSDOT's involvement in TMDL development. WSDOT must identify barriers to implementation of low impact development approaches (LID) and actions taken to remove these barriers. Finally, WSDOT is obligated to report annually on budget requests for resources needed for permit compliance.

In 2014, the final year of the permit, WSDOT must report:

- The estimated cost for each monitoring program element;
- Stormwater management actions taken or planned to reduce pollutants;

Stormwater Permitting

- The status of monitoring programs and evaluation of monitoring sites;
- A cumulative water quality and sediment quality results summary for each site;
- An estimated water quality loading from highway runoff sites for each pollutant based on precipitation and runoff volume; and
- A cumulative analysis of parameters of concern from each of WSDOT's land use monitoring sites.

An infiltration pond.

Stormwater standards & retrofits

The 2009 permit requires stormwater runoff treatment and control facilities be designed and built to more stringent standards. It also establishes new requirements for retrofitting existing highways that do not have runoff treatment or control, or for which treatment or control is substandard. These retrofits could occur as a stand-alone project or as part of transportation improvement projects triggering retrofit obligations contained in the Highway Runoff Manual.

Legislative analysis of permit implementation

The 2010 Supplemental Transportation Budget directed the Joint Legislative Audit and Review Committee to conduct an analysis of WSDOT's stormwater permit to determine the costs of alternative options for meeting permit requirements.

The following options, at a minimum, must be reviewed:

- WSDOT performing the functions,
- permit functions being consolidated within the Department of Ecology or otherwise centralized for all state agencies; and
- using an external firm or organization to meet the requirements.

The report is due by December 2010.

History of WSDOT stormwater permits

1980 Department of Ecology (Ecology) delegated authority to administer the federal Clean Water Act in Washington. Focus is on point-source pollution such as raw sewage and industrial discharges.

1987 Congress expands the Clean Water Act to include stormwater discharges.

1995 WSDOT granted a "Phase I" stormwater permit covering state highways in King, Snohomish, and Pierce counties.

1997 WSDOT publishes Stormwater Management Plan.

1999 Ecology issues Phase I stormwater permit covering Clark county. Federal "Phase II" stormwater requirements are published, that later lead to expanding coverage to smaller urbanized areas, including some in eastern Washington.

2000 Ecology administratively extends Phase I permits until the agency is ready to reissue Phase I and issue new Phase II permits.

2003 WSDOT submits application for a permit to cover state highways and transportation facilities across the state.

2007 Ecology reissues permit to Phase I permittees and issues new Phase II permits. Ecology administratively extends the 1995 Phase I permit to WSDOT.

2008 Ecology releases draft WSDOT permit for public review and comment, indicating that WSDOT's Highway Runoff Manual meets stormwater management and design standards.

2009 Ecology issues WSDOT permit. Permit is appealed to the Pollution Control Hearings Board.

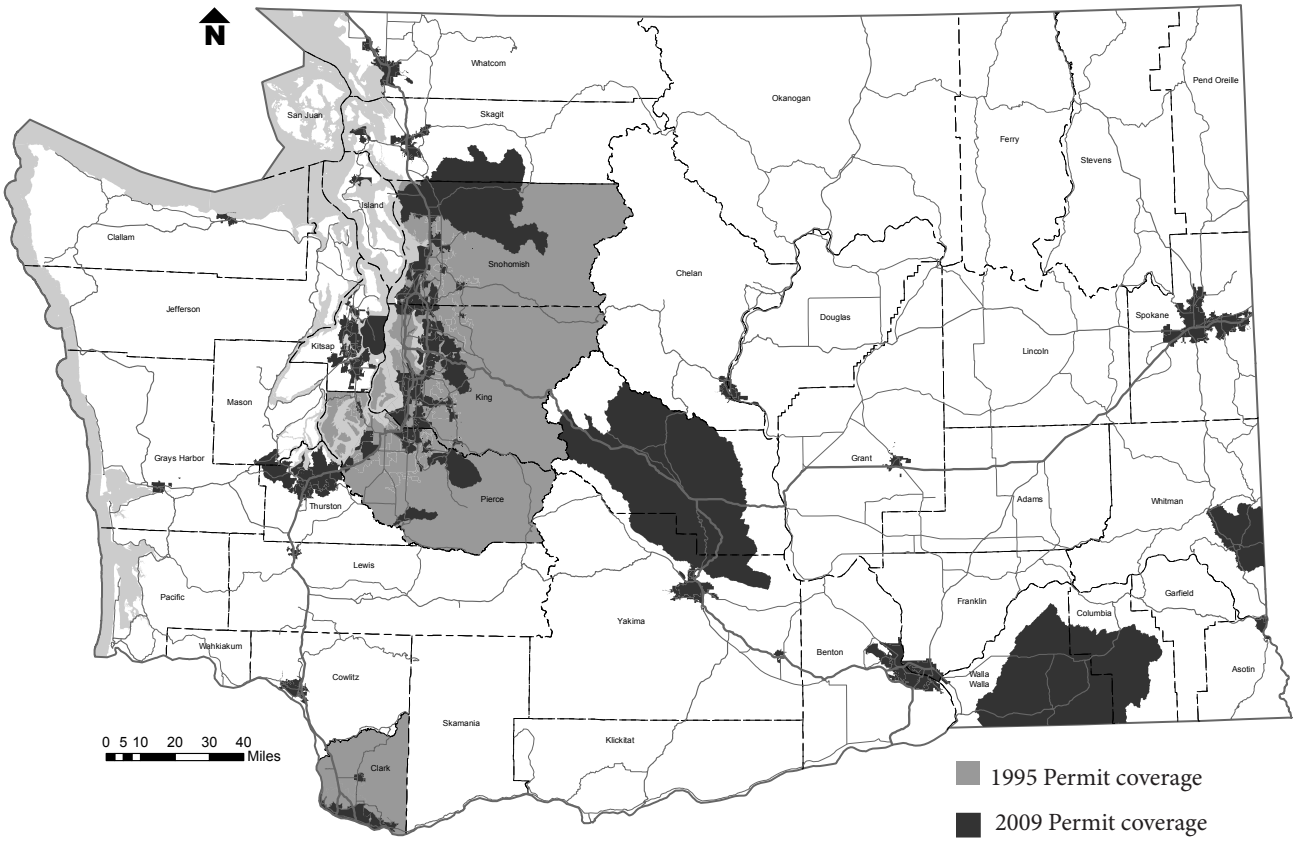
2010 Settlement resolving the appeal is reached in January. Modified permit released for public review and comment, and was issued in May.

2013 Ecology and WSDOT must evaluate expanding permit coverage statewide.

2014 WSDOT's permit scheduled to be reissued.

Stormwater Permitting

Map: WSDOT stormwater permit coverage areas – 1995 compared to 2009



Source: Washington Dept of Ecology: Municipal Stormwater Permit Areas - WSDOT 2/4/2009. Cartography: 4/20/2010.
1995 Permit coverage: King, Pierce and Snohomish counties, plus Clark, added to permit in 1999.
2009 Permit coverage: Population densities of 1,000 persons or more statewide or a TMDL area.

Permit appeal and the settlement agreement

Soon after Ecology issued the WSDOT stormwater permit, it was appealed by Puget Soundkeeper Alliance. In January 2010, Ecology, WSDOT, and the appellant reached a settlement resolving the permit appeal. This settlement agreement leaves the majority of the permit intact, but adds substantive language in the following four areas:

Illicit discharge detection and elimination Adds more detail about WSDOT's program and procedures for assessing and identifying illicit discharges and illegal connections as well as actions to be taken when WSDOT finds them.

Water Cleanup Plans (also known as Total Maximum Daily Loads) Ecology agreed to add any new water cleanup plans that include requirements for WSDOT to the permit at least once every 18 months.

Consultation with the US Fish and Wildlife Service and National Marine Fisheries Service (Services) Enlists the Services review of non-federally-funded transportation projects when the potential exists for stormwater impacts in areas where Endangered Species Act-listed species may be affected. The new permit language incorporates safeguards to preclude significant delay in project delivery.

Stormwater retrofit for existing highways Subject to engineering feasibility evaluations and cost-effectiveness thresholds stormwater retrofits of existing pavement become mandatory on most highway improvement projects within the Puget Sound basin. These retrofits will occur when the cost to do so does not exceed 20% of the cost for treating the new pavement.

Stormwater Treatment Facility Construction

Stormwater Treatment Facilities Highlights:

- WSDOT currently has over 2,100 stormwater treatment facilities statewide.
- Of those facilities, approximately 1,300 were constructed in NPDES permit coverage areas.

Managing stormwater runoff helps remove pollutants entering streams and rivers, contributes to both Puget Sound and salmon recovery, and reduces flooding and erosion. Pollutants in highway runoff originate from the wear-and-tear of motor vehicles, atmospheric deposition, trash and debris that accumulates on the roadway, and runoff from land uses adjacent to highways. WSDOT's work to manage stormwater is governed under the federal Clean Water Act, which requires National Pollutant Discharge Elimination System (NPDES) permits for stormwater discharges into state waters. WSDOT's transportation facilities cover over 40,000 acres with hard, impermeable surfaces, including highways, ferry terminals, and parking lots. These surfaces prevent water from penetrating the ground where it can be naturally filtered.

WSDOT continually works to minimize the adverse impact of stormwater runoff from its highways on the environment. For every inch of rain that falls on an acre of pavement, about 27,000 gallons of stormwater are produced. Stormwater treatment facilities help to absorb pollutants transported by rain running across highways and other surfaces. These facilities minimize the chance polluted stormwater will reach streams, rivers, and groundwater supplies.

WSDOT's stormwater facilities inventory continues to increase

To date, WSDOT has constructed over 2,100 stormwater treatment facilities statewide, of which approximately 1,300 were constructed in 2009 NPDES permit coverage areas statewide. The 1995 and 2009 NPDES permit coverage areas are shown on pp. 37. Prior to this year, WSDOT tracked the number of facilities built in the 1995 NPDES permit coverage areas by year. However, now that the permit coverage areas have significantly expanded, the data is no longer relevant for amnagement and reporting purposes. In moving forward under the new permit, WSDOT will track number of stormwater treatment facilities constructed statewide and those that fall within the new NPDES permit coverage areas.

The number of stormwater treatment facilities built over time is driven by legislatively mandated project lists, design, and construction schedules, funding, and regulatory approvals. The number of facilities built represents cumulative progress toward protecting Washington state's water quality from stormwater runoff.

While new highway projects are designed to effectively manage stormwater, most of Washington state's highway infrastructure was built before federal Clean Water Act requirements for stormwater were enacted in 1987. Hence, the majority of highways and facilities built prior to 1987 need to be retrofitted to meet current stormwater treatment goals. To effectively address portions of the highway system in need of retrofit, WSDOT has developed a screening tool that identifies and prioritizes retrofit projects that will provide the greatest environmental benefits.

A type of stormwater treatment facility known as a bioswale.

WSDOT's stormwater treatment facilities are critical for managing stormwater and mitigating its adverse impacts on the environment. The Washington State Department of Ecology presumes that when facilities are designed and constructed using Best Management Practices (BMPs), stormwater will be treated to meet both federal and state water quality regulations. The presumption is based upon best available science, and use of approved BMP's that represent all known available and reasonable methods of prevention control, and treatment of wastes prior to discharge to waters of the state.

Construction Site Water Quality Monitoring

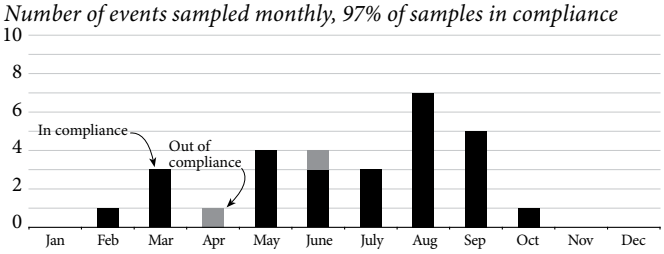
WSDOT monitors the quality of water when working directly in stream and lakes, as well as the stormwater runoff from construction sites. The Washington State Department of Ecology (Ecology) permits in-water work by issuing a 401 Water Quality Certification. Stormwater discharges resulting from construction sites are also monitored and regulated under a permit required under the National Pollutant Discharge Elimination System (NPDES) program. This article summarizes the performance of water quality samples taken in 2009.

97% of in-water samples comply with water quality standards

WSDOT sampled water quality upstream and downstream from nine in-water work projects in 2009. Results show that 97% (105 out of 108) of the samples collected met state water quality standards for turbidity (a measure of water cloudiness). The following graph summarizes results comparing water quality upstream and downstream from nine in-water work projects. The three non-complying events were associated with earthwork next to a stream channel that created turbidity in the water body. For those situations, WSDOT took corrective actions to ensure compliance.

Monthly compliance with state water quality standards during in-water work, 2009

Number of events sampled monthly, 97% of samples in compliance



Data source: WSDOT Environmental Services Office.

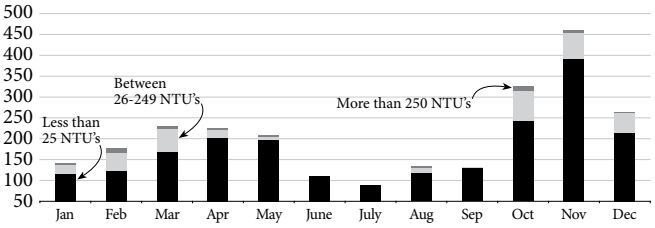
98% of stormwater samples comply with required standards

Projects with one or more acres of soil disturbance are required to sample discharge water quality for turbidity at all locations where stormwater discharges from the site. Ecology has designated "benchmark values," which are used as guidelines for projecting the likelihood of compliance with water quality standards. These "benchmark values" are also used as indicators of properly functioning Best Management Practices (BMPs) that are used by WSDOT to ensure compliance at project sites. Discharge samples from construction sites that measure less than 25 Nephelometric Turbidity Units (NTUs – the unit used to measure turbidity) are considered 'not likely' to exceed state water quality standards under most conditions, and indicate that the BMPs are functioning properly. Construction site discharges above 25 NTUs indicate BMPs are not functioning properly, so action (called adaptive management) must be taken to correct problems. A discharge of 250 NTU or more has a higher risk of exceeding water quality standards; Ecology must be notified and immediate corrective actions must be taken.

The stormwater runoff data collected under the NPDES permits issued for 2009 are summarized in the graph on the right. In 2009, only 2% of the roughly 2,500 turbidity samples WSDOT collected exceeded the 250 NTU benchmark. Fourteen percent (14%) of the samples were recorded as between 26 and 249 NTUs, and the majority, 84% of the samples, were below 25 NTUs.

Monthly compliance with NPDES* general permit benchmarks, 2009

Measurement in Nephelometric Turbity Units (NTUs)
84% of samples collected below 25 NTUs



Data source: WSDOT Environmental Services Office.
*NPDES is the National Pollution Discharge Elimination System.

Construction Site Water Quality Monitoring Highlights

- In 2009, 108 samples were taken to measure compliance with state in-water quality standards.
- Of those samples, 97% (105) were in compliance, compared with 93% of samples in 2008.
- For stormwater discharge, 2,498 samples were taken to measure relative water quality levels.
- Only 2% of those samples (48) exceeded the highest threshold for stormwater water quality standards.
- Although rare, non compliance events are quickly and appropriately dealt with. For information related to compliance and violations, see pp. 37 of *Gray Notebook* 36.

Erosion Control Preparedness at Construction Sites

Erosion Control Preparedness Highlights

- In October 2009, WSDOT inspected 12 projects in western Washington and four in eastern Washington.
- For 2009, performance ratings declined for four (33%) of the 12 measures. Three (25%) saw improvement, and five (42%) were considered to be stable.
- Overall, all measures were assessed to be either 'Excellent' (four measures) or 'Good/ Fair' (eight measures).

Contractors work hard to prevent erosion for several reasons: to protect water quality, maintain a safe work site, and promote a speedy return to stable slopes after a project is completed. Among the practices WSDOT employs to prevent sediment transport are spreading straw, planting grass, building ponds, and taking other precautions to protect water quality. As partners, WSDOT and its contractors implement precautionary methods, called Best Management Practices (BMPs), that are implemented according to the project-specific Temporary Erosion and Sediment Control (TESC) plans WSDOT creates. WSDOT performs weekly project inspections of its TESC performance. In addition, each fall, WSDOT inspects construction sites to document how thoroughly these plans are implemented, evaluate how effective plans are at preventing erosion, and identify areas for improvement.

Results of 2009 inspections

In October 2009, WSDOT inspected 16 projects (12 in western Washington and four in eastern Washington) with significant erosion potential based on project size, steepness of slopes, soil type, or proximity to sensitive waterways.

The table below contains results from the annual site inspections for the last six years. The numbers represent the percentage of projects that met the particular assessment measure. For example, in 2009, acceptable measures were in place on all projects where dewatering (removing water from soils) was performed. WSDOT's overall performance improved from 2004 through 2008. In 2008, performance was at an all time high, with all measures above 80%. In 2009, WSDOT experienced slight decreases in preparedness in several measures, and a considerable decline in slope protection preparedness.

Erosion and sediment control assessment results, 2004-2009

Number of sites inspected each year, 2009 performance rating and status

		Year and number of sites inspected						
2009 Performance	**Temporary erosion and sediment control assessment measure**	**2004 12**	**2005 21**	**2006 18**	**2007 30**	**2008 15**	**2009 16**	**Performance status**
Excellent	Dewatering	100%	100%	100%	100%	100%	100%	Stable[1]
Excellent	Sediment control BMPs[2] installed on time	100%	95%	61%	92%	93%	100%	Improved
Excellent	Control other pollutants from impacting water quality	100%	100%	89%	93%	100%	100%	Stable
Excellent	Delineate clearing limits	100%	95%	94%	90%	100%	100%	Stable
Good	Manage project erosion/sediment control BMPs[2] proactively	80%	90%	92%	90%	98%	97%	Stable
Good	Access routes prevent tracking of mud onto streets	91%	82%	94%	81%	86%	94%	Improved
Good	Erosion control BMPs[2] installed on time (stabilize soils)	67%	86%	56%	83%	80%	93%	Improved
Good	Control flow rates	100%	95%	72%	93%	93%	93%	Stable
Good	Maintain BMPs[2]	50%	67%	44%	81%	93%	88%	Decreased
Good	Channels for temporary stormwater conveyance are stabilized	73%	87%	59%	92%	100%	87%	Decreased
Good	Storm drain inlet protection	83%	86%	93%	92%	100%	86%	Decreased
Fair	Protect cut & fill slopes	89%	79%	56%	83%	100%	64%	Decreased

Data source: WSDOT Environmental Services Office.

1 Stable performance status is achieved for any measure within 5% of the previous year's rating.

2 BMP: Best Management Practices.

Erosion Control Preparedness at Construction Sites

Performance of October 2009 inspection sites

Effective slope protection results from proactive TESC planning and proper installation and maintenance of appropriate best management practices (BMPs). Cut and fill slopes are particularly vulnerable to erosion. In five of the 16 projects assessed, slope erosion developed due to a lack of preparedness in other TESC measures, such as problems controlling flow rates. Some projects did not have erosion control BMPs in place at all, or did not maintain existing controls properly. Conveyance channels that are not adequately stabilized can also lead to compromised slopes.

The lesson learned in 2009 is that WSDOT must improve proactive planning for slope protection. All of the TESC plan measures are designed to work together as a comprehensive plan, and the BMPs associated with each TESC measure should be used in effective combinations based on site conditions.

Strategy for erosion control

In addition to recommending overall increases in proactive planning for slope protection, the Erosion Control Program will provide training and technical support to focus TESC efforts on source control. Source control, (preventing soil displacement) is the first line of defense against water quality problems. By focusing TESC efforts on preventing soils from shifting, WSDOT aims to save resources on the second line of defense, sediment control. Sediment control is the effort to trap displaced sediment before it leaves the site. The Erosion Control Program will continue to work towards creating clearer instructions for erosion control staff on designing, installing and maintaining BMPs to strive for 100% performance in 2010.

The I-405 - Northeast 8th Street to SR 520 project utilized several Best Management Practices to help control and prevent erosion at the construction site. Straw blankets are used to protect the soil from raindrop impact and prevent erosion.

Here, vegetation grows through jute matting, a high-strength, coarse, environmentally-friendly fabric. The jute matting helps prevent erosion and discourages the growth of unwanted plants, such as Cystisus scoparius *(also known as Scotch broom).*

Wetlands Protection Annual Report

Wetland Protection Highlights

Since 1988, WSDOT has established, enhanced, or restored 177 wetland sites covering 796 acres across Washington.

WSDOT now has three wetland mitigation banks it can use to accommodate future project needs.

Wetlands are transitional areas between land and water, and are either saturated with water or covered by shallow water for a part of each year. Wetlands are important elements of watersheds: they help regulate the amount of water moving through a watershed by soaking up water during wet periods and slowly releasing it during dry periods. In addition, wetlands reduce peak flood levels, recharge groundwater levels, improve water quality, and provide habitat for fish and wildlife.

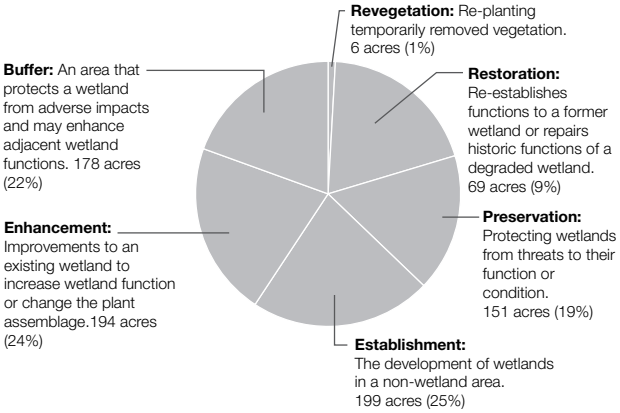
WSDOT designs transportation projects to avoid and minimize wetland disturbance. The department obtains permits from regulatory agencies when projects have unavoidable wetland disturbances. Wetlands are then enhanced, restored, established, or preserved to meet the permit conditions and both the federal and state's 'No-Net-Loss' policy.

WSDOT has established 177 wetland mitigation sites on 796 acres since 1988. Thirteen new sites on 41 acres were added to the monitoring inventory in 2009.

WSDOT replacement wetlands, 1988-2009

Total acreage (and percentage) of wetland projects

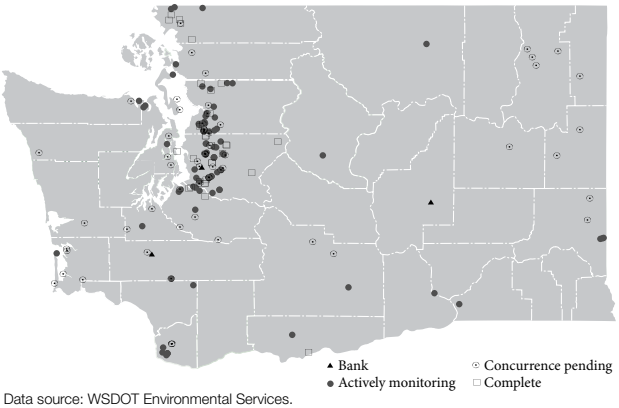
177 wetland projects over 796 acres



Data source: WSDOT Environmental Services.

*Data note: Mitigation banks and two non-wetland stream bank re-vegetation sites included in earlier editions of the *Gray Notebook* are not included in the chart above.

WSDOT Wetland protection sites, 1988-2009



Data source: WSDOT Environmental Services.

Wetland monitoring and evaluation

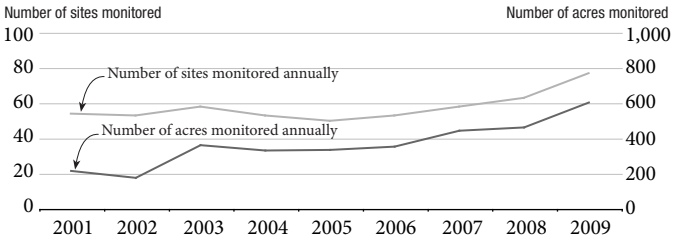
Replacement wetlands are typically monitored for 10 years to evaluate their performance towards intended goals and compliance with federal, state, and local permit conditions.

Projects resulting from the 2003 Nickel and 2005 Transportation Partnership Account (TPA) funding packages increased wetland monitoring workloads. This work will continue to increase over the next several years as the projects are completed, and wetland monitoring will remain at a high level for at least 10 more years. In response to this future workload peak, WSDOT's monitoring group increased its efficiency in 2009 to keep pace with the growing workload by:

- Focusing on the most critical attributes at each site,
- Adopting more rapid data collection methods,
- Using handheld field computers to collect data,
- Extending the length of the summer monitoring season,
- Using temporary help from the WSDOT technical and clerical on-call staff pools.

WSDOT wetland mitigation site monitoring workload, 2001-2009

Number of sites monitored and the number of acres monitored



Data source: WSDOT Environmental Services.

Completing Wetland Mitigation

Agencies determine that wetland mitigation is complete

Since 2006, federal and state agencies must provide written agreement that WSDOT has met its permit requirements before mitigation obligations are considered complete. WSDOT has been working with the U.S. Army Corps of Engineers (USACE) to get written agreement that the department has met its mitigation obligations for sites that have ended their required monitoring period. As of December 30, 2009, the USACE has reviewed 41 mitigation sites and determined that WSDOT has completed required wetland mitigation for 30 sites.

Completion of wetland mitigation
As of December 31, 2009

Status	Number of sites
Completions requested by WSDOT	41
Requests reviewed by USACE	41
Determinations received by WSDOT	30
Sites with additional work requested by USACE	2
Decisions pending	9

Data source: WSDOT Environmental Services.

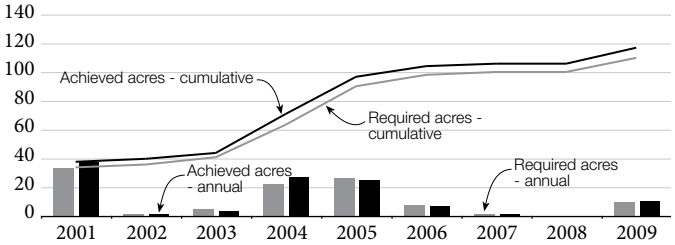
Early completion of mitigation requirements

When mitigation sites meet final performance targets two years in a row before the end of the monitoring period, the USACE and the Washington State Department of Ecology (Ecology) can determine that WSDOT has completed permit obligations earlier than required. In 2009, the USACE and Ecology determined that a mitigation site constructed for the SR 527 164th Street SE to 132nd Street SE widening project qualified for early completion. This determination will save WSDOT five years of monitoring and site management. WSDOT expects to propose additional sites for early completion in 2010.

WSDOT succeeds at attaining 'No-Net-Loss' goals

Wetland area is measured twice during the monitoring period. The first measurement, typically taken in the third year of monitoring, provides an early indication of the amount of potential wetland developing. The final measurements, taken at the end of the monitoring period, determine the acreage achieved. Under federal policy, 'No-Net-Loss' of wetlands is measured on a program scale, not on a project-by-project basis. Collectively, the 56 wetland sites where final area has been determined produced 6% more area than required (117 acres achieved compared to 110 acres required).

WSDOT wetland mitigation acres achieved, 2001-2009
Number of acres achieved (annual and cumulative) vs. required acres (annual and cumulative)



Data source: WSDOT Environmental Services.

WSDOT completes 94% of recommended site management activities in 2009

Active wetland management, such as weed control, irrigation, mulching, and supplemental planting can improve long-term environmental outcomes. WSDOT implements management activities in response to site needs identified during monitoring visits. For these sites monitored in 2008, 94% of recommended management activities (107 of 114) were implemented in 2009.

WSDOT's site management activities by region
As of December 31, 2009

WSDOT Region	Sites	Recommendations	Completed
Northwest	57	69	67
Southwest	7	12	7
Olympic	9	20	20
South Central	3	6	6
North Central	4	7	7
Total	**80**	**114**	**107**

Data source: WSDOT Environmental Services

WSDOT enhanced an existing wetland as part of the SR 500 Thurston Way interchange project. The site is now two years old.

Wetland Mitigation Banks

Future projects involving mitigation banks

In 2008, the U.S. Environmental Protection Agency and USACE guidance on compensatory mitigation (see pp. 56 of March 2009 *Gray Notebook* 33) was revised to favor mitigation banking over traditional compensatory mitigation. Mitigation banking can be thought of as a type of "savings account" for future capital projects and mitigation needs. WSDOT's mitigation banking sites create credits based on the number of acres and the value that is created. These credits can be used--withdrawn from the account as compensation for unavoidable wetland impacts within the bank's specified service area.

Since 1999, WSDOT has been developing its own wetland mitigation banks, and currently has three certified banks in operation. The department's mitigation banks have provided credits needed for replacement wetlands for multiple transportation projects. They reduce the overall costs for designing, permitting, purchasing, constructing, monitoring and maintaining a series of individual mitigation sites, and often shorten the time it takes WSDOT to get permits for future projects.

Moses Lake Bank, Grant County

The Moses Lake Bank, certified in 2003, is within the city of Moses Lake and was WSDOT's first fully operational mitigation banking project. This bank restored and enhanced a degraded urban wetland, providing wildlife habitat and educational opportunities to the local community.

North Fork Newaukum Bank, Lewis County

The North Fork Newaukum Bank, certified in 2005, is a restored and enhanced floodplain wetland. This bank was constructed to support widening projects planned for the I-5 corridor.

Springbrook Creek Bank, King County

The Springbrook Creek Bank, certified in 2007, is comprised of restored and enhanced wetland providing wildlife habitat, flood storage, improvements to water quality, and educational benefits to the local community. This bank was established cooperatively with the city of Renton to support transportation projects in the Cedar River and Green River watersheds near Renton. The design contractor, HDR Engineering, received a bronze award for designing and constructing this mitigation bank at the 43rd Annual Engineering Excellence Awards Banquet sponsored by the American Council of Engineering Companies of Washington.

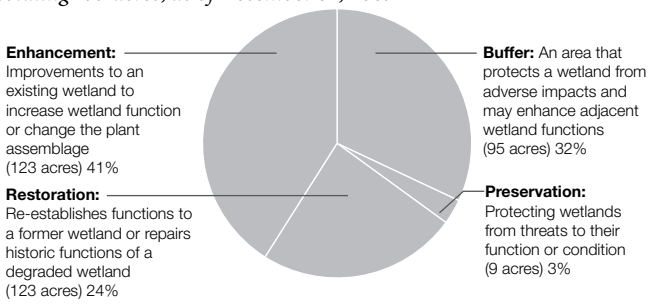
WSDOT wetland mitigation banks

Wetland mitigation bank	Service area (watershed)	Area generating credit (acres)	Potential credits	Credits used
Moses Lake	Central Columbia Basin	11	5	1.36
North Fork Newaukum	Upper Chehalis River	171	78.39	12.39
Springbrook Creek	Green and Cedar Rivers near Renton	117	44	4.02

Data source: WSDOT Environmental Services.

WSDOT wetland mitigation banks

Percentage of mitigation-types amongst the three locations, totaling 299 acres, as of December 31, 2009



Data source: WSDOT Environmental Services.

The Springbrook Creek wetland and habitat mitigation bank, near Renton in the Green and Cedar rivers' watershed.

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 goal:

This new policy goal is under development through WSDOT's updated Strategic Plan, due to be released in summer 2010.

In this section

Trucks, Goods & Freight Annual Report 46

CVISN 53

See also

Federal Recovery Act-funded Projects 56

Trucks, Goods, & Freight Annual Report

Freight Highlights

- WSDOT's Truck Freight Performance Measure pilot project is now under way with data from nearly 2,500 trucks being collected daily.
- Truck volumes on Washington highways have increased slightly from 2008 to 2009.
- Commercial truck registrations decreased 6.5% from 2008 to 2009.
- Container volumes through Washington seaports decreased 12.2% from 2008 to 2009.
- Total rail freight traffic has decreased slightly in recent years, but future growth is projected.
- Air cargo tonnage handled in Washington grew 5% between 2007 and 2008.

Efficient, safe, and secure freight transportation is crucial to the economic strength of Washington state. Washington's freight system is a multimodal, interconnected network of highways and local roads, mainline and branch line railroads, navigable waterways and deepwater ports, and air cargo facilities.

WSDOT supports Washington's freight systems by providing planning for all state freight investments and directly managing the state's highway and rail programs.

Washington's freight system

There are three components to Washington's freight system that support both national and state economies. First, Washington is a global gateway, connecting Asian trade flows to the U.S. economy, Alaska to the lower 48 states, and Canada to the U.S. West Coast. Second, the state's manufacturers and farmers rely on the freight system to transport their products to customers worldwide as well as in-state customers. Third, Washington's distribution system is a fundamental local utility, critical to the state's economy.

A large part of Washington's economy depends on freight for its competitiveness and growth. Highly freight-dependent sectors include agriculture, mining, construction, manufacturing, wholesale, retail, transportation, and warehousing. In 2008, freight-dependent sectors accounted for 33% of the state's Gross Domestic Product (GDP) and 71% of business income.

Freight system performance measures

Detailed truck, goods, and freight performance data – both state and national – has been very limited due to its proprietary nature. Transportation agencies throughout the country are beginning to respond to the need for performance measures, and develop independent data collection methods. WSDOT has developed one of the first accurate mechanisms to track truck freight performance and evaluate the effectiveness of public investments in the state's primary truck freight corridors.

Truck Freight Performance Measure pilot project

With recent improvements in satellite and cell phone technology, an increasing number of trucking companies are using global positioning system (GPS) devices for fleet management and the dispatching of vehicles. It is now feasible and cost effective for the public sector to use GPS data from these devices to track trucks and to develop performance measures. GPSs can capture a truck's travel routes, times, and speeds on our road network and locate the location and amount of delay. This information, collected over time, can help determine whether WSDOT infrastructure projects and operational changes are improving performance for freight customers.

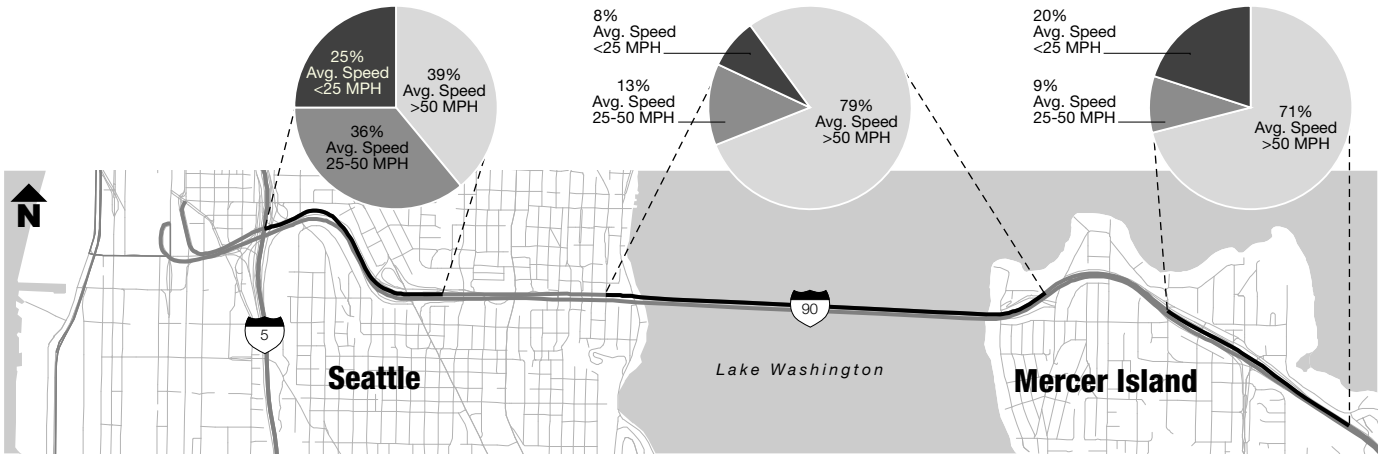
Truck Freight Performance Measure pilot project: Key information

- Daily data for 2,500 trucks in the Puget Sound region is being collected as a cost effective way to help WSDOT determine the cause of truck delays.
- GPS data measuring truck speeds and location is helping WSDOT identify freight bottlenecks as well as observe truck characteristics such as speed compared to other traffic.

The Truck Freight Performance Measure pilot project acquires GPS data from vendors who supply commercial in-vehicle fleet management systems. This information demonstrated the feasibility of a state-level, long-term, truck-based freight performance monitoring program from 2008 to 2010. WSDOT has a data acquisition contract with vendors and receives data on a daily basis for about 2,500 trucks that travel in the Puget Sound region. This data stream, with millions of truck location 'reads' (or measurements), was used to create a foundation for the freight performance measures program between 2007 and 2009; the Legislature funded expansion of the program to major cross-state truck corridors in 2010.

Truck Freight

An example of I-90 westbound truck speeds, tracked by GPS
September 2009 - September 2010



Source: WSDOT Truck Freight Performance Measure Pilot Research Project.

The information in the graphic above demonstrates one travel performance measure that can be obtained from the GPS devices. Because this fleet-management GPS data is a by-product of trucking industry operations, the data from individual trucks typically consists of infrequent location reads, making any one truck an unreliable probe vehicle. The data in this graphic is from a large quantity of trucks over time which compensates for the infrequent location reads. For example, the graphic shows GPS trucks speeds on the I-90 bridge averaged over one year. The pie charts clearly indicate a bottleneck on the westernmost segment of westbound I-90 through Seattle where average truck speeds decrease significantly.

Studies confirm freight vehicles move slower than other roadway users

The pilot project also revealed that trucks operate at a slower speed on the interstate than measured by WSDOT speed indicators. Analysis of one year of truck GPS data from a segment of I-90 between I-5 and the Mount Baker Tunnel shows that average truck speeds were slower than the average speed for all vehicles. Eastbound truck speeds were 18% lower (47 mph vs 57 mph) and westbound truck speeds were 31% lower (40 mph vs 58 mph).

This observation confirmed the results of a study conducted in 2003 by the University of Washington Transportation Center (TRAC). The *Freight Data from Intelligent Transportation System Devices* study examined GPS data from trucks operating in the Central Puget Sound Region. Real-time GPS speed data was compared to the WSDOT speed indicators. After observing that trucks operated at a slower average speed then the average speed for all vehicles, researchers dispatched GPS-equipped automobiles to follow the probe vehicles. The results confirmed that trucks ran more slowly on the studied sections of roadway.

Operational issues unique to large vehicles are the key to the variance. Trucks take longer to accelerate to freeway speeds and need more time to decelerate upon exiting. Trucks operate in the right-hand lane and encounter more obstacles that require braking, such as other vehicles entering and exiting the roadway, including other trucks. Speed maintenance is also hindered by hills: a truck that is not already at highway speed may slow even further due to limited forward momentum.

The significantly different operating characteristics of trucks must be taken into consideration and included in the design of highway facilities. WSDOT is working with the State Design Office to incorporate truck considerations in the Highway Design manual.

Trucks, Goods, & Freight Annual Report

Truck Freight

Truck volumes increase on Washington highways from 2008 to 2009

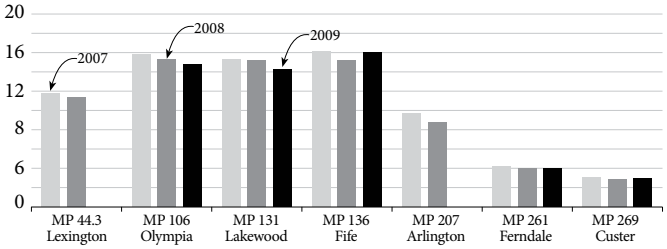
Truck volumes in Washington have shown steady, long-term increases. Although 2008 saw the first annual decrease, volumes appear to have begun to increase slightly in 2009. Data on truck volumes by selected mileposts show the locations with the greatest activity, as well as growth trends; the graphs show average daily truck traffic at select mileposts on three north-south routes – I-5, US 97, and SR 18 – and I-90 east-west.

At most locations where truck data is collected, average daily truck volumes remained fairly steady from 2008 to 2009. On I-5 near Olympia, annual daily truck traffic decreased 3%, from 15,263 trucks daily in 2008 to 14,784 trucks daily in 2009. On I-90 near Cle Elum, the number of trucks increased 3% from about 6,130 trucks a day in 2008 to 6,290 trucks a day in 2009. Previously, between 2007 and 2008, a 10% decrease was recorded. Modest growth in overall average daily truck volumes on Washington's major highways may be a sign that economic conditions are beginning to stabilize.

The number of commercial trucks registered in Washington decreases by 6.5%

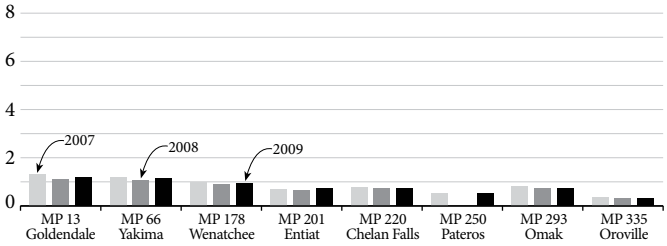
The number of commercial trucks registered and paying state taxes in Washington decreased 6.5%, from 257,100 in 2008 to 240,400 in 2009. Commercial truck registrations generally decreased from much higher levels in the mid-1980s, a trend which leveled off during the years 2001 to 2007. The economic recession may have contributed to the decline in commercial vehicles registrations.

I-5 average daily number of trucks by milepost
2007-2009 (south to north)
Number in thousands



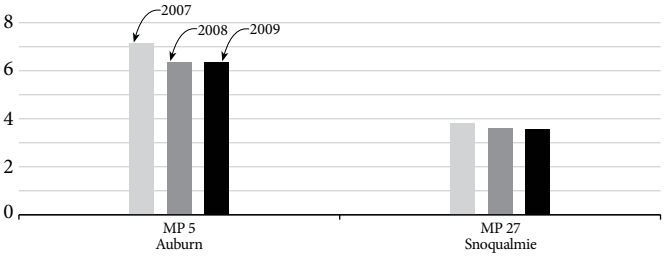
Data source: WSDOT Transportation Data Office.
2009 data for MP 44.3 Lexington and MP 207 Arlington is unavailable.

US 97 average daily number of trucks by milepost
2007-2009 (south to north)
Number in thousands



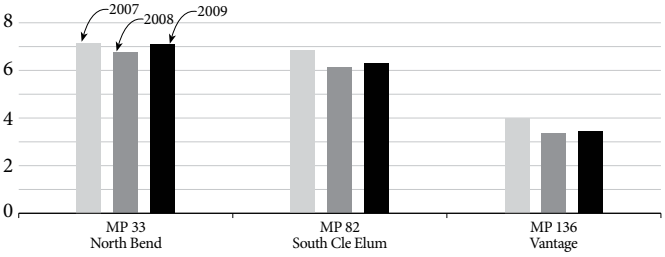
Data source: WSDOT Transportation Data Office.
2008 data for MP 250 Pateros is unavailable.

SR 18 average daily number of trucks by milepost
2007-2009 (south to north)
Number in thousands



Data source: WSDOT Transportation Data Office.

I-90 average daily number of trucks by milepost
2007-2009 (east to west)
Number in thousands



Data source: WSDOT Transportation Data Office.

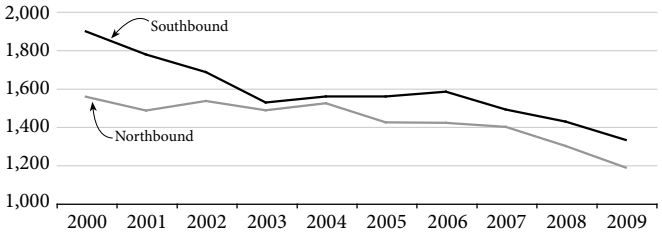
Truck Freight

Truck crossings decrease nearly 8% at western Washington border crossings

At western Washington border crossings, which handle almost 80% of all cross-border trade along Washington's northern border, total truck traffic has doubled since 1990, but declined in recent years. The number of trucks crossing at these points decreased 7.6% from a combined average of 2,723 northbound and southbound trucks a day in 2008 to an average of 2,516 trucks a day in 2009.

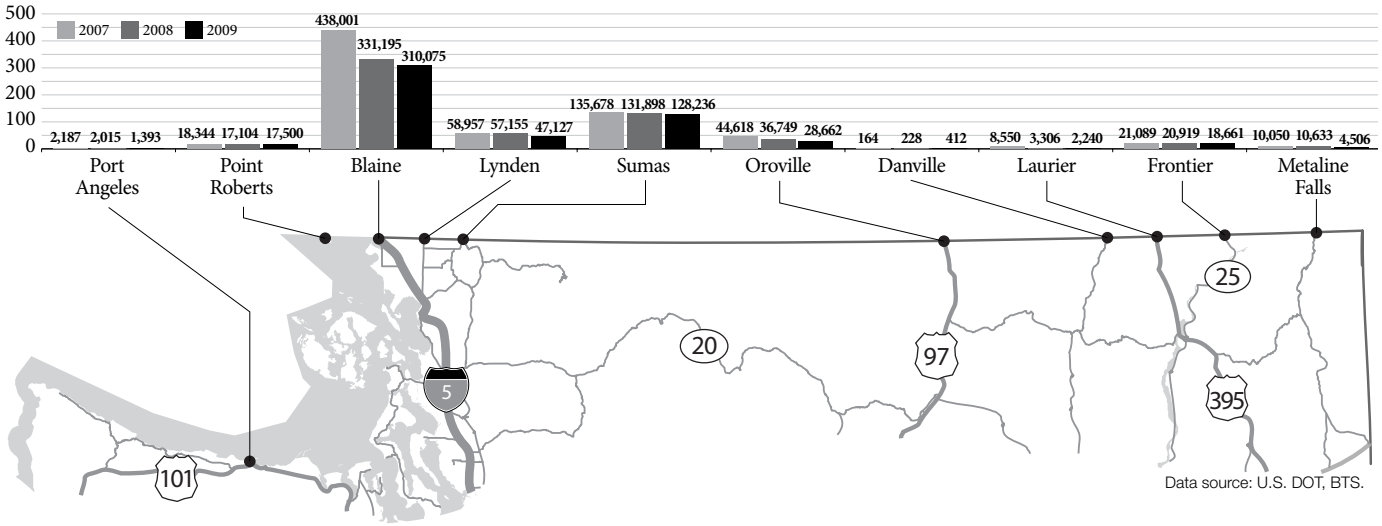
For all Washington commercial truck crossings, the number of trucks entering Washington from Canada decreased 8.6% from 611,202 total truck crossings in 2008 to 558,812 total truck crossings in 2009. This decrease is likely due to the recent economic downturn.

Western Washington truck border traffic
(Blaine, Lynden, and Sumas)
Average daily number of trucks



Data source: U.S. Customs and Border Protection, Statistics Canada; compiled by Whatcom Council of Governments.

Trucks entering Washington from Canada, 2007 – 2009
Number in thousands



Data source: U.S. DOT, BTS.

Building freight transport resilience through GIS-based data

WSDOT, working in conjunction with the University of Washington, has completed a study to explore resilience related to freight transportation. The purpose of the research is to improve our understanding of how sensitive the economy is to disruptions in infrastructure availability and so lay the groundwork for improving the resilience of the transportation system. The GIS tool developed through this project is a precursor to a comprehensive, statewide freight-modeling tool, while providing immediate insights into the two industries studied, diesel and potatoes.

Funding for this $249,000 study was provided by the federal government, Washington state, and the TransNow Regional Center at the University of Washington.

As origin-destination data for other freight-dependent sectors is added to the model, WSDOT will be able to better evaluate the impact of freight system disruptions, improving its ability to develop optimal strategies for highway closures and prioritize improvements to the system based on relative economic impacts of the disruptions. For more information: www.wsdot.wa.gov/Freight/publications.htm.

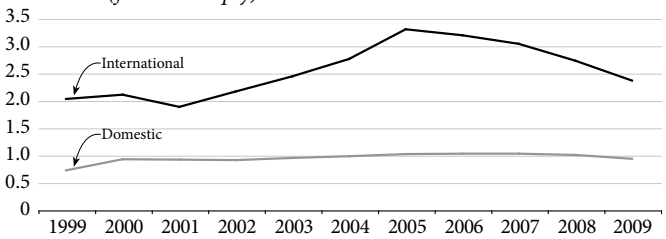
Marine Freight

Container freight through Washington's Seaports decreased 12.2% from 2008 to 2009

Container volumes were 12.2% lower in 2009 compared to 2008, following an 8.5% decline in 2008 from 2007 volumes. The Central Puget Sound seaports, which include the Port of Seattle and Port of Tacoma, are gateways, handling 99.7% of the state's international container traffic. Together, these two ports handled a total of 3.1 million TEUs (twenty-foot equivalent units: international and domestic) in 2009. International container traffic has declined 22% in the past two years compared to a 9% decline for domestic container traffic. Despite the current worldwide recession, which officially began in the U.S. in December 2007, container traffic for Seattle and Tacoma grew at a long-term average annual growth rate of 1.4% from 1998 to 2009.

Waterborne container traffic: Port of Seattle and Port of Tacoma

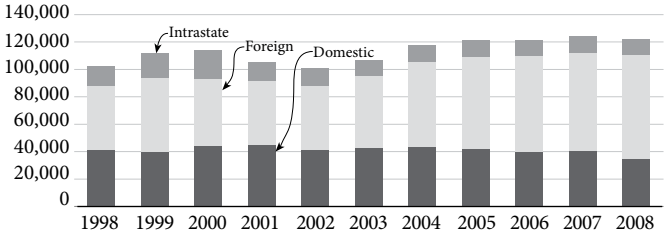
Number of containers (TEUs: twenty foot equivalent units)
In millions (full and empty)



Data source: Port of Tacoma and Port of Seattle.

Washington waterborne freight: intrastate, foreign, and domestic

Waterborne tonnage in 1,000s of short tons, 1998-2008

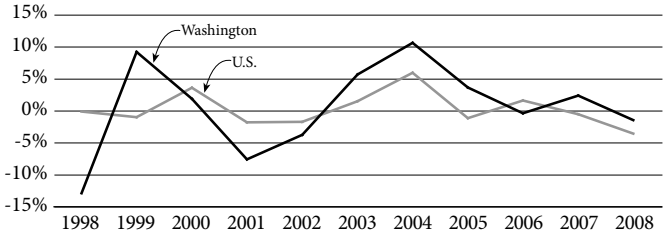


Data source: U.S. Army Corps of Engineers, Navigation Data Center.

All waterborne commercial activity in Washington, measured by volume of freight handled in short tons, decreased slightly from 2007 to 2008. Washington waterborne commerce totaled 122.1 million short tons of freight in 2008, compared to 124.0 million tons in 2007. (Due to processing time, 2009 tonnage will not be available until early 2011.) Washington waterborne commerce decreased by 1.6% in 2008 from 2007 tonnage, in comparison to total U.S. waterborne commerce, which decreased by 3.7%. Since 1998, Washington's foreign commerce has grown at an average annual rate of 4.9% compared to the U.S. annual growth rate of 2%.

Washington and U.S. total waterborne freight tonnage

Total percent change, 1998-2008



Data source: U.S. Army Corps of Engineers, Navigation Data Center.

Rail Freight

Freight rail growth projected

Rail traffic continues to grow in Washington according to an Association of American Railroads report, based on STB Waybill data. Although shipments originating in, and moving within, Washington decreased slightly over the last two years, shipments terminating in Washington grew considerably. Farm products continue to be the primary commodity terminating in Washington; the state led the nation in terminated rail freight of grain and other field crops.

Washington rail freight by tonnage

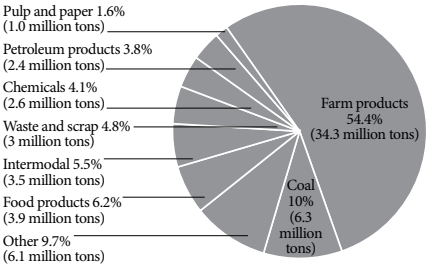
2006-2008
Thousands of tons

	Rail tons originating in state	Rail tons terminating in state	Rail tons moving within / through state	Total rail freight	%Δ Total rail freight
2008	23,200	63,200	26,800	113,200	-0.24%
2007	25,536	59,403	28,535	113,474	+0.98%
2006	26,228	56,860	29,290	112,378	+3.06%

Data source: Association of American Railroads.

Freight rail tonnage terminating in Washington

2008



Data source: WSDOT State Rail and Marine Office.

Washington State's 2010 – 2030 Freight Rail Plan completed

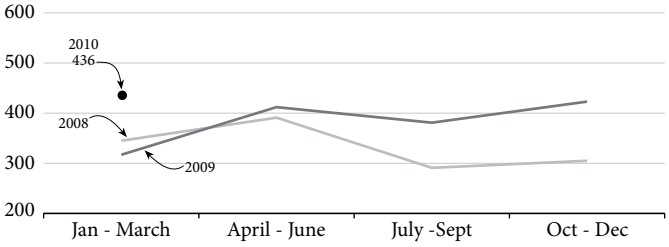
In 2009, WSDOT developed a new freight rail plan to meet federal and state requirements. The plan evaluated the conditions of current freight rail systems in Washington, including active, inactive, and preserved railroads. It examined mainline capacity, port-to-rail access, congestion, and other current issues; identified rail traffic densities, commodity flows, and grade crossings; and documented needs and related projects, providing further analysis of eligible projects for funding priority. The plan is an integral part of WSDOT's multimodal plan; it can viewed in at www.wsdot.wa.gov/Freight/Rail/Plan.htm. When the National Rail Plan is complete, WSDOT will combine the freight rail plan and the passenger rail plan.

Grain Train usage improves

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.

Washington State Grain Train carloads

Carloads per quarter, 2008-2010



Data source: WSDOT Rail and Marine Office.

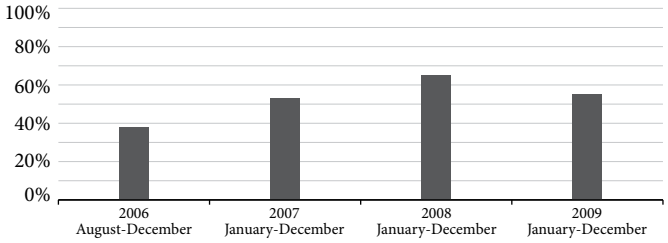
The economic downturn has not significantly affected Washington's agriculture grain shippers. Use of the state Grain Train cars was higher when compared to the first quarter of 2009 and 2008. There were 436 carloads shipped in the first quarter of 2010 compared to 317 in the first quarter of 2009 and 345 for 2008.

Produce rail car program use on the rise

In 2006, the legislature authorized WSDOT to provide a pool of refrigerated rail cars to haul perishable agricultural commodities. The program, which uses federal grant and state funds, transports Washington's produce throughout the U.S.

Produce rail car average monthly utilization rate

Percent of time produce cars are in operation
August 2006 - December 2009



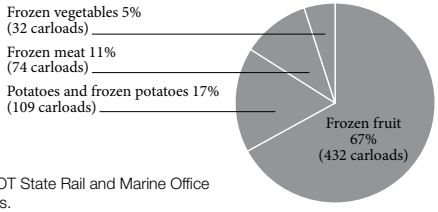
Data source: WSDOT State Rail and Marine Office.

Rail Freight / Air Freight

A total of 647 shipments have been made since the program began in 2006, resulting in an average utilization ratio of 55%. Since 2006, the utilization rate has increased from 38% to 55% in 2009.

The produce rail cars are used to ship frozen fruits, fresh and frozen potatoes, frozen meat, and frozen vegetables. Frozen fruit has been the most heavily shipped product through this program, accounting for 67% of all produce types.

Produce rail car shipments by product
August 2006 - December 2009



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

Total air cargo tonnage handled in Washington grew 5% between 2007 and 2008

In 2008, air cargo handled at Washington airports totaled 1,416,036 tons (measured in plane plus cargo weight, as reported by FAA). Between 2007 and 2008, air cargo tonnage increased 5.1%, from 1,347,350 tons to 1,416,036 tons. Air cargo activity is concentrated at a small number of Washington airports: about 53% of all air freight tonnage is handled at the Seattle-Tacoma International Airport, about 29% is handled at Boeing Field/ King County International Airport, and about 18% is handled at Spokane International Airport. Total Washington air cargo data for 2009 was unavailable in time for this report.

Total air freight tonnage handled at Sea-Tac airport declines from 2008 to 2009

At Seattle-Tacoma, where air freight tonnage handled is reported annually, total tonnage decreased 7.2% from 2008 to 2009, from 290,768 in 2008 to 269,689 metric tons in 2009. Sea-Tac ranks eighteenth in the United States by tons of cargo handled.

Air freight: Seattle-Tacoma International Airport
In metric tons, 1999 - 2009

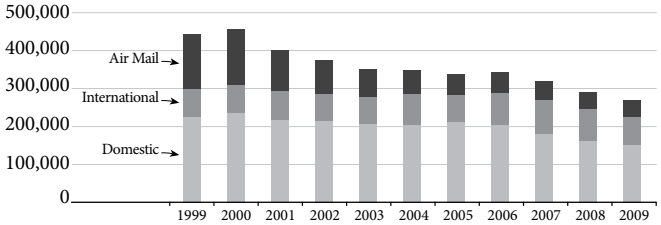
Year	Total freight	% Change
2009	269,689	-7.2%
2008	290,768	-8.9%
2007	319,013	-6.7%
2006	341,981	1.0%

Data source: Port of Seattle, 2009 Seattle-Tacoma International Airport Activity Report.

Data as reported to Port of Seattle by the airlines, includes domestic freight, international freight, and air mail. Sea-Tac air freight is measured as freight cargo weight and does not include plane weight.

Washington's exporter and importer distribution facilities, logistics service providers, freight forwarders, and consolidators are concentrated in the South Puget Sound region. Shippers rely on this integrated network to deliver fast and reliable door-to-door service. Freight forwarders and consolidators must be able to consolidate multiple shipments to reduce shipping costs and obtain economies of scale. Sea-Tac and Boeing Field offer frequent flights to multiple destinations, established support networks, and strong local demand.

Total Sea-Tac air freight, by category
In metric tons, 1999 -2009



Data source: Port of Seattle, 2009 Seattle-Tacoma International Airport Activity Report.
Data as reported to Port of Seattle by the airlines.

In the last decade there has been a gradual decline in the amount of air freight moving through the Seattle Tacoma International Airport. Between 1999 and 2009, the volume of air mail has fallen significantly: 143,723 metric tons recorded in 1999 compared to 43,875 in 2009. International freight volumes have remained stable as domestic freight volumes have declined, with 225,898 metric tons in 1999 compared to 151,296 in 2009. Overall, air freight moving through Sea-Tac decreased by nearly 40% between 1999 and 2009. It should be noted that during the most recent recession in 2008 and 2009, Sea-Tac has fared better than many other air cargo hubs in other large U.S. cities. As cargo aircraft are hauling lighter loads, Seattle has become a more attractive and cost effective alternative to Anchorage for refueling stops.

Washington's Long-Term Air Transportation Study

In 2005, the Washington Legislature required WSDOT to implement a state aviation plan to determine long-term air transportation needs, as well as address needs related to air cargo. For more information, see the Aviation Annual Report on page 18, and the project highlight article in Highlights on page 95.

Commercial Vehicle Information Systems & Networks (CVISN): Annual Report

As part of the Intelligent Transportation Systems program, the Commercial Vehicle Information Systems and Networks (CVISN) program helps improve the efficiency, safety, and security of truck freight movement throughout Washington. The CVISN system uses a network of weigh-in-motion scales and transponders to electronically screen trucks as they approach weigh stations. This allows previously identified, properly licensed, safe, and legal carriers to bypass weigh stations. (For more information on how the system works, please see the June 2007 *Gray Notebook* 26, p. 79.)

WSDOT and the Washington State Patrol (WSP) manage CVISN jointly. WSP enforces laws associated with the regulation and safety of commercial trucks, and WSDOT develops, installs, and maintains CVISN equipment and infrastructure.

Number of CVISN-equipped trucks increases 3.2% in 2009

In 2009, 21.6% of all trucks moving through the state had CVISN transponders, compared to 18.3% 2008. Two factors probably contributed to this increase. First, WSDOT reopened the Everett weigh station in March 2009. As reported in the March 2009 *Gray Notebook* 33, construction and a collision that destroyed the site's roadside equipment kept the Everett Station closed since March 2007. Second, WSP graduated 46 additional Commercial Vehicle Enforcement Officers (CVEOs) in 2008, allowing for the ports of entry to be fully staffed in 2009 and other weigh stations to be opened more often throughout the year, which significantly affects measurements of transponder usage as only open weigh stations are able to collect this information.

Although WSDOT indicated in the March 2009 *Gray Notebook* that an economic downturn depressed transponder usage in 2008, it is not clear if economic factors have contributed to 2009's increasing in usage.

The percentage of trucks that are using transponders to bypass weigh stations increased very slightly, from 81.2% in 2008 to 81.7% in 2009. The reopening of the Everett weigh station and additional staffing may also explain this increase. Additionally, there is a limit to the number of vehicles that can safely pass through weigh stations. This limit, along with growth in commercial vehicle traffic, may also lead to more automatic bypasses triggered by the system.

CVISN-equipped trucks save an estimated $6.5 million for trucking industry in Washington in 2009

Trucks equipped with CVISN transponders received over 1,048,000 green lights to bypass Washington weigh stations in 2009. This 24% increase in the number of green lights from 2008 is likely due to the reopening of the Everett weigh station in March 2009 and the hiring of additional officers.

CVISN Highlights

Trucks equipped with CVISN transponders received more than 1,048,000 green lights in 2009.

In 2009, CVISN saved the trucking industry in Washington an estimated $6.5 million.

In November 2009, WSDOT and WSP began a pilot test of an Automatic License Plate Reader (ALPR) system at Fort Lewis weigh station.

Trucks with transponders, 2004-2009

Percentage of trucks with transponders and percentage of transponder-equipped trucks bypassing weigh stations

	Number of trucks with transponders	Percent with transponders	Percent bypassed stations
2009	1,271,103	21.55%	81.76%
2008	1,072,507	18.34%	81.20%
2007	1,099,432	20.72%	81.50%
2006	1,155,255	20.24%	82.12%
2005	1,058,843	18.72%	81.83%
2004	915,486	13.33%	85.96%

Data source: WSDOT CVISN Office.

Estimated money and hours saved by the trucking industry through the use of CVISN transponders

Commercial Vehicle Information Systems and Networks, Dollars in millions

	2005	2006	2007	2008	2009
Number of green lights	850,000	948,000	896,000	843,000	1,048,000
Hours of travel timed saved	70,000	79,000	75,000	70,000	87,000
Amount of money saved*	$5.25	$5.9	$5.6	$5.25	$6.5

*The amount of money saved is an estimate based on the estimated cost of operating a commercial vehicle, $1.25 a minute.

Data source: WSDOT CVISN Office and Washington Trucking Associations.

WSDOT estimates that the average stop at a weigh station is five minutes and the estimated cost of operating a commercial vehicle is $1.25 per minute. Based on these estimates, CVISN saved the trucking industry about 87,000 hours valued at approximately $6.5 million in 2009.

New technology makes travel faster for more freight trucks

In 2009, WSDOT and WSP began testing a new technology, Automatic License Plate Readers (ALPRs), to electronically screen commercial vehicles at weigh stations.

An ALPR camera, mounted over the right lane of the freeway, reads the tractor's commercial vehicle license plate while the truck travels at freeway speeds. The camera transmits the license plate data to the computer inside the weigh station, where the truck's weight, registration, and safety records are checked automatically. If the checks are satisfactory, a roadside Changeable Message Sign directs the driver to bypass the weigh station. If there is a problem with the vehicle or load, or if the ALPR cannot read a plate because it is dirty, bent, or otherwise unreadable, the sign can direct the vehicle into the weigh station.

A federal grant requiring a pilot test at one station funds this system. WSDOT and WSP chose the Fort Lewis weigh station for the pilot test, which has been operational since November 2009. Based on feedback from WSP, the officers found the additional data provided by the ALPR system to be extremely useful in screening commercial vehicles. If the results of the pilot test are acceptable, as determined by a combination of WSP, WSDOT, the Federal Motor Carrier Safety Administration, and the Washington Trucking Associations, ALPRs will be installed at Washington's other 10 CVISN-equipped weigh stations, supplementing the existing transponder system.

Approximately 21% of commercial vehicles use transponders for electronic screening today. Statistics for the ALPR system are not yet available; however, this new technology will allow WSP to electronically screen more commercial vehicles then they do now, by collecting the same data as transponders, but for a much larger percentage of commercial vehicles on Washington's roads. This will allow more freight vehicles to stop less often, reaching there destinations more quickly as WSP focuses on the trucks with potential problems. Ultimately, the ALPR technology will improve the safety, security, effectiveness, and productivity of roadside operations.

An example of a plate that the ALPR cameras cannot read.

A WSP Commercial Vehicle Enforcement Officer (CVEO) inspects a truck to make sure it is safe and in compliance with all applicable laws.

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.

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Worker Safety 2

Special Report on Federal Recovery Act-funded Projects

Recovery Act-funded Projects Overview

Recovery Act Highlights

Washington met the March 2010 deadline to obligate all $492 million in stimulus highway funds.

WSDOT began working with the Federal Rail Administration to advance high-speed passenger rail projects after receiving $590 million in funding.

WSDOT and local governments completed 99 of 209 stimulus highway projects as of March 31, 2010.

The American Recovery and Reinvestment Act (Recovery Act) is providing Washington and its local governments with well over $1.3 billion for transportation investments that will improve the movement of people and goods, as well as create and retain jobs. The Recovery Act included $492 million for highway projects and $179 million for transit investments in the state. While the initial projects are completed or under construction, WSDOT is preparing to implement additional federal stimulus funding.

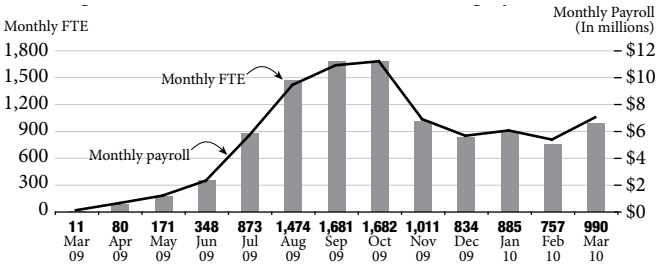
In January, WSDOT received $590 million in a competition for the available $8 billion in Recovery Act funds for High-Speed Intercity Passenger Rail investments nationwide. High-speed rail projects will improve travel times and reliability between Seattle and Portland. See page 59 for more details.

WSDOT and the city of Seattle received $65 million from the competitive TIGER grant program in February, for highway improvements to the North Spokane Corridor and Seattle's Mercer Street Corridor. See page 60 for details about the North Spokane project.

WSDOT and local governments continue to complete and advance projects. By March 31, 2010, 209 projects had been certified for stimulus funding, including 193 that were completed or under way. See page 57 for information on highway, ferry, and transit projects completed this quarter.

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.

Source: WSDOT Capital Program Development & Management, Highways & Local Programs.

On February 19, Washington met the March 2, 2010, deadline to obligate 100% of federal highway stimulus funds. If the current projects result in unused Recovery Act funds, states have until September 30, 2010, to obligate additional money to other stimulus projects.

Projects have provided over $72 million in payroll

Recovery Act highway projects have provided more than 1.8 million hours of employment and $72 million in payroll, including $18.3 million in the last quarter. Workers have earned an average of $38 an hour on state and local projects. As the table shows, labor hours and payroll declined from last quarter, primarily due to winter weather that closed work sites and project completions.

Employees have worked more than 1,867,000 hours on stimulus-funded projects as of March 31,2010, earning almost $72.1 million in payroll.

For additional information on Recovery Act-funded projects please visit www.wsdot.wa.gov/funding/stimulus

Recovery Act employment

Monthly from October 2009 to March 2010; Totals from March 2009 to March 2010; dollars in millions

	October	November	December	January	February	March	Total
Labor hours	290,971	174,965	144,326	153,068	130,888	171,263	1,867,991
Payroll value	$11.2	$6.7	$5.6	$6	$5.3	$7	$72.1
Monthly FTE*	1,682	1,011	834	885	757	990	–
Individuals paid with Recovery Act funds	6,626	4,961	3,608	3,500	3,329	3,857	–

Data source: Monthly Recovery Act employment data is collected from contractors, subcontractors, and WSDOT then uploaded to the FHWA Recovery Act Data System (RADS). Hours and payroll reflect combined state and local data.

* Note: The number of full time monthly equivalent (FTE) jobs is calculated on a 2,080 hour work-year. October, November, and December data has been revised since the December 31, 2009, *Gray Notebook*. More information is available on-line at www.wsdot.wa.gov/funding/stimulus/measuredemployment.

Recovery Act Progress Summary

Recovery Act-funded highway projects through March 31, 2010

Number of projects by jurisdiction; dollars in millions

Project information	State	Local	Total	Notes
Individual highway projects	47	162	209	State projects specified in the Legislative Evaluation & Accountability Program (LEAP) list. Fifteen state and 21 local projects were added to the list and received federal approval. Six local projects are no longer receiving funds.
Certified by Governor	47	162	209	Governor must certify that projects were reviewed and represent an appropriate investment of taxpayer dollars. Including the two safety buckets separated below, 211 projects have been certified.
Projects advertised	47	157	204	
Contracts awarded/Under construction	42	151	193	
Projects completed	21	78	99	This is an increase from 88 reported complete as of December 31, 2009.
Financial information	**State**	**Local**	**Total**	**Notes**
Recovery Act dollars provided	$340	$152.1	$492.1	$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	$152.1	$492.1	Obligated dollars represent projects approved by the federal government with an executed project agreement. The state met the requirement to obligate 50% of funds by June 29, 2009. All dollars must be obligated by March 2, 2010. As of January 29, 2010, $477.5 million had been obligated.
Total cost of obligated projects	$816	$846	$1,662	Also includes non-Recovery Act leveraged fund sources; represents total project funds positioned to enter the economy.

Data source: WSDOT Capital Program Development & Management Office, Highways and Local Programs Office. Data as of March 31, 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 March 31, 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	10	38
Projects completed	15	6	21
Financial information			
Funds available for buckets	$3.1	$9.2	$12.3
Recovery Act dollars obligated	$2.9	$8.9	$11.8
Total cost of obligated projects	$3.0	$11.5	$14.5

Data source: WSDOT Capital Program Delivery & Management Office.

Recovery Act project definitions and notes

Tier 1 Priority shovel-ready projects selected for Recovery Act funding.

Tier 2 The projects originally selected for funding with Recovery Act surplus funds and/or additional Recovery Act funds.

Tier 3 Additional projects identified in December 2009 to receive surplus Recovery Act funds.

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

Obligated funds An obligation is a commitment—the Federal government's promise to pay the State for the Federal share of a project's eligible cost. This commitment occurs when the project is approved and the project agreement is executed. Obligated funds are considered "used" even though no cash is transferred.

Next Obligation deadline: Funds that were obligated by March 2, 2010 can be removed and obligated to other projects by September 30, 2010. Some funds may be moved as contracts are closed and following favorable bids.

Newsletter: The latest information on stimulus projects is at www.wsdot.wa.gov/funding/stimulus/newsletter.

Special Report on Federal Recovery Act-funded Projects

Recovery Act Project Delivery

More than 90 stimulus highway projects were completed by March 31, 2010

State and local governments have completed 99 projects receiving Federal Highway Administration (FHWA) Recovery Act funding, including 21 state projects and 78 local projects.

The projects improved the condition of state and local roads, expanded access for pedestrians and bicyclists, and installed rumble strips and cable median barrier devices on state highways to improve safety.

Nine local Recovery Act FHWA projects were completed between January 1 and March 31, 2010, including these four:

- Lacey: Lacey Woodland Regional Trail
- Edmonds: Annual Asphalt Overlay
- Everett: Holly Drive Non-Motorized Improvements
- Blaine: Boblett Street

Additionally, a state project that installed three permanent Highway Advisory Radios (HAR) at Sherman Pass and Hatton Coulee, received $240,000 in Recovery Act funds. While the contractor Aztech Electric of Spokane completed the work on November 17, the stations were activated this quarter.

Stimulus funds paid for three new Grape Line buses providing intercity service between Walla Walla and Pasco.

Recovery Act transit funds deliver three new buses

Three new Grape Line buses funded by federal stimulus dollars began carrying passengers between Walla Walla and Pasco in February. The new Grape Line buses are the latest fruits from $1.9 million in federal Recovery Act grants for the Travel Washington Intercity Bus Program.

Indiana-based bus maker Turtle Top Inc. manufactured the vehicles, each of which will carry up to 20 passengers. The buses are equipped with high-back reclining passenger seats, a wheelchair lift, two wheelchair stations, a bike rack for two bicycles, and luggage storage areas.

The Grape Line offers three scheduled round trips daily between Walla Walla and Pasco in southeast Washington under a partnership between WSDOT and Greyhound. Central Washington Airporter is the contracted Grape Line service provider. The Grape Line provides efficient and reliable connections in Pasco with Greyhound, Amtrak, and Ben Franklin Transit, and in Walla Walla with Valley Transit, Milton-Freewater Bus, and Columbia County Public Transportation. Similar buses purchased for Travel Washington's Dungeness Line on the Olympic Peninsula proved to be economical to operate and comfortable to ride.

Two ferry terminal projects completed in March 2010

Ferries Terminal Preservation – Seismic retrofits at Seattle and Edmonds

These projects provided seismic retrofit work at the Seattle and Edmonds terminals, to secure the transfer span so it does not collapse during an earthquake. As part of the Recovery Act funding, the Bainbridge and Vashon Terminal slips are also being retrofitted.

Project benefits: This project will prevent the transfer span (moveable bridge where the dock meets the vessel) from falling into the water during an earthquake, which in turn will help the WSDOT quickly restore ferry operations.

Highlights and challenges: Both successful low bids, for Seattle by General Construction Company and for Edmonds by Mason Construction Company, were within 10% of the Engineer's Estimate.

Budget performance: These projects were completed for about $198,000, under the approved budget of $201,000.

Schedule performance: These projects began in the middle of November 2009 and were both operationally complete by March 10, 2010. Project close-out will be completed by June 2010.

Workers installed anchor bolts at the Edmonds Ferry Terminal.

Recovery Act High-Speed Intercity Passenger Rail Program

WSDOT received funding for high-speed rail

In January, the Federal Rail Administration (FRA) announced that Washington received $590 million in Recovery Act funds for the Pacific Northwest Corridor. The projects funded by these grants will improve on-time performance, speed, and reliability between the Columbia River and the Canadian border. The projects will bring considerable benefits to the region, including energy savings and congestion reduction, transportation options, job creation, and environmental and economic benefits.

The corridor is one of 11 federally designated High-Speed Rail Corridors and qualifies for grants under the President's High-Speed Intercity Passenger Rail program. The Recovery Act included $8 billion for the new program, which represents a significant federal investment in the nation's passenger rail transportation network. Nationwide, 31 states and 13 corridors received funding for high-speed passenger rail service.

Grants add service and fund new capital projects

The FRA announced the projects funded by the first round of grants will add two daily roundtrips between Seattle and Portland, for a total of six. Other projects will include building bypass tracks to allow for more frequent service and multiple upgrades to the track and signal systems. Safety improvements will include grade separations, positive train control (a safety system that monitors and controls train operations), and seismic retrofits to King Street Station in Seattle.

In March, WSDOT proposed a list of five projects worth $311 million that could begin construction in 2010 and be completed by 2011 or 2012. Five additional projects and the purchase of a new train were proposed as part of WSDOT's plan beyond the 2010 construction season.

While WSDOT proposed a series of projects in its 2009 grant applications, the FRA did not identify which projects are funded. States must resubmit project lists and negotiate funding with the FRA. (A list of proposed projects are in the gray panel on this page.) The FRA will have to approve all projects for High-speed rail funds.

Oregon also received $8 million for projects to improve rail service, including upgrades at Portland's Union Station as well as engineering and environmental work for track and signaling projects.

Washington will apply for more funding this year from the $2.5 billion set aside for high-speed rail in the federal transportation appropriations bill approved in December 2009.

WSDOT received $590 million in High-Speed Intercity Passenger Rail Program funding for improvements to services in Washington.

High-speed rail projects proposed in March 2010

WSDOT proposed the following 10 projects for funding. All proposed projects are subject to Federal Rail Administration refinement and approval.

Projects that could begin this year include:

- Tacoma D to M Street Connection – $34.3 million
- Advanced Signal System – Positive Train Control (PTC) - $62.3 million
- Tacoma-Point Defiance Bypass – $91.6 million
- Vancouver Yard Bypass Track – $29.1 million
- Corridor Reliability Upgrades South – $94.1 million

Projects that could begin in future seasons include:

- Kelso Martin's Bluff: New Siding – $35.6 million
- Kelso Martin's Bluff: Toteff Siding Extension – $37.4 million
- Kelso Martin's Bluff: Kelso to Longview Jct. – $126 million
- King Street Station Track Upgrades – $52 million
- Everett Storage Track – $36 million
- Purchase of one train set – $32 million

Special Report on Federal Recovery Act-funded Projects

Recovery Act Award – TIGER projects

Spokane project wins TIGER grant

On February 17, 2010, U.S. Transportation Secretary Ray LaHood announced that a WSDOT North Spokane Corridor project was selected for a $35 million Recovery Act grant. The project was funded as part of a $1.5 billion discretionary surface transportation grant program called TIGER, or Transportation Investments Generating Economic Recovery. TIGER grants provided funding for 51 projects nationwide, including two in Washington.

Funds will support north-south mobility in Spokane

The project will build 3.7 miles of the southbound lanes on the North Spokane Corridor/US 395 between Frances Avenue and Farwell Road as part of a project designed to improve north-south traffic flow through Spokane. The project was advertised on March 22, and is scheduled for completion in late 2011.

WSDOT recently completed construction of the northbound lanes between Frances Avenue and Farwell Road, and opened the section as a two-lane, north-south highway in August 2009.

The planned 10.5 mile North Spokane Corridor is a new transportation route that will provide multi-modal transportation including a 60 miles an hour limited access roadway, a pedestrian/bike path, park and ride lots, and preservation of right-of-way for high capacity public transportation.

The project addresses one of the region's top transportation priorities, replacing and expanding US 395 through Spokane. Population growth and increased truck volumes have contributed to increasing congestion through the city. The project will increase capacity and reduce travel times as part of the broader corridor project.

WSDOT submitted two other applications for TIGER grants which were unsuccessful: $300 million for the SR 520 Floating Bridge Replacement project in King County and $147 million for the I-5/SR 500 Interchange project in Clark County.

The city of Seattle also received a $30 million TIGER grant for its Mercer Street Corridor project in February, 2010. The project was advertised on March 10, 2010.

Nationwide, the U.S. Department of Transportation received roughly 1,400 applications requesting $56.5 billion, including 49 applications from Washington. As part of the program to boost the economy, the projects were required to begin construction quickly and be completed within two years of the grant award.

A $35 million TIGER grant for the North Spokane Corridor will add southbound lanes to the northbound lanes completed in August 2009.

TIGER project details

US 395/Frances Ave to Farwell Rd – Southbound lanes

TIGER grant award: $35 million
Grant date: February 17, 2010
Ad date: March 22, 2010
Construction start: June 2010
Estimated completion: Late 2011

North Spokane Corridor – Frances to Farwell

WSDOT's Capital Project Delivery Programs

Highway Construction: Nickel and TPA Project Delivery Performance Overview

Expanded reports show WSDOT's progress on transportation budgets

As reported in last quarter's *Gray Notebook 36*, WSDOT has further refined the reporting format and information provided to communicate performance results in delivering the 2003 Nickel and 2005 TPA transportation packages in the Beige Pages. This edition continues this series of refinements, offering new information as well as data that readers are already familiar with in updated formats.

Revised 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 (see below). Some projects may be newly added, reflecting changing needs and priorities, while some projects that were present in previous budgets are no longer listed because they are already complete.

To provide a comprehensive account of the entire program in the current Transportation Budget, the Beige Pages' tables will now account for individual projects that may have been previously reported as one "bucket" of projects or as a project "bundle." The tables now reflect these individual "unbundled" projects from programmatic budget items (such as guardrail improvements, fish passage, or the Bridges Seismic Retrofit Program), and more clearly identify subprojects within mega-projects (such as the Alaskan Way Viaduct project).

By "unbundling" these previously rolled-up projects, the total combined number of projects in WSDOT's capital project delivery program has increased, from 391 to 421. The table below shows how the total of 421 is composed.

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	$241,743
Projects completed that *are* included in the current Budget	194	$3,468,014
Subtotal of completed projects	**264**	**$3,709,757**
Projects included in the current Budget that are not yet completed	157	$11,725,544
Total	**421**	**$15,435,301**

Project Delivery Highlights for Nickel and TPA combined

- WSDOT has refined its method of presenting the projects in the Nickel and TPA capital projects program, "unbundling" projects from programmatic budget items and identifying subprojects.
- WSDOT will continue to report performance against budget and schedule, using the revised project numbers.
- 89% of all Nickel and TPA projects combined were completed early or on time.
- 91% of Nickel and TPA completed projects combined are under or on budget.
- 82% of Nickel and TPA completed projects were both on time and on budget.

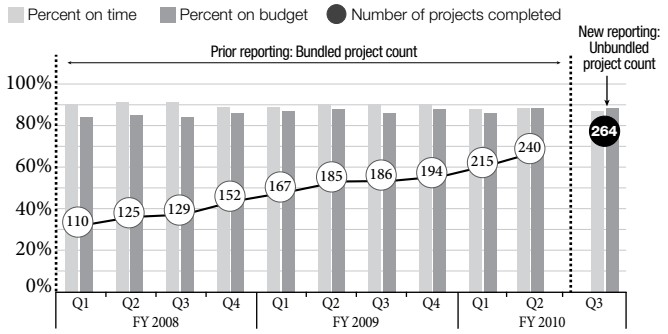
Progress against the Original Program lists in the 2003 and 2005 funding packages

This edition continues the presentation of status reports on the 2003 and 2005 LEAP (Legislative Evaluation & Accountability Program) lists; the tables on pages 71 and 72 address all budget items including highway and other modes, pre-construction and environmental studies, that were listed in the original funding packages. In addition, they address performance against scope and original appropriation, so these elements are no longer shown in the Schedule & Budget tables on page 64.

Immediately following those pages are WSDOT's financial planning reports, showing actual revenue against planned revenue for both the Nickel and TPA programs.

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

264 of 421 projects completed as of March 31, 2010



Data source: WSDOT Capital Program Development & Management.

WSDOT's Capital Project Delivery Programs

Current 2010 Legislative Transportation Budget: Highways

Highway construction performance dashboard

As of March 31, 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	$241,743
Projects completed that *are* included in the current Transportation Budget	194	$3,468,014
Projects included in the current Transportation Budget but not yet completed	157	$11,725,544
Total number of projects[1] in Improvement & Preservation budget[2]	**421**	**$15,435,301**

Schedule and Budget Summary: Results of completed projects in the current Transportation Budget detailed on page 64.		**Combined Nickel & TPA**
Number of projects in current Transportation Budget completed to date: 2003 – March 31, 2010		***264***
Percent completed early or on time		89%
Percent completed under or on budget		91%
Percent completed on time and on budget		82%
Baseline estimated cost at completion		$3,712,802
Current estimated cost at completion		$3,709,757
Percent of total program over or under budget		0.08% Under
Total number of projects completed in 2009-11 biennium to date	***50***	
Percent completed early or on time	86%	
Percent completed under or on budget	94%	
Percent completed on time and on budget	84%	
Baseline estimated cost at completion this biennium	$1,249,837	
Current estimated cost at completion this biennium	$1,247,701	

Advertisement Record: Results of projects entering into the construction phase or under construction detailed on pages 65-69.		**Combined Nickel & TPA**
Total cumulative number of projects in construction phase to date, 2003 – March 31, 2010		***60***
Percent advertised early or on time		85%
Total number of projects advertised for construction in 2009-11 biennium to date	***7***	
Percent advertised early or on time	86%	

Projects To Be Advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on page 70.	**Combined Nickel & TPA**
Total projects being advertised for construction bids April 1, 2010 – September 30, 2010	***11***
Percent on or better than anticipated advertisement schedule	82%

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		$884,018
Total 2003 Transportation Funding Package (Nickel) expenditure	*$258,646*	
Total 2005 Transportation Partnership Account (TPA) expenditure	*$466,543*	
Total Pre-Existing Funds (PEF) expenditure[3]	*$158,829*	

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 page 61.
2. Per the 2005-2007 Transportation Budget, Section 603.
3. For full details of the PEF program, see pages 86-89.

Current 2010 Legislative Transportation Budget Performance Dashboard: Rail and Ferries

A total of eight Nickel and six Transportation Partnership Account (TPA) rail construction projects have been delivered on time and on budget as of March 31, 2010, for $56.6 million. Eight projects (five Nickel-funded, three TPA-funded) in construction have total award amounts of $36.7 million. No rail projects are planned to advertise before September 30, 2010.

To date, Ferries has completed three construction projects using Nickel funding, and three TPA-funded contracts (see note* below) have been awarded for $244 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 March 31, 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 – March 31, 2010	8	6	14
% 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	$30,710	$25,965	$56,675
Current estimated cost at completion	$30,710	$25,965	$56,675
% 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	5	3	8
% Advertised early or on time	100%	100%	100%
Total award amounts to date	$27,996	$8,728	$36,724
Advertisement schedule: projects now being advertised or planned to advertise			
April 1, 2010 through September 30, 2010			
Total being advertised for construction	0	0	0
% On schedule or earlier	N/A	N/A	N/A

Ferries construction performance dashboard

As of March 31, 2010; dollars in thousands

Schedule, scope and budget summary: completed projects			
Cumulative to date, 2003 – March 31, 2010	3	0	3
% 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	$10,712	$0	$10,712
Current estimated cost at completion	$10,712	$0	$10,712
% 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			
Cumulative to date, 2003 – March 31, 2010	0	3	3
% Advertised early or on time	0%	100%	100%
Total award amounts to date	$0	$224,835	$224,835*

Data source: WSDOT Project Control and Reporting Office.

* 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

Cumulative to date	Fund type	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost	On budget	Completed on time, on budget
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 first quarter of the 2009-2011 biennium, please see Gray Notebook 35 for the quarter ending September 30, 2009. To view projects completed in the second quarter of the 2009-2011 biennium, please see Gray Notebook 36 for the quarter ending December 31, 2009.

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

Projects completed as of March 31, 2010

Nickel and Transportation Partnership Account (TPA) projects, costs estimated at 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 4 Climbing lane to Coal Creek Rd vicinity – Upgrade guardrail (Cowlitz, Wahkiakum) The operationally complete date was delayed one month, to January 2010, due to guardrail work that remained to be completed. This project was one of several in the WSDOT programmatic budget line item Guardrail Retrofit program.	Nickel	√	Late	$1,942	$1,942	√	
Central King County to South Snohomish Bridges – Seismic retrofit (King, Snohomish) This project was one of several in the WSDOT programmatic budget line item Bridges Seismic Retrofit program.	TPA	√	Early	$10,395	$10,395	√	√
SR 539/Tenmile Road to SR 546 – Widening (Whatcom) The operationally complete date was delayed to January 2010, due to difficulty obtaining steel required for the bridge construction.	Nickel	√	Late	$106,748	$103,724	√	

Data source: WSDOT Capital Program Development & Management.

Advertisement Record

60 Projects in construction phase as of March 31, 2010

Nickel & 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
Concrete Rehabilitation Program Although this budget line item is active, no projects are currently planned for construction in the 2009-2011 biennium.	Nickel					
SR 17/Othello vicinity to Soap Lake vicinity – Install lighting (Adams, Grant) Advertisement date was advanced to construct a portion of this project as a part of a larger PEF program for construction efficiencies. The project was combined with SR 26/Othello vicinity–Install lighting (Adams) for construction efficiencies; that project is now completed.	TPA	Early	Dec-07	Central Washington Asphalt, Inc.	Aug-10	$5,134
SR 285/George Sellar Bridge – Additional eastbound lane (Chelan, Douglas) Advertisement date was delayed one month to address additional bridge analysis, design, and detailing requirements, and to purchase railroad easements.	TPA	Late	Jan-09	Max J. Kuney Company	Mar-11	$12,885
I-5/SR 501 Ridgefield interchange – Rebuild interchange (Clark) This project has been identified to receive $10M in Federal Recovery Act funding,	TPA	Early	Jun-09	Tapani Underground, Inc.	Nov-11	$15,795
SR 503/Gabriel Rd Intersection (Clark) 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.	TPA	√	Oct-07	Nutter Corp. dba Nutter Underground Utilities Co. Inc	Nov-10	
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
I-405/South Renton vicinity Stage 2 – Widening	Nickel/ TPA					
• I-405/SR 167 to SR 169 – Northbound widening (King)	TPA	√	Oct-08	I-405 Corridor Design Builders	Dec-10	$83,599
• I-405/SR 167 to SR 169 – Add new southbound 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.*			
I-5/5th Ave NE to NE 92nd St – Noise wall (King)	TPA	√	Feb-08	Wilder Construction Co.	Aug-10	$3,315
I-90/I-5 to 12th Ave S – Seismic retrofit (King) This is a project within the Bridge Seismic Retrofit Program.		√	Oct-08	PCL Construction Services, Inc.	Jun-10	$5,703
I-90/Eastside Bridges – Seismic (King) This is a project within the Bridge Seismic Retrofit Program.		√	Oct-08	Imco General Construction, Inc.	Sep-11	$5,999
SR 11, SR 525, and SR 900 – Roadside safety improvements (King, Snohomish, Skagit) This is a project within the Statewide Roadside Safety Improvements Program.		√	Feb-08	Coral Construction Company	Jul-10	$1,463
SR 519/ I-90 to SR 99 Intermodal Access Project – Interchange improvements (King)	Nickel	Early	Jun-08	Kiewit Pacific Co.	Jun-10	$66,969
SR 520/W Lake Sammamish Parkway to SR 202, Stage 3 – Widening (King) 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.	Nickel	Late	Jan-07	Tri-State Construction, Inc.	Sep-11	$9,988
SR 99/Aurora Ave N Corridor – Add HOV lanes (King) This project represents WSDOT's contribution to a City of Shoreline project.	TPA	√	Jun-05		Mar-11	$7,000

WSDOT's Capital Project Delivery Programs

Advertisement Record

60 Projects in construction phase as of March 31, 2010

Nickel & 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 99/Alaskan Way Viaduct – Replacement (King)						
Subprojects of this multi-stage project are now in construction but were not previously captured in *Gray Notebook* 'Projects to be advertised' tables. New subprojects will be recorded in the advertisement pipeline tables in future GNBs.						
• SR 99/S Massachusetts St to Union St – Electrical line relocation (King)	TPA	√	May-08	Frank Coluccio Construction	Jun-13	$17,040
• SR 99/S Holgate St to S King St – Viaduct replacement (King)	TPA	√	Oct-09	Signal Electric, Inc.	Sep-13	$4,902
The ad date was delayed from June 2009 to October 2009 in order to design the tunnel portal entry for the new 1.7 mile bored tunnel through downtown Seattle. The bored tunnel design alternative was not known until January 2009.						
• SR 99/Battery St Tunnel – Fire and safety improvement (King)	TPA	√	*Combined with project above for construction efficiencies.*			
Additional sign-bridges have some elements that were not initially planned. New environmental right-of-way siting work and review was needed.						
SR 900/SE 78th St vicinity to I-90 vicinity – Widening and HOV (King)	Nickel	√	May-08	Icon Materials, A Division of CPM	Apr-10	$19,354
The project's operationally complete date was delayed one quarter because the contractor missed the paving window due to wet weather.						
I-90/Snoqualmie Pass East – Hyak to Keechelus Dam – Corridor improvement (Kittitas)						
• I-90/Snoqualmie Pass East – Hyak to Keechelus Dam – Corridor improvement	TPA	Early	Feb-09	KLB Construction, Inc.	Oct-15	$3,298
SR 142/Roadside Safety – Roadside improvements (Klickitat)		Early	Mar-08	Dirt & Aggregate Interchange/James Dean Construction, Inc.	Oct-10	$1,022
Cost increase includes pooled funds from other roadside safety projects to address high-benefit locations. This is a project within the Statewide Roadside Safety Improvements Program.						
I-5/Tacoma HOV Improvements (Pierce)	TPA					
• I-5/Port of Tacoma Rd to King county line – Add HOV lanes	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	TPA	√	Jul-08	Guy F. Atkinson Construction, Llc	Dec-11	$119,925
I-5/Ardena Road Bridge – Upgrade bridge rail (Pierce)		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-405/Kirkland vicinity Stage 2 – Widening (Snohomish, King)	TPA					
• I-405/NE 195th St to SR 527 – Northbound widening (Snohomish, King)	TPA	Early	May-09	Kiewit Pacific Co.	Jun-10	$19,263
I-5/236th St SW Bridge – Seismic retrofit (Snohomish)	TPA	√	Dec-08	Midmountain Contractors, Inc.	Sept-10	$17,747
SR 20 and SR 530 – Roadside safety improvements (Snohomish, Skagit)		√	Feb-09	Coral Construction Company	May-10	$521
This is a project within the Statewide Roadside Safety Improvements Program.						

Advertisement Record

60 Projects in construction phase as of March 31, 2010

Nickel & 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 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 to allow additional time 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.*			
SR 9/Lake Stevens Way to 20th St SE – Improve intersection (Snohomish)	TPA	√	Apr-08		Jun-10	
This is a WSDOT project administered by Snohomish County in order to coordinate more effectively with locally managed projects, and improve cost and construction efficiency.						
US 395/North Spokane Corridor US 2 to Wandermere and US 2 Lowering – New alignment (Spokane)	Nickel					
• NSC – US 2 to Wandermere vicinity (Spokane)	Nickel	√	May-09	Graham Construction & Management, Inc.	May-11	$37,541
• US 395/NSC – US 2 Lowering (Spokane)	Nickel	√	Aug-08	Graham Construction and Management, Inc.	May-11	$42,849
I-5 Grand Mound to Maytown – Widening						
• I-5/Grand Mound to Maytown Stage One – Add lanes (Thurston)	Nickel	√	Dec-07	Scarsella Bros., Inc.	Jun-10	$61,495
US 12/Frenchtown vicinity to Walla Walla – Add lanes (Walla Walla)	TPA	√	Dec-07	Apollo, Inc	Jul-10	$33,733
This project's operationally complete date has been delayed to July 2010 due to harsh weather and numerous unworkable days.						
SR 542/Nooksack River – Redirect river and realign roadway (Whatcom)	TPA	Late	Jan-09	Tapani Underground, Inc.	Oct-11	$395
Advertisement date delayed 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. Right-of-way certification requirements were not met prior to bid opening. Advertisement was rescheduled for January 2009 to keep the in-water construction work within the July 1 to September 30 fish passage window.						
US 12/Tieton River West Crossing – Replace bridge (Yakima)	TPA	Late	Apr-09	Scarsella Bros, Inc.	Oct-10	$6,547
The scheduled advertisement date was delayed due to the extended time needed to obtain the Joint Aquatic Resources permit from the county and local agencies.						
US 12/Tieton River East Crossing – Replace bridge (Yakima)	TPA	Late	*Combined with project above for construction efficiencies.*			
The scheduled advertisement date was delayed due to the extended time needed to obtain the Joint Aquatic Resources permit from the county and local agencies.						

WSDOT's Capital Project Delivery Programs

Advertisement Record

60 Projects in construction phase as of March 31, 2010

Nickel & 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
Biennium to date (2009-11)						
SR 26/West of Othello – Add passing lane (Adams)	TPA	Early	Dec-09	Selland Construction, Inc	Oct-10	$609
SR 150/West of Chelan – Install lighting (Chelan)	TPA	√	Oct-09	McCandlish Electric, Inc.	Aug-10	$164
SR 971/S Lakeshore Rd – Install lighting (Chelan)	TPA	√	Oct-09	McCandlish Electric, Inc.	Aug-10	$164
Advertisement date was delayed one year as part of the 2009-11 Transportation budget addressing current budget constraints.						
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	√	Sep-09	Selland Construction, Inc.	Oct-12	$735
One phase of a multi-phase project was incorrectly identified ad slate. The advertisement date was advanced so that construction on the irrigation canal could take place during the 2009-2010 winter season while the irrigation water is shut off.						
I-5/Ship Canal Bridge – Noise mitigation study (King)	TPA	√	Dec-09	Penhall Co.	Aug-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.						
I-90/Two Way Transit – Transit and HOV improvements Stage 2 & 3 (King)	TPA	Early	Dec-09	Interstate Improvement, Inc.	Jul-14	$7,591
SR 203/Corridor safety improvements – King county (King)	TPA	√	Nov-09	Tri-State Construction, Inc.	Nov-10	$2,969
SR 203/Roadside safety improvements (King)	TPA	√	*Combined with project above for construction efficiencies.*			
Lake Washington Congestion Management (King)	TPA	√	May-09	Elcon Corporation	Nov-10	$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 GNBs.						
SR 520/ Bridge replacement and HOV (King)	TPA					
Subprojects of this multi-stage project are now in construction but were not previously captured in *Gray Notebook* 'Projects to be advertised' tables. New subprojects will be recorded in the advertisement pipeline tables in future GNBs.						
• SR 520 Pontoon construction (King)	TPA		Aug-09	Kiewit-General, A Joint Venture	Apr-14	$367,330
SR 410/214th Ave E to 234th – Add lanes (Pierce)	TPA	Late	Dec-09		Sep-10	
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 County (Snohomish)	TPA	√	Nov-09	Tri-State Construction, Inc.	Nov-10	$2,969

Advertisement Record

60 Projects in construction phase as of March 31, 2010

Nickel & 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 2/N Glen-Elk Chattaroy Rd Intersection – Intersection improvements (Spokane)	TPA	√	Aug-09	Inland Asphalt Co.	Sep-10	$379
SR 510/Yelm Loop – New alignment (Thurston)	TPA	Early	Dec-09	Scarsella Bros.,Inc.	Oct-10	$4,147
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
SR 241/Dry Creek Bridge – Replace bridge (Yakima)	TPA	√	Nov-09	Apollo, Inc.	Apr-10	$299
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 – Reroute highway (Yakima)	TPA	√	Dec-09		Jul-12	
This project, shown as under construction in *Gray Notebook 36*, advertised on time but not awarded due to problems acquiring right of way. It will now be readvertised in fall 2010; the project completion date has been delayed one year to 2012.						
Quarter ending March 31, 2010						
SR 503/Lewisville Park vicinity – Add climbing lane (Clark)	TPA	√	Jan-10	Rotschy, Inc.	Nov-10	$3,702
US 97/S of Chelan Falls – Add passing lane (Douglas)	TPA	Early	Feb-10	Granite Northwest Inc.	Oct-10	$1,623
SR 169, SR 410, SR 525, SR 900 and SR 520 – Roadside safety improvements (King)		√	Feb-10	Coral Construction Company	Jul-10	$638
This is a project within the Statewide Roadside Safety Improvements Program.						
SR 520/I-405 vicinity – Seismic retrofit (King)		√	Mar-10		Sep-11	
This is a project within the Bridge Seismic Retrofit Program.						
SR 99/SR 518 Interchange Bridge Crossing – Seismic retrofit (King)		Late	Mar-10		Jun-10	
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 9/Lundeen Parkway to SR 92 – Add lanes and improve intersections (Snohomish)	TPA	√	Mar-10		Dec-11	
I-5/Mellen Street interchange to Grand Mound interchange – Add lanes	TPA					
• I-5/Blakeslee Junction railroad crossing to Grand Mound interchange – Add lanes (Thurston, Lewis)	TPA	√	Feb-10		Dec-11	

Data source: WSDOT Capital Program Development & Management.

WSDOT's Capital Project Delivery Programs

Projects To Be Advertised

11 Projects in delivery pipeline for April 1, 2010, through September 30, 2010

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
I-5/SR 161/SR 18 – Interchange improvements (King)	TPA	Oct-09	Apr-10	Delayed	$109,216	$109,488
This project contains design elements from the unfunded Phase 2 pulled into Phase 1. The phase 1 ad date has been adjusted to April 2010 is timed to eliminate the possibility of exceeding the biennial funding and allow additional time to included design elements and PSE for the recently approved addition of the flyover section.						
• I-5/SR 161 and SR 18 Interchanges – Rebuild interchange						$3,297
SR 303/Port Washington Narrows Bridge – Upgrade bridge rail (Kitsap) A project within the Bridge Rail Retrofit Program.	Nickel	May-10	May-10	√	$1,422	$2,351
SR 305/Unnamed tributary to Liberty Bay – Fish barrier (Kitsap) A project within the Fish Passage Barriers Program.	TPA	Apr-10	Apr-10	√	$2,562	$2,588
US 97/Blewett Pass – Passing lane (Kittitas)	TPA	Nov-09	May-10	Delayed	$2,509	$2,261
SR 161/24th St E to Jovita – Add lanes (Pierce)	Nickel	Oct-09	May-10	Delayed	$34,267	$37,541
Advertisement date was delayed to allow time to determine a wetland mitigation site.						
SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)	Nickel	Jan-16	Apr-10	Advanced	$182,405	$182,405
SR 529/Ebey Slough Bridge – Replace bridge (Snohomish)	TPA	Mar-10	Apr-10	Delayed	$46,964	$49,508
I-5/196th St (SR 524) Interchange – Build ramps (Snohomish)	TPA	Feb-10	Apr-10	Delayed	$59,491	$52,194
I-5/Capitol Blvd Bridge – Upgrade bridge rail (Thurston)	Nickel	Jul-10	Jul-10	√	$295	$1,188
A project within the Bridge Rail Retrofit Program.						
US 12/SR 124 Intersection – Build interchange (Walla Walla)	TPA	Oct-09	Apr-10	Delayed	$29,490	$24,184
The project's advertisement date has been delayed four months and the operationally complete date three months due to difficulties obtaining a land exchange agreement with the U.S. Department of Fish & Wildlife.						
I-5/36th St vicinity to SR 542 vicinity – Ramp reconstruction (Whatcom)	TPA	Apr-10	May-10	√	$27,298	$27,298

Data source: WSDOT Capital Program Development and Management.

3 Additional subprojects preparing to advertise April 1, 2010, through September 30, 2010*

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
I-90/Hyak to Keechelus Dam Phase 1G – Salvage & plant supply (Kittitas)	TPA	Apr-10	Apr-10	√	$1,506	$1,506
Subproject of I-90 Snoqualmie Pass East – Corridor improvement; page 66.						
I-5/Portland Ave and SR 167 interchanges – Rebuild interchanges (Pierce) Subproject of I-5/Tacoma HOV Improvements; page 66.	TPA	May-10	May-10	√	$7,829	$7,829
I-5/Grand Mound to Maytown Stage Two – Replace interchange (Thurston)	Nickel	Jun-10	Jun-10	√	$40,793	$40,793
Subproject of I-5 Grand Mound to Maytown – Add lanes; page 67.						

Data source: WSDOT Capital Program Development and Management.

* Note: The items listed in this table are subprojects of larger construction projects as noted. When contracts are awarded, these items will be added to the appropriate project in the Advertisement Record table. They do not contribute to the total number of projects in the pipeline shown on Beige Pages dashboards on pages 62, 71, and 72.

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.

This edition of the *Gray Notebook* contains the second of a series of project reporting changes. The new dashboards below and on page 72 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 March 31, 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	104	67%	94	74%	1	20%	9	38%
Total projects under way	42	27%	33	26%	3	60%	6	25%
In preconstruction phase	*22*		*20*		*2*		*0*	
In construction phase	*20*		*13*		*1*		*6*	
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	*3*		*3*		*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 March 31, 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	$3,424,551	88%	$3,175,890	94%	$132,787	45%	$115,874	55%
Actual expenditures, 2003 through March 31, 2010	$2,915,590	75%	$2,728,599	81%	$86,341	29%	$100,650	48%

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 Programs

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

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

Status as of March 31, 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	122	49%	116	51%	0	0%	6	40%
Total projects under way	107	43%	101	44%	1	25%	5	33%
In preconstruction phase	*57*		*55*		*1*		*1*	
In construction phase	*50*		*46*		*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*	
Preconstruction starts within 6 months	*0*		*0*		*0*		*0*	
Construction starts within 6 months	*0*		*10*		*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 March 31, 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	$3,144,779	44%	$3,011,091	45%	$67,234	36%	$66,454	56%
Actual expenditures, 2005 through March 31, 2010	$1,846,879	26%	$1,763,019	26%	$31,008	17%	$52,852	45%

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 February 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 February 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 10.8%. 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.

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

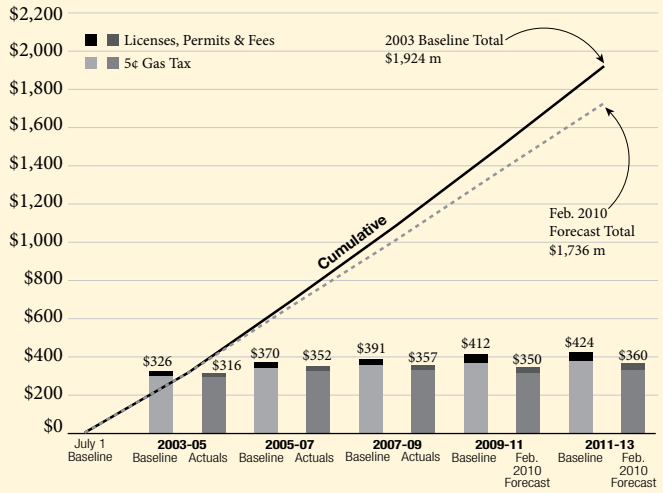
Deposited into the Multimodal Account (established in 2000)

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

Multimodal Account projections for the vehicle sales tax are lower than the baseline forecast resulting in a decrease of 14.6% in the ten-year outlook. This decrease is primarily due to the decline in vehicle sales.

Transportation 2003 (Nickel) account revenue forecast

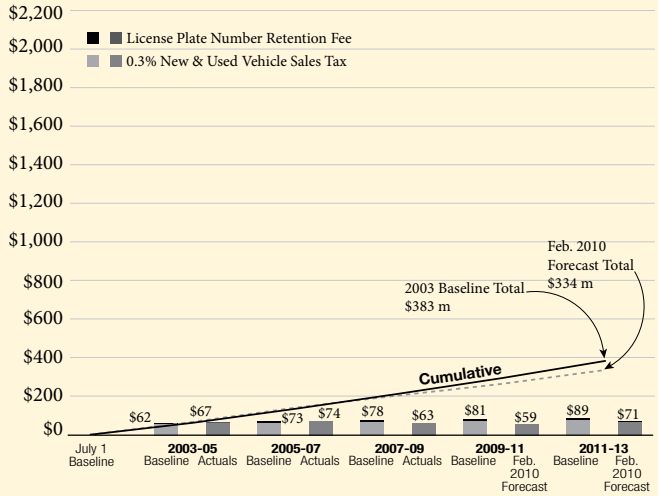
March 2003 Legislative baseline compared to the February 2010 Transportation Revenue Forecast Council
Dollars in millions



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

Multimodal Account (2003 Package) revenue forecast

March 2003 Legislative baseline compared to the February 2010 Transportation Revenue Forecast Council
Dollars in millions



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

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

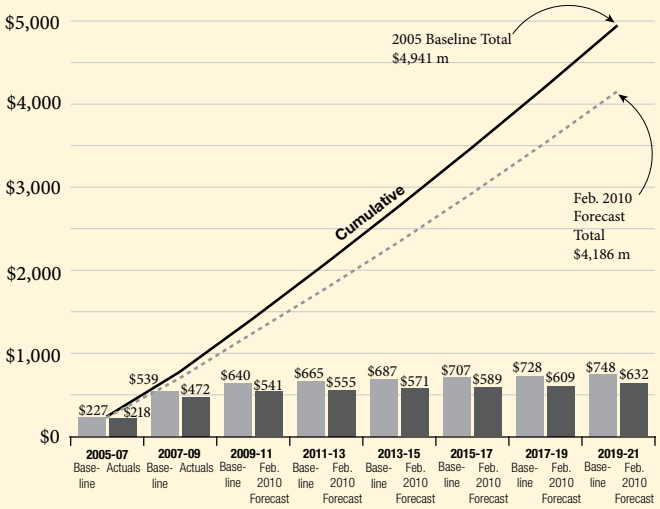
Revenue forecast update

The accompanying chart compares the current February 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 February 2010 forecast for gas tax receipts over the 16-year period decreased by 18.0% 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 February 2010 Transportation Revenue Forecast Council
Dollars in millions



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

2005 Transportation Funding 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 motor homes
- Fee increases to various driver's license services
  - Original and Renewal License Application increased to $20 (previously $10)
  - Identicards, Driver Permits and Agricultural Permits increased to $20 (previously $15)
  - Commercial Driver License and Renewal increased to $30 (previously $20)
  - License Reinstatement 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 January 1, 2010 and March 31, 2010, WSDOT completed three projects that increased capacity, improved bridges, 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 close-out 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 2009 supplemental budget. This report includes the original project appropriation from the 2003 and 2005 budgets to explain changes in project budgets over time. The graph offers 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.

More information on completed projects is available online at www.wsdot.wa.gov/projects. For completed Recovery Act projects, see page 57.

SR 539/Ten Mile Road to SR 546 - Widening

This project widened a two-lane highway to four lanes. It also added four wide roundabouts, divided a median with cable barrier, and replaced four bridges on SR 539, including a new steel truss bridge over the Nooksack River. Construction crews finished the project in time to open the roads for the Winter Olympics in Vancouver, B.C. Paving, painting, and planting work will be completed this summer.

Project's benefits: Drivers on this route experience congestion and delay. The project improved mobility for motorists and truck drivers, and addressed public concerns about safety by incorporating roundabouts.

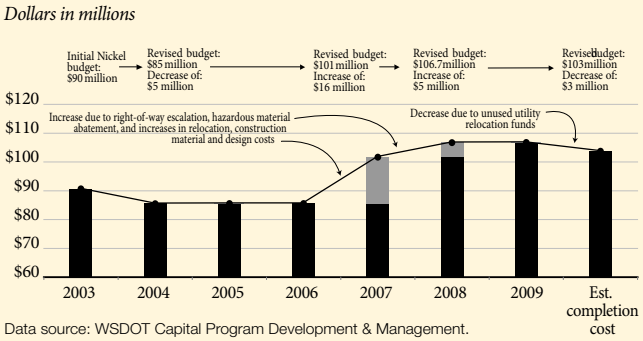
Project's highlights or challenges: The project had to be completed before the 2010 Winter Olympics in Vancouver, which advanced the schedule and impacted project delivery. Higher property values and relocation costs increased the cost of right-of-way by $17 million. The project completion was delayed due to steel availability for the bridge construction.

Budget performance: The project cost $103.7 million, below the last approved budget of $106.7 million, due to lower-than-anticipated utility costs. The estimated cost at completion was $13 million higher than the original FY 2003 budget of $90 million due to higher right-of-way and construction material costs.

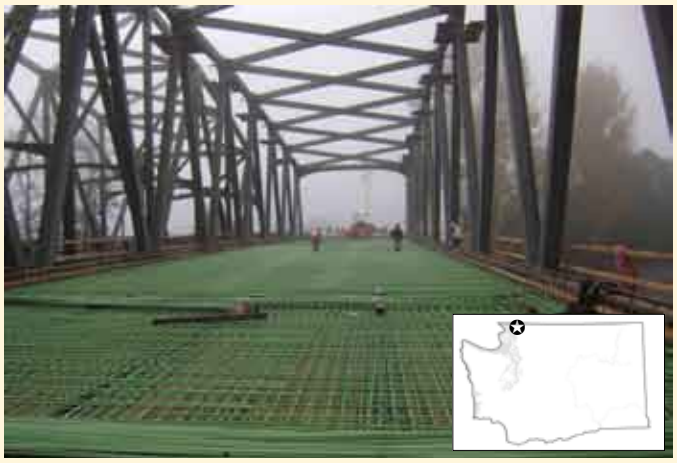
Schedule performance: The project was operationally complete in February 2010, one quarter late.

SR 539/Ten Mile Rd to SR 546 – Widening (Whatcom)

Annual project budget from conception to estimated cost at completion



Data source: WSDOT Capital Program Development & Management.



The SR 539 widening project included building a new steel truss bridge over the Nooksack River.

WSDOT's Capital Project Delivery Program

Completed Projects: Delivering performance and system benefits

SR 4/Climbing Lane to Coal Creek Road vicinity – Upgrade guardrail (Cowlitz and Wahkiakum)

This project improved guardrail features to meet current standards on a 27-mile stretch of SR 4 between Skamokawa in Wahkiakum County and Coal Creek Road in Cowlitz County. The guardrail improvements replaced existing guardrail and cable barriers, restored roadway embankments and asphalt curbs under guardrail, and retrofitted bridges with improved railings. Restored sections were also paved.

Project's benefits: The project is intended to reduce the severity of run-off-the-road collisions. A recent statewide analysis found that this section of SR 4 was in need of roadside safety enhancements and preservation.

Highlights and challenges: The project was combined for efficiencies with SR 4/Skamokawa to Coal Creek Road - Paving and guardrail and a local project, Wahkiakum County's Pave West Little Island Road, that received $200,000 in Recovery Act funds. The related projects were operationally complete in December 2009.

Budget performance: The project cost $1.9 million at completion, which is the same as the original budget.

Map: SR 4/Climbing lane to Coal Creek Rd vicinity – Upgrade guardrail (Cowlitz and Wahkiakum)

Schedule performance: The project was complete in March 2010, one quarter behind the last approved schedule, due to a guardrail materials.

Central King to South Snohomish Bridges – Seismic (King and Snohomish)

This project performed seismic retrofits on 19 existing bridges located in King County and south Snohomish County to minimize and avoid catastrophic bridge failures.

Project's benefits: Earthquakes pose substantial risks to transportation infrastructure in Washington. Seismic improvements to selected bridges along I-5 in Tukwila and Lynnwood are intended to reduce the risk of serious damage or failure during an earthquake. The project's retrofits will reduce potential damage from earthquakes, and improve motorist and pedestrian safety.

Project's highlights or challenges: The project is part of WSDOT's Seismic Retrofit Program, which strengthens bridges and structures statewide to resist future earthquakes. About 900 bridges are scheduled for improvement.

Budget performance: The project cost $10.4 million at completion, $2.4 million below the last approved budget due in part to a low favorable bid 9% below the Engineer's Estimate.

Schedule performance: The project was completed in March 2010, three quarters ahead of the last legislatively approved schedule.

Project Spotlight: SR 410 Nile Valley Landslide Detours

Over the course of the morning on October 11, 2009, a massive landslide destroyed a half-mile of SR 410 about 28 miles west of Yakima. It changed the landscape of the Nile Valley, as millions of cubic yards of earth slid downhill, covering SR 410 in 25 to 30 feet of rock and soil, and pushing the Naches River out of its bed. Water flooded homes and swamped Nile Loop Road, a county road parallel to SR 410.

WSDOT and other agencies immediately responded to the natural disaster. WSDOT closed 47 miles of SR 410, while Yakima County officials evacuated residents and closed the damaged sections of Nile Loop Road. For several days, the only way out of the area for the 600 residents and business owners west of the landslide was to travel west over Chinook Pass, making Yakima an 82-mile trip.

WSDOT immediately applied for Federal Highway Administration 'quick release' National Transportation Recovery Strategy funds so that – just two days after the landslide – the agency's emergency contractor, Selland Construction, Inc., could construct an emergency access route on Nile Loop Road. The emergency route allowed experts to assess damage, monitor the landslide and river, and evaluate options for a longer-term solution.

The emergency route was a temporary fix that was potentially at risk from the unstable slope as well as seasonal river flooding. WSDOT opted to build a new 4,000-foot-long section of the SR 410 detour along the valley, through a field, and away from both the landslide and river channel. The agency's goal was to open a sturdy route by Thanksgiving that would withstand winter weather and potential flooding. Construction of the detour called for 50 pieces of equipment, moving more than 32,000 of cubic yards of material.

Meanwhile, the Yakima County Flood Control Zone District worked on creating a new river channel, more stable than the one the river carved for itself. After snows forced closure of Chinook Pass earlier than usual, and weather forecasts predicted flood conditions on the Naches, Yakima County was under pressure to direct the river into the newly created channel. Officials opted to breach the emergency route in two locations earlier than planned, and WSDOT had to shift traffic onto the unpaved detour.

By working seven days a week, 14 hours a day, WSDOT and contractor crews finished building the SR 410 detour 45 days after the landslide, one day earlier than the Thanksgiving deadline. WSDOT estimates that the total cost for restoring temporary access to the SR 410 corridor and completing the detour will be about $13 million.

Next steps

During construction of the detour, geotechnical experts monitored the landslide stability with radar and ground-based LiDAR (Light Detection and Ranging terrain mapping system) Since October, crews drilled more than 20 holes into the landslide as deep a 500 feet to sample material and install monitoring devices.

This work was complete in December 2009; the draft geotechnical findings were released in mid-April. In April, WSDOT hosted an open house meeting to seek input from Nile Valley residents and businesses on SR 410's permanent location. Options include upgrading the existing Nile Loop Road to state highway standards, building a new route with new bridges crossing the river, or building the roadway over or around the toe of the landslide.

SR 410 Nile Valley Landslide Detours Highlights

- WSDOT applied for National Transportation Recovery Strategy funds two days after the slide, enabling it to build an emergency access road.
- The winter-durable detour was 4,000 feet long. It was constructed in 45 days.
- Estimated cost for restoring temporary access to the SR 410 corridor is $13 million.
- WSDOT is working with local communities to develop a permanent route for SR 410.

Top: WSDOT engineers survey what remains of SR 410. Bottom: The new detour, ready for winter weather.

Special Report: New Ferry Construction

Project Highlights:

- Construction continues on the new 64-car ferry *Chetzemoka*, preparing for a summer 2010 delivery.
- Construction highlights this quarter:
  - January: Moved *Chetzemoka* out of construction hall onto drydock.
  - March: *Chetzemoka* floated for the first time.
  - March: Steel and aluminum cutting began for the second Kwa-di Tabil Class ferry.
- For more information: www.wsdot.wa.gov/Projects/Ferries/64CarFerries.

New ferries are helping WSDOT replace its aging fleet. WSDOT has been without a state-owned ferry to serve the challenging Port Townsend/Keystone route since November 2007. The narrow, shallow Keystone Harbor prevents the use of a larger ferry, but the new 64-car ferry design is very maneuverable for its size and should reduce the number of weather-related cancellations to ensure safe, reliable ferry service.

The contract to construct the first 64-car ferry for $65.5 million was awarded to Todd Pacific Shipyards in December 2008. The *Chetzemoka* is scheduled for completion in summer 2010.

In January, WSDOT announced Kwa-di Tabil is the vessel classification name of its new 64-car ferries. Kwa-di Tabil, (pronounced kwah DEE tah-bale) means "little boat" in the Quileute language. A fourth grade class at Blue Heron Middle School in Port Townsend submitted the winning entry in a contest to name the new class.

Construction processes and next steps on *Chetzemoka*

The *Chetzemoka* was moved out of the construction building onto a drydock at Todd Pacific Shipyards in Seattle on January 16. The superstructure sections arrived by barge from Nichols Brothers Boat Builders on Whidbey Island and were installed on the hull. All of the vessel's underwater components were installed while it was in drydock, including rudders, propellers, and shafting. Shipyard crews also installed windows, exterior railings, and interior ladders, and painted the exterior of the vessel. The *Chetzemoka* was floated on March 2 and was towed to a pier at Todd to continue outfitting.

In March, crews continued installing interior components, including piping systems, electrical equipment and cables, lighting, ventilation equipment and ducts, and insulation. The keel coolers and raw water piping systems were completed, and work continued on the exhaust and salt water systems. At each stage of work, crews tested various systems on the vessel.

The *Chetzemoka* was towed to Everett Shipyard on April 3, where work will continue to complete outfitting and system testing prior to dock trials and sea trials.

Second Kwa-di Tabil Class vessel begins construction in March

Todd, Nichols Brothers, and Jesse Engineering began production of the second Kwa-di Tabil Class (64-car) ferry. Steel and aluminum cutting began in early March. The first weld inspections occurred on March 16. Todd began fabrication of the first assemblies and panels in early April, with the keel laying occurring on April 19.

The Chetzemoka, propelled by the tugboat Westrac, makes its way past Seattle to Everett.

Special Report: Tacoma Pierce County HOV Program Quarterly Update

I-5/SR 16: Westbound Nalley Valley construction progresses

Construction on the new westbound Nalley Valley viaduct continues at an aggressive pace. Crews have completed the temporary SR 16 westbound roadway and bridges, which allowed westbound SR 16 traffic to move off the old westbound viaduct and onto the temporary structure. This traffic shift was crucial for allowing viaduct demolition work and subsequent reconstruction of the SR 16/Sprague Avenue interchange.

As of March 2010, crews have drilled 69 of 84 shafts, constructed 68 of 77 columns, and completed 23 of 34 bridge caps. Over 40%, or 48 of 111 segments, of the new bridge that will connect northbound I-5 to westbound SR 16 are complete. Work has begun on setting bridge girders across the Nalley Valley, and pouring concrete for 13 of 47 bridge deck spans is complete. Working with the HOV design office, the project team has revised the Scott Pierson pedestrian path and slope grading, which eliminated the need to build two retaining walls. Additional project savings were realized by working with the contractor to modify the bridge girders.

The design and construction offices are working together to proactively address and correct conflicts in elevation, drainage structures, and bridge and roadway plans. The focus is on correcting the designs while minimizing the effect on the project schedule and budget.

I-5: Port of Tacoma Road to King County Line – HOV construction continues

Construction on the new northbound and southbound HOV lanes along a three-mile stretch of I-5 continues. I-5 traffic lanes remain narrowed to 11 feet each to provide construction zones both in the highway median and shoulder areas.

On the south end of the project, traffic has moved closer to the highway median to create a construction zone beyond the highway shoulder. WSDOT is building soldier pile walls to allow for the widening of ramps and installation of electrical hardware that will support traffic cameras, counters, illumination, and ramp signals.

On the north half of the project, crews continue to work in the highway median to widen the two West Hylebos Creek bridges, install variable-height barriers, and prepare for surfacing and paving the median.

More than 160 piles have been installed within the project limits; the final 17 piles will be driven after traffic has again been shifted to temporary lanes. The project is scheduled for completion in late 2011.

Initial construction work on the *I-5: Portland Avenue to Port of Tacoma Road – Northbound HOV Stage 1* project

Early construction work for the northbound Stage 1 project will be contracted separately and is scheduled for advertisement in mid-April. WSDOT expects to reduce construction risks and maximize resources for the entire northbound project by completing this work earlier than scheduled. Stage 1 work includes widening the Bay Street and I-5 Portland Avenue bridges, making ground improvements and building retaining walls for the future Puyallup River bridges, and lowering the profile of Portland Avenue under I-5 to maintain vertical clearance.

Giant girders are an essential component of the Westbound Nalley Valley project.

Project Highlights

Nalley Valley Construction:
- 82% or 69 of 84 shafts completed.
- 88% or 68 of 77 columns completed.
- 68% or 23 of 34 bridge caps completed.

Port of Tacoma to King Co. Line Construction:
- 95% or 160 of 177 piles driven.

Early construction work on Stage 1 of the I-5: Portland Avenue to Port of Tacoma Road project will be advertised in mid-April 2010.

For more information: www.wsdot.wa.gov/projects/PiercecountyHOV/ or www.tacomatraffic.com.

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 81 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 86-89.

It is important to note that while the number of projects appearing on the Watch List has 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 500/St John's Boulevard – Build interchange (Clark)	Highway	Environmental: permitting; Right-of-way: land acquisition
SR 28/Junction US 2 and US 97 to 9th Street, Stage 1 – New alignment (Douglas)	Highway	Right-of-way: land acquisition
SR 99/Aurora Ave – George Washington Memorial Bridge – Seismic retrofit (King)	Highway	Design: alternatives
SR 900/SE 78th St vicinity to I-90 vicinity – Widening and HOV (King)	Highway	Construction: weather
I-5/Grand Mound to Maytown – Add lanes (Thurston)	Highway	Construction: cost increase of materials, timing problems
Updates to Watch List		
SR 14/Camas Washougal – Add lanes and build interchange (Clark)	Highway	Coordination: inter-agency issues; Environmental: permitting; Right-of-way: land acquisition
I-5/Rush Road to 13th Street – Add lanes (Lewis)	Highway	Construction: cost increase of materials
SR 161/24th St E to Jovita – Add lanes (Pierce)	Highways	Environmental: mitigation
SR 529/Ebey Slough Bridge – Replace bridge (Snohomish)	Highway	Environmental: permitting; Design: alternatives
SR 522/Snohomish River Bridge to US 2 – Add lanes (Snohomish)	Highway	Environmental: permitting; Design: alternatives
SR 9/Pilchuck Creek – Replace bridge (Snohomish)	Highway	Design: design element changes
US 12/SR 124 Intersection – Build interchange (Walla Walla)	Highway	Construction: timing problems
SR 823/Selah vicinity – Reroute highway (Yakima)	Highways	Right-of-way: land acquisition
Stanwood –New station, siding upgrade (Snohomish)	Rail	Design: new Federal requirements; Environmental: permitting
Removed from Watch List		
SR 99/Spokane Street Bridge – Replace bridge approach (King)	Highway	Coordination: inter-agency issues
SR 530/Sauk River Bank Erosion – Realign roadway (Skagit)	Highway	Design: alternatives
• SR 530/Sauk River (Site #2) – Stabilize river bank (Skagit)		Design: alternatives
SR 539/Tenmile Rd to SR 546 (Whatcom)	Highway	Construction: site problems
SR 542/Nooksack River – Redirect river and realign roadway (Whatcom)	Highway	Environmental: reviews & approvals, permitting; Design: utilities

Source: Capital Program Development & Management, WSDOT Regions.

Added to Watch List

SR 500/St John's Boulevard – Build interchange (Clark)

This project, budgeted for $57 million, will replace the intersection at SR 500 and St. John's Boulevard with a new interchange. The complex construction elements include tall walls, high-voltage power lines and utility relocations, culverts, and a multi-use trail. When complete, it will improve safety and traffic flow.

The project is in the design phase; the schedule is at risk. While currently on time, WSDOT designers have encountered several design and constructability challenges, such as moving utilities, constructing ramp bridges under high voltage power lines, and protecting a culvert. Following a Value Engineering study, WSDOT revised certain design elements to keep the project within budget.

The environmental documentation phase was initially completed in 2002 with an Environmental Assessment. In 2008, updates to the design meant new parcels of land were needed for right-of-way. These acquisitions led to additional environmental justice analysis, several months of public consultation, and negotiation with the Federal Highway Administration (FHWA) on the appropriate level of documentation required before WSDOT could apply for new permits.

The FHWA agreed to WSDOT's final environmental documentation on February 2, 2010. WSDOT can now apply for the final permits, and expects that the advertisement date will be

Watch List: Projects with schedule or budget concerns

delayed by four to six months, to fall 2010, while those applications are processed.

SR 28/Junction US 2 and US 97 to 9th Street, Stage 1 – New alignment (Douglas)

Related project: SR 28/ US 2/97 Intersection improvements – Box culvert

This multi-phase project, budgeted for $54.5 million, will extend Eastmont Avenue to the junction of US 2/97 and SR 28 and construct intersection improvements to improve traffic flow. SR 28 is heavily congested due to both local vehicles and through traffic connecting to US 2/97. When completed, an additional north-south arterial will connect the northern and southern ends of the Wenatchee Valley, reducing congestion and congestion-related collisions on SR 28.

Of the project's seven stages, five are directly administered by Douglas County and two by WSDOT; one WSDOT stage was completed in early April. The schedule is at risk.

One of the Douglas County stages has been delayed due to problems acquiring a parcel of land needed for the new right-of-way. The county is continuing negotiations and the property owner has verbally agreed to a settlement, but the operationally complete date has been delayed by one year, to October 2012.

WSDOT and Douglas County are continuing to build related contracts not affected by the property acquisition.

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.

The project is in the preliminary engineering phase. The budget is at risk; the schedule was at risk. As reported in the December 2008 *Gray Notebook 32*, WSDOT decided to test a new technology that uses a fiber-reinforced polymer (FRP) to enhance structural stability. Washington State University (WSU) has tested the effectiveness of this technology on a scale model of the bridge columns and completed enough testing for WSDOT to conclude that wrapping the columns with FRP is feasible.

With the retrofit method confirmed, WSDOT has begun the final structural analysis of the bridge. The analysis will verify that all retrofitted bridge elements will perform at acceptable levels during an earthquake, and provide an updated construction cost estimate. Results are expected in late spring 2010. The extensive testing has not further affected the schedule, and the project remains on schedule for advertisement in January 2011 and operational completion in early 2013.

Project costs have been updated to reflect current project knowledge. The final design cost is estimated at $1.5 million, the construction cost between $13 and $16.5 million, depending on the results of the structural analysis. The project's total cost range is between $15 and $18.5 million, $5.7 to $9.2 million higher than the $9.3 million budget that was based on the pre-testing cost estimate.

SR 900/SE 78th vicinity to I-90 vicinity –Widening and HOV lanes (King)

This project, budgeted for $44.9 million, will widen SR 900, provide shoulders for the I-90 westbound off-ramp, add turn lanes to an intersection, add HOV lanes, and remove fish barrier culverts. When completed, the project will reduce congestion, and improve traffic flow and safety.

The project is in the construction phase; the schedule is at risk. The operationally complete date was delayed from October 2009 to April 2010 when the contractor was unable to complete the final paving due to wet weather. WSDOT expects that the final work of paving, striping, and planting will be completed in April, although the road may be open to traffic while work is ongoing.

I-5/Grand Mound to Maytown Stage One – Add lanes (Thurston)

This project, budgeted for $90 million, will construct one additional northbound lane and one southbound lane from south of US 12 at Grand Mound Interchange to the interchange at Maytown. Work will include replacing several bridges and extending both on- and off-ramps for improved safety.

The project is in the construction phase; the schedule is at risk. Bad weather during the 2008-2009 construction season had already affected the number of working days available to the contractor. Extra staging work required during construction for traffic management and at the Maytown Bridge added to the delay in the early months of 2010. The operationally complete date has been delayed from June 2010 to October 2010.

Updates to Watch List

SR 14/Camas Washougal – Add lanes & build interchange (Clark)

This project, budgeted for $57 million, will improve safety and relieve congestion on SR 14 from 6th Avenue to east of Union

Watch List: Projects with schedule or budget concerns

Street (SR 500). The project will widen SR 14 to four lanes from Lady Island through 2nd Avenue, with work on both the East and West Camas Slough bridges.

The project is in the design phase; as reported in the December 2009 *Gray Notebook 36*, the schedule is at risk. Problems with right-of-way acquisition, local permitting requirements, and consequent environmental constraints on the construction timeline will delay advertisement from April 2010 to perhaps as late as October 2010.

WSDOT cannot apply for a City of Camas Shoreline permit until after all properties are acquired or a Possesion & Use permit is obtained. This is a unique requirement by a local agency, and WSDOT must develop and implement a new process to comply with it properly. Additionally, one property may need to go through condemnation proceedings which will delay the process by several months.

A six-month delay in advertisement will delay most of the 2010 work to 2011, but the project should still be completed on schedule in the fall of 2012.

I-5/Rush Road to 13th Street – Add lanes (Lewis)

This project, budgeted for $53 million, will improve a 3.7 mile section of I-5 from Rush Road to 13th Street in Lewis County. By constructing an additional lane in each direction and a new interchange at LaBree Road, the project will reduce congestion and improve traffic flow.

As reported in the December 2009 *Gray Notebook 36*, WSDOT is evaluating cost adjustments for completed bid items. The evaluation process can be lengthy and may add further costs to the project. It is now anticipated that the final contract cost will be determined by May 2010.

SR161/24th St E to Jovita – Add lanes (Pierce)

This project, budgeted for $35.3 million (incorrectly identified as budgeted for $34 million in *Gray Notebook 36*) will improve mobility in 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 remains at risk. As reported in the December 2009 *Gray Notebook 36*, WSDOT is still seeking a satisfactory wetland mitigation site. The advertisement date is further delayed from April 2010 to August 2010, and the operationally complete date has been delayed from March 2011 to July 2011. WSDOT will provide more information closer to the new advertisement date.

SR 9/Pilchuck Creek – Replace bridge (Snohomish)

This project, budgeted for $6.2 million, will replace the existing 17-foot-wide bridge over Pilchuck Creek with a wider bridge meeting current design standards. Although rated 'structurally deficient,' the existing bridge is safe to cross.

About 16% of the project's design phase is complete; the budget and schedule are at risk. Based on the December 2009 Value Engineering/Cost Risk Assessment (VE/CRA) workshop recommendations, WSDOT will now realign the highway west of its current location to improve safety by providing longer sight-line distances and to minimize wetland impacts.

This project's current total cost is estimated at $17.8 million, $11.6 million higher than the current budget. Design costs are currently estimated at $2.3 million, $1.1 million more than the $1.2 million design budget. Construction costs have increased to $14.9 million, $10.4 million more than the $4.5 million construction budget, due to the costs of relocating the bridge. The right-of-way budget of $500,000 is being re-evaluated based on the selected design. However, the project will be able to mitigate for its wetland impacts at an existing site near Stanwood.

Schedule risks have been identified. The current January 2012 advertisement date could be delayed to allow time if environmental documentation and required permits are not complete. Even if the 2012 ad date is met, the operationally complete date will be delayed by seven months, to October 2013 from March 2013, to allow in-water work within the allowable fish passage window.

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 September 2009 *Gray Notebook 35*, the project has been split into two stages for construction. Stage 1 constructs a flyover ramp at the SR 522/US 2 interchange, and is on schedule for advertisement in April 2010. It is expected to be operationally complete by late fall 2011.

The design phase for Stage 2 is about 80% complete. It will constructs improvements from the Snohomish River Bridge to the new interchange. As reported in the December 2009 *Gray Notebook 36*, the schedule continues to be at risk. WSDOT has applied for the necessary shoreline permit; it may take up to

Watch List: Projects with schedule or budget concerns

eight months for the application to be approved. WSDOT is also waiting for a decision from the Washington Department of Fish and Wildlife (WDFW) on allowing additional time for in-water work. Stage 2 is expected to be operationally complete, on schedule, by 2014.

More information will be provided next quarter.

SR 529/Ebey Slough Bridge – Replace bridge (Snohomish)

This project, budgeted for $49.5 million, will replace the old Ebey Slough Bridge with one that meets current design standards.

This project is in the design phase. As reported in the December 2009 *Gray Notebook 36*, the budget and schedule were at risk. The 2010 Legislature approved an additional $2.5 million in funding to address costs associated with wetlands mitigation and construction cost inflation, bringing the total project budget to $49.5 million. WSDOT completed the required Environmental Impact Statement (EIS), and all other permits have been issued.

The project's schedule remains at risk: the advertisement date has been delayed from March to April 2010. This allows WSDOT time to make additional changes to the bridge design that will meet structural requirements for weight and reduce construction noise as required by the Endangered Species Act.

The delay also gives WSDOT time to complete an analysis requested by the Environmental Protection Agency (EPA). The EPA asks that WSDOT analyze the amount of sediment disturbance from bridge construction activities which may in turn affect EPA's water quality monitoring of a nearby superfund cleanup site. When this analysis is completed, it should enable the U.S. Army Corps of Engineers (USACE) to finalize an outstanding permit that has been on hold pending the EPA's required testing.

If completing the EPA analysis work is delayed beyond April, the delay may affect how much in-water construction work can be achieved in the first construction season. A schedule update will be provided as information becomes available.

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 current budget is about $5 million less than the 2009 Transportation Budget because the Engineer's Estimate was reduced due to a favorable bidding climate.

The project is in the design phase; the schedule continues to be at risk. The pending land exchange to accommodate project impacts to the McNary National Wildlife Refuge, described in the June 2009 *Gray Notebook 34*, has not yet been completed. The advertisement date has been delayed three months, from February to April 2010.

If the land exchange is not completed in time for the April 2010 advertisement date, construction would also be delayed and the project would not be completed until fall 2012, 15 months later than scheduled in the 2009 Transportation Budget.

SR 823/Selah vicinity – Reroute highway (Yakima)

This project, budgeted for $11 million, will make improvements and provide an alternate route around Selah's business district to relieve congestion during peak commuting times. The current budget is $600,000 less than the 2009 Transportation Budget due to a lower Engineer's Estimate.

This project is in the design phase; the schedule is at risk. WSDOT has delayed project construction by one year due to ongoing right-of-way acquisition problems. As reported in the December 2009 *Gray Notebook 36*, WSDOT met the December 2009 advertisement date by changing the project's construction sequence to avoid parcels not yet acquired. WSDOT delayed the bid opening in January 2010 and pulled the project from advertisement on March 15, 2010 due to lack of progress in completing the acquisitions.

The project will be re-advertised in fall 2010, after the remaining right-of-way issues are resolved. Construction is scheduled to begin in spring 2011 and be operationally complete in July 2012, 13 months later than originally planned.

Rail updates to Watch List

Stanwood – New station,
Stanwood – Siding upgrade (Snohomish))

These two projects, budgeted for $21 million, will construct a new train platform to serve Amtrak *Cascades* passengers, and upgrade and extend the siding in Stanwood. As reported in the December 2009 *Gray Notebook 36*, the Stanwood Station has been completed.

The siding upgrade project is being constructed in two stages. The first stage is complete. Stage 2, the siding extension project, is in the design phase; both the schedule and the budget are at risk. As reported in the December 2009 *Gray Notebook 36*, construction on the siding extension was delayed pending the outcome of a cultural resource survey conducted by USACE

Watch List: Projects with schedule or budget concerns

and the issuance of environmental permits. WSDOT's 2010 budget request asked for the reappropriation of $1.1 million into the 2009-2011 biennium, to cover the costs associated with addressing contaminated soil on the station project site.

In December 2009, WSDOT received the 401 wetland permit from the Department of Ecology. In January 2010, the Stillaguamish Tribe met with WSDOT and USACE and the Tribe's concerns about project locations were resolved. In March, the Legislature approved WSDOT's request for the reappropriation. If WSDOT receives the 404 permit from USACE in May 2010, as anticipated, the remaining schedule and budget risks will be resolved and the project will be able to move forward.

Removed from Watch List

SR 99/Spokane St Bridge – Replace bridge approach (King)

This project, budgeted for $14.0 million, will replace the southernmost section of the Spokane Street Bridge. WSDOT has selected a lightweight structural fill material to replace the outdated timber pile supports.

The project is in the design phase. As reported in the December *Gray Notebook 36*, the schedule delay for advertisement and completion was approved in the 2010 Transportation Budget.

The Port of Seattle has requested a Freight Mobility Strategic Investment Board (FMSIB) grant application to cover the additional construction costs for the Port's requested access road. WSDOT anticipates FMSIB funding to be included in the 2011 budget proposal and appropriated in the 2011 legislative session in time for the fall 2011 advertisement.

More information will be provided when it becomes available after the 2011 legislative session.

SR 530/Sauk River Bank Erosion – Realign roadway (Skagit)

Related projects: SR 530/Sauk River (Site #2) – Stabilize river bank

This project on the Sauk River, where erosion threatened SR 530, was scheduled in two stages. Stage 1 realigns the highway away from the river; Stage 2 (SR 530/Sauk River Site #2) stabilizes and restores the riverbank and fish habitat by removing remnants of past emergency repairs. The Stage 2 project is already operationally complete and on budget.

The budget and schedule for Stage 1 were at risk. As reported in the December 2009 *Gray Notebook 36*, the project was on hold while WSDOT conducted a corridor study and it was reviewed by the Legislature. The study, completed in January 2010, supported the need for the Stage 1 road realignment. The 2010 Legislature approved the requested increase to the project's funding by $4.3 million to $8 million.

The requested change to the schedule to complete the study was already approved in the 2009 Legislative session, so WSDOT can now proceed to complete the design in time for advertisement in October 2010.

SR 539/Ten Mile Road to Badger Road — Widening (Whatcom)

This project, budgeted for $103.7 million, will construct one additional lane in each direction from Ten Mile Road to SR 546 near Lynden to reduce congestion and improve safety.

The project is about 90% complete and remains within budget. The budget was reduced from $106.7 million when certain potential risks did not occur.

As reported in the December 2009 *Gray Notebook 36*, the project was operationally complete in time to open four lanes to traffic for the February 2010 Winter Olympics in Vancouver, B.C. The highway is now reduced to two lanes in each direction in the vicinity of the Nooksack River so the contractor can complete work that could not be finished before the site was shut down for the winter. Final paving is expected in early April.

154229G SR 542/Nooksack River — Redirect river and realign roadway (Whatcom)

Related projects:
SR 542/Warnick Bluff site
SR 542/Bruce & Baptist creeks
SR 542/CED, E. Church Mountain Rd
SR 542/Gallup Creek Bridge replacement

This project, budgeted for $16.6 million, will address locations on SR 542 along the Nooksack River and its tributaries where repeated flooding has damaged the roadway. WSDOT will improve these locations through a combination of relocating the road and redirecting the river to prevent further erosion.

The East Church Mountain Road portion of this project was awarded in February 2010. Work began in mid-March with operational completion planned for October 2010.

As reported in the December 2009 *Gray Notebook 36*, advertisement for the Gallup Creek Bridge Replacement portion of the project was delayed to allow time to obtain environmental permits. The final permit has been received, and the project advertised in early March; it is expected to be operationally complete in fall 2011.

WSDOT was also able to resolve a problem involving a water line on the existing bridge. WSDOT and the water district have now signed an agreement to include the water line relocation work in the WSDOT contract.

Both projects are within budget.

WSDOT's Capital Project Delivery Programs

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.

PEF performance is reported at two levels

Six individually tracked projects

Six projects are reported individually due to their size or significance (see below and the following pages 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 page 89.
- Before & After results for selected types of projects such as highway safety. (For examples, please see the article on highway corridor safety, pp. 5-6).

Six individually tracked Pre-Existing Funds (PEF) projects: results through March 31, 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		Scheduled date 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	√	Sep-07 complete	√
• US 2/43rd Ave SE vicinity to 50th Ave SE vicinity – Bridge rehabilitation		$26.7 *2009*	Jan-09	√	Aug-10		Dec-11	√ Early
SR 202/SR 520 to Sahalee Way — Widening (King)	$36.9 *2001-03*	$82.7 *2009*	May-98	√	Aug-05	√	Feb-08	√ Early
SR 539/Horton Road to Tenmile Road — Widen to five lanes (Whatcom)	$32.0 *2001-03*	$66.3 *2009*	Oct-90	√	Jan-07	√	Nov-08	√
SR 28/E End of the George Sellar Bridge — Construct bypass (Douglas)	$9.4 *2004*	$29.3 *2009*	May-04	√	Jul-10	Early	Dec-11	
The project advertised early but the construction phase has been delayed to balance the financial plan for the 2009-11 biennium budget process.								
US 101/Purdy Creek Bridge — Replace bridge (Mason)	$6.0 *2004*	$13.3 *2009*	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, but construction was completed one month earlier than the scheduled September 2009.								
SR 303/Manette Bridge Bremerton vicinity — Replace bridge (Kitsap)	$25.5 *2002*	$88.7 *2009*	Sep-96	√	Mar-10	√	Jun-13	
Construction phase has been delayed to balance the financial plan for the 2009-11 biennium budget process. The project cost estimate has increased to accommodate environmental requirements and cost escalation of material above normal inflation.								

Data source: WSDOT Capital Program Development & Management.

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

Forty PEF projects advertised as of March 31, 2010

The 2009-11 Highway Construction Program includes a commitment to advertise 99 Pre-Existing Funds (PEF) projects in the current biennium. Forty projects were advertised through the third quarter ending March 31, 2010. Of the 36 projects planned for advertisement through this quarter, 11 were delayed to future quarters of this biennium, none were delayed to future biennia, and one project has been deleted.

Of the 14 planned PEF advertisements scheduled for this quarter, six was advertised as scheduled. Seven were delayed to later in this biennium, none were deferred to a future biennium, and none were deleted. In addition, six projects advanced from a later quarter and eight projects delayed from a previous quarter were advertised in the quarter; one emergent project was advertised.

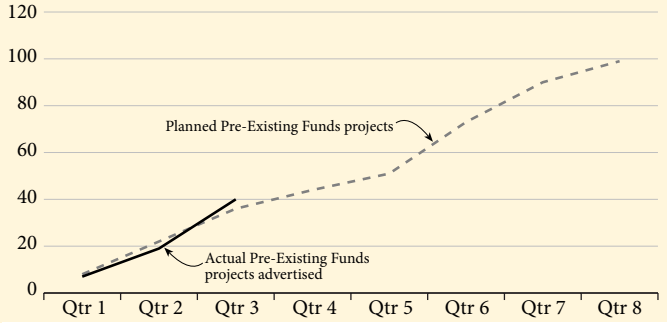
Pre-Existing Funds projects: Biennial progress
July 1, 2009 through March 31, 2010; Dollars in millions

WSDOT total award estimate*:	$65.5
Actual total award amount*:	**$52.3**
Projects advertised (see page xxx for definitions)	
As scheduled	13
Early	9
Late	15
Emergent	3
Total projects advertised through March 31, 2010	**40**
Projects delayed (delayed within the biennium)	11
Projects deferred (delayed out of the biennium)	0
Projects deleted	1

Data source: WSDOT Capital Program Development & Management.

* In cases where WSDOT's estimate and award amounts 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.

Pre-Existing Funds projects construction program
Planned vs. actual number of projects advertised
2009-2011 biennium, quarter ending March 31, 2010



Data source: WSDOT Capital Program Development & Management.

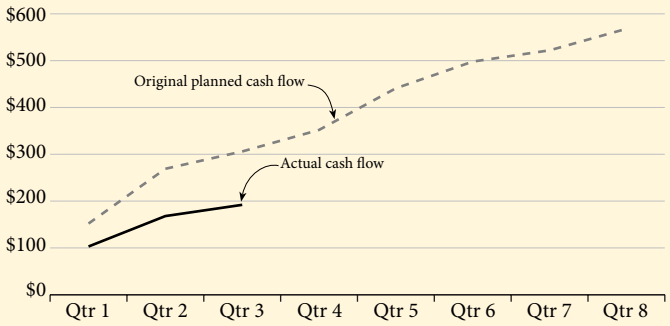
Paying for the Projects: Financial Information

WSDOT submitted an expenditure plan to the Legislature for the third quarter of the biennium totaling approximately $425 million. As of March 31, 2010, actual expenditures totaled $231 million, a variance of about $193 million, or 46%, from the biennium plan. The variance for the Highway Construction Program was divided between the Improvement and Preservation programs.

The Preservation Program planned cash flow was $306 million, and actual expenditures were $192 million. This was $114 million under plan, or 37%.

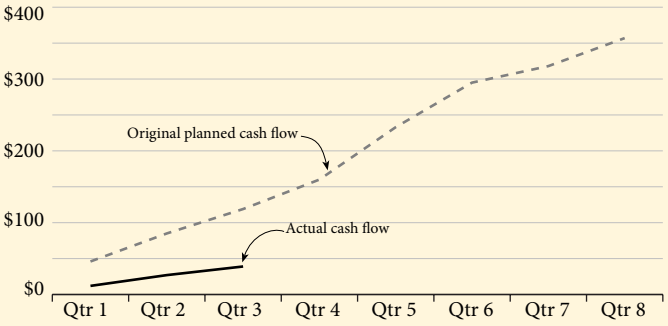
The Improvement Program planned cash flow was $119 million, and actual expenditures were $39 million. This was approximately $80 million under plan, or 67%.

Pre-Existing Funds preservation program cash flow
Planned vs. actual expenditures
2009-2011 biennium, quarter ending March 31, 2010
Dollars in millions



Data source: WSDOT Capital Program Development & Management.

Pre-Existing Funds improvement program cash flow
Planned vs. actual expenditures
2009-2011 biennium, quarter ending March 31, 2010
Dollars in millions



Data source: WSDOT Capital Program Development & Management.

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

January 1 – March 31, 2010

Project description	Advertised as scheduled
Olympic Region Centerline Rumble Strips 2009 – Safety Project advertisement delayed to June 2010 to allow time for completion of Biological Assessment and NEPA documentation.	Delayed
US 2/Safety improvements	√
SR 4/Germany Creek vicinity – Rock scaling This slope was identified by HQ Geotechnical branch for inclusion in the statewide risk reduction rock slope scaling initiative.	√
I-5/SR 121 to north of Tumwater Blvd – Paving Advertisement date delayed one year, from February 2010 to February 2011, so that this project could be combined with an adjoining project for construction efficiencies.	Delayed
I-5/Thorn Ln to 47th Ave SW – Median Barrier Replacement	Early
US 12/Tank Farm Rd to SR 124 – Paving	√
SR 16/Tacoma Narrows Bridge Phase 1 – Electrical Advertisement date was deferred from June 2009 to March 2010 to coincide with the old bridge closure.	Late
SR 22/Toppenish to SR 223 – Chip Seal Advertisement date was deferred from February 2007 to March 2010, to balance the financial plan for the proposed 2007 budget.	Late
SR 24/SR 240 vicinity – Chip seal	Advanced
SR 26/Royal City eastward – Seal	Advanced
SR 28/E Wenatchee to Rock Island – Pave	Late
I-82/Terrace Heights off-ramp – Improvements	Late
I-90/Sunset interchange modifications – Modify facility to full access interchange Advertisement date delay is due to design change from wall contraction to fill slope construction to limit required permits and manage costs.	Late
I-90/Mt Baker Tunnel & Mercer Island Lid – PLC replacement Advertisement date was delayed to insure compatibility of the Programmable Logic Controllers with the new computer system that is near completion under the I-90 Tunnels VAX Replacement project, which will upgrade the original servers interface to latest standards.	Late
I-90/Lake Easton vicinity to Big Creek Br vicinity eastbound – Replace/Rehab concrete Advertisement date was deferred from April 2009 to March 2010, due to delays in completion of environmental documentation.	Late
US 97/Okanogan to Riverside – Seal This project is receiving federal Recovery Act funding.	Advanced
US 97/Pateros South – Seal This project is receiving federal Recovery Act funding.	Emergent
US 97/Satus Creek Bridge – Bridge replacement Advertisement date has been delayed to October 2011 to allow time for negotiation with Yakama Nation so that WSDOT can perform the survey and geotechnical work needed to complete revised alignment.	Delayed
US 97/Satus Creek vicinity – Paving	Delayed
US 97/Satus Creek vicinity – Safety Work	Delayed
SR 99/I-5 to Hylebos Creek – Paving Advertisement date has been delayed to February 2011 to minimize traffic conflicts with I-5/Port of Tacoma to King County Line–HOV project work.	Delayed
SR 112/Murphy Rd to Charlie Creek-Weel Rd – Pedestrian safety Originally one of three components in one project, design issues required this component become a stand-alone project, and advertise separately.	Late
SR 240/SR 24 to Hagen-Robertson Rd intersection – Chip seal	Advanced

Pre-Existing Funds (PEF) Projects: Advertisement record

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

January 1 – March 31, 2010

Project description	Advertised as scheduled
SR 303/Manette Bridge Bremerton vicinity – Replace bridge The project's original advertisement and construction were rescheduled to balance the 2007-09 financial plan. The operationally complete date is now scheduled for June 2013.	√
US 395/Spokane city limits to Stevens county line – HMA paving and safety	√
US 395/Wandermere to vicinity Half Moon Rd – Median barrier	Advanced
SR 433/Lewis and Clark Bridge – Superstructure painting	√
SR 507/vicinity East Gate Rd to 208th St E – Safety Project design is on hold pending receipt of the hydraulic report; preliminary engineering will resume in late spring 2010, with a new ad date to be determined.	Delayed
SR 516/160th Avenue SE to Covington city limits – Paving Advertisement was delayed in December 2007 to avoid conflicting with multiple, simultaneous City of Covington projects. The project has now advertised eight months earlier than anticipated.	Advanced

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

Consultant Use Highlights

- WSDOT consultant spending totaled $99.5 million between October 1, 2009 and March 31, 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.

WSDOT retains consultants to complete tasks and projects that WSDOT does not have the resources or expertise to perform with WSDOT staff. There are two different types of consultant agreements: 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 October 1, 2009 to March 31, 2010, the net total of new consultant expenditures was $57.9 million for task order agreements, $16.8 million for project specific agreements, and $24.8 million for general engineering consultant agreements. For a breakdown of the $99.5 million in total expenditures this period, see the table "Consultant expenditures," on the following page.

Task order agreements

Forty-five task order agreements had Nickel project expenditures during this period, and total expenditures for services rendered were $1.7 million for 41 prime consultant firms. Seventy-eight task order agreements had Transportation Partnership Account (TPA) project expenditures during this period; expenditure totals were $31.5 million for 53 prime consultant firms. The total statewide task order agreement consultant expenditures (excluding Nickel, TPA, and general engineering consultants) for the same period were $24.6 million. For a list of significant expenditures for consultants, see the table "Significant authorizations for task order consultants," on the following page.

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 is 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.

Use of Consultants

General engineering agreements

Work continued on eight high-profile general engineering consultant (GEC) project agreements between October 1, 2009, and March 31, 2010. GEC expenditure totals were $24.8 million, divided between eight primary consultant firms, of which $0.1 million were Nickel funds and $24 million were TPA funds. For a breakdown of the projects, see the table, "Expenditures for general engineering consultants," below.

Project-specific agreements

Between October 1, 2009, and March 31, 2010, 15 prime consultants were awarded new expenditures for project-specific Nickel agreements and/or supplements totaling $3.6 million. New expenditures for project-specific TPA agreements and/or supplements were $10.3 million, divided between 15 prime consultants. All non-Nickel/TPA, project-specific, consultant authorizations totaled $3 million. The bottom table, "Significant authorizations for project-specific consultants," lists significant expenditures for project-specific agreements.

Consultant expenditures

October 1, 2009, through March 31, 2010, dollars in millions

Type of consultant agreement	Nickel	TPA	PEF	Total
Task order consultant agreements (including GEC agreements)	$1.8	$55.5	$25.4	$82.7
Project-specific agreements/supplements	$3.6	$10.3	$3.0	$16.8
Totals	**$5.4**	**$65.8**	**$28.4**	**$98.5**

Significant authorizations for task order consultants

October 1, 2009, through March 31, 2010, dollars in millions

Project	Consultant	Total expenditures
Columbia River Crossing Project (TPA, PEF)	David Evans and Associates, Inc.	$10.3
On-Call UCO Engineering Management Services (Nickel, TPA, PEF)	Shannon & Wilson, Inc.	$3.2
Alaskan Way Viaduct and Seawall EIS (TPA, PEF)	PB Americas, Inc.	$20.9

Expenditures for general engineering consultants (GEC)

October 1, 2009, through March 31, 2010, dollars in millions

Project	Consultant	Expended this period
GEC Alaskan Way Viaduct & Seawall Replacement Project	Hatch Mott MacDonald	$6.1
GEC I-90 Snoqualmie Pass East – Hyak to Keechelus Dam	URS Corporation	$1.4
GEC Northwest Region Mt. Baker Area	H.W. Lochner, Inc.	$0.0
GEC Northwest Region Mt. Sno-King Area	Aecom USA, Inc.	$0.2
GEC SR 167 Extension	Jacobs Engineering	$0.0
GEC SR 167 Valley Freeway Corridor	Perteet, Inc.	$0.9
GEC SR 520 Bridge Replacement and HOV Project	HDR Engineering, Inc.	$16.2
GEC Tacoma/Pierce County HOV Program	CH2M Hill, Inc.	$0.0
Total		**$24.8**

Significant authorizations for project-specific consultants

October 1, 2009, through March 31, 2010, dollars in millions

Project	Consultant	Total expenditures
I-405 General Engineering Consultant (Nickel, TPA)	HNTB Corporation	$6.6
Tacoma/Pierce County HOV Program (Nickel, TPA)	CH2M Hill, Inc.	$3.9
I-5, SR 161 I/C and SR 18 I/C Enviro/ Design (Nickel)	Berger/ ABAM Engineers, Inc.	$1.4

Data source for all tables: WSDOT Consultant Services Office.

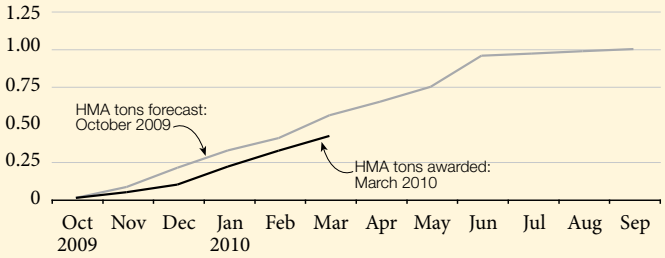
Hot Mix Asphalt

Hot Mix Asphalt Highlights

WSDOT expects to award 35% less HMA in the 2010 construction season compared to the 2009 season.

WSDOT compiles a yearly forecast of hot mix asphalt (HMA) tons awarded to assist the paving industry in preparing to deliver the agency's annual program. The agency's forecast allows private contractors to better anticipate future HMA volumes and manage their production of HMA. This ultimately leads to more competitive bidding and favorable prices on WSDOT contracts. In addition, the agency tracks actual tons awarded against the forecast to gauge how accurately we plan our annual paving program.

Hot mix asphalt tons awarded
October 2009 - September 2010
Tons in millions



Data source: WSDOT Construction Office.

Hot mix asphalt, projected 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	N/A	N/A

Data source: WSDOT Construction Office.

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 Transportation Funding Package was passed after the projection was made for 2003. WSDOT subsequently awarded five projects from the Nickel funding package with a combined total of 315,285 tons of HMA.

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

Actual hot mix asphalt tons awarded comes in 25% below projection for Q4 of 2009 and Q1 of 2010

In October 2009, WSDOT forecast that 995,053 tons of hot mix asphalt would be awarded in construction contracts through September 2010. This forecast anticipated that during the six months from October 2009 through March 2010, 48 projects would be awarded with a combined total of 555,100 tons of HMA. At the end of March, the actual total is 38 projects awarded with a combined total of 417,223 tons of HMA. Fewer projects were award than anticipated due to an extremely competitive bid climate, with awards being delayed due to factors including more bid protests than normal.

The 2010 forecast of 995,053 tons is similar to the original 2009 forecast of 994,496 tons. With funds made available through the American Recovery and Reinvestment Act (ARRA), WSDOT was able to do more small paving projects than expected. In March 2009, WSDOT revised the 2009 forecast of HMA tonnage from 994,496 to 1,535,757 tons to account for an additional 541,261 tons of HMA in ARRA-funded projects. Compared to last year's revised forecast, WSDOT will award 35% less HMA in the 2010 season than in the 2009 season, as a majority of the ARRA-funded paving projects were completed in the summer of 2009.

There are a number of reasons why WSDOT will award less HMA this year. While funding for pavement preservation projects remained fairly steady from 2002 to 2010 (excluding the one-time ARRA funding), the cost of HMA has gone from an average of $33 a ton in 2002 to $67 a ton in 2009. This means that about half as much paving can be done today as in 2002 for the same amount of money. Additionally, many of the projects currently under construction with Nickel and TPA funding do not involve paving. Finally, in response to higher HMA prices and stagnant funding, WSDOT expanded its policy on chip seal pavement routes, converting some routes that were previously paved with HMA to be maintained with chip seal. For more information about WSDOT's paving program see the Pavement Conditions Annual Report in the December 2009 *Gray Notebook*.

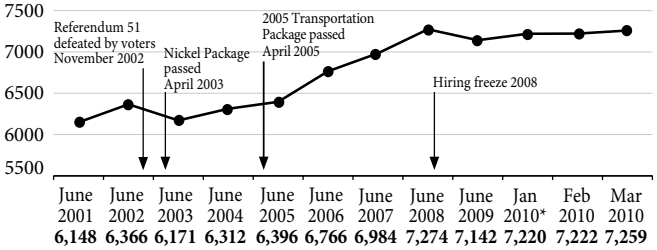
Workforce Level and Training

This quarter, WSDOT employed 7,259 permanent full-time employees, 30 more employees than the previous quarter ending December 31, 2009. The recent increase is due to the movement of temporary staff to permanent appointments. WSDOT employed 127 more permanent full-time employees on March 31, 2010, than one year previously, mostly because nonpermanent Ferries Division staff attained permanent status after meeting the collective bargaining agreement requirement in July 2009.

The chart at right 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. For consultant use information, see the article on page 90.

Number of permanent full-time employees

From June 2001 to March 2010



Data source: Dept. of Personnel Data Warehouse, HRMS, WSDOT and the ferry system payroll.

Data note: Between June 2009 and October 2009, up to 63 people a month were coded as employees for settlement pay purposes; from November 2009 to March 2010, 9 people were coded in this way. Those numbers are not included in the graph.

Workforce Level and Training Highlights

- WSDOT employed 30 more permanent full-time workers on March 31, 2010, than on December 31, 2009.
- Compliance improved for all mandatory courses from December to March.
- WSDOT met the 90% statewide performance goal for three courses in March.
- Five WSDOT employees obtained required mobile crane operation certifications this quarter.

Workforce training compliance improved

Training compliance for all mandatory diversity and policy courses improved from December 31, 2009, to March 31, 2010. The total number of employees requiring training, which includes temporary and permanent employees, fell by 212, which improved the percentage of compliance. Three courses – Disability Awareness, Valuing Diversity, and Violence That Affects the Workplace – met the agency's 90% compliance goal.

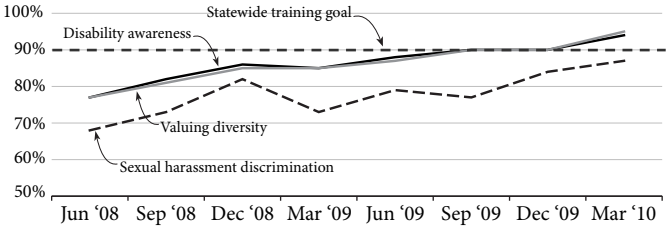
Mandatory diversity training compliance

By the end of March 2010, 95% of employees had successfully completed the Valuing Diversity course and 94% completed the Disability Awareness course, the highest compliance scores ever, exceeding the 90% agency goal. Sexual Harassment/ Discrimination course compliance is 87%. Continued coordination between offices ensures training sessions are available for employees with seasonal work schedules.

Changes in training delivery have also increased compliance as the agency tries to reduce costs. The refresher requirements for Valuing Diversity and Disability Awareness were eliminated in January and replaced with a quarterly newsletter that gives the entire agency workforce the most current policies and information about workplace diversity and disability issues. The agency's first newsletter edition was distributed to all employees electronically in April 2010; printed copies are also available.

Required diversity training for all WSDOT employees

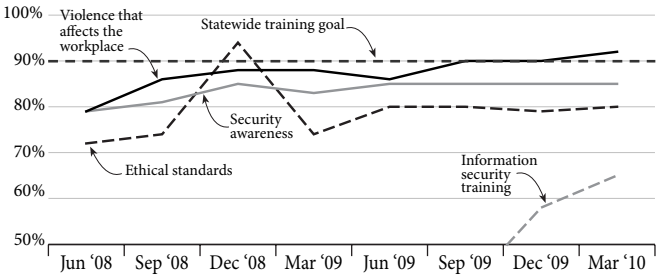
By percentage of employees in compliance, June 2008 to March 2010



Data source: WSDOT Human Resources Office, Staff Development.

Required policy training for all WSDOT employees

By percentage of employees in compliance, June 2008 to March 2010



Data source: WSDOT Human Resources Office, Staff Development.

Workforce Level and Training

Sexual Harrassment/Discrimination will continue to have a mandatory three-year refresher requirement for supervisors and five-year refresher for all other employees.

WSDOT is developing a forecasting report to more easily identify employees and supervisors who are due for basic or refresher training. The forecasting report will support course scheduling needs for each region and Ferries.

Policy training compliance improved over December

Training compliance for Ethical Standards, Information Security Training, Security Awareness, and Violence That Affects the Workplace improved from December 2009 to March 2010. Violence That Affects the Workplace compliance was 92%, above the state goal of 90%.

Compliance with a new course, Information Security Training, improved from 58% to 65% in the second quarter. The course, which started in 2009, has a one-year refresher requirement, beginning in December.

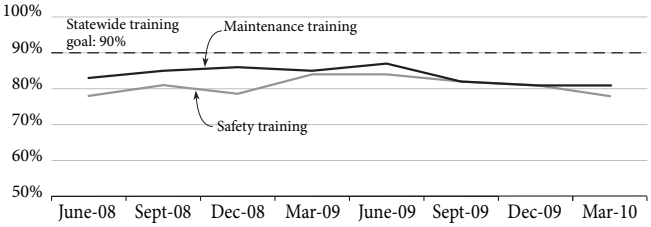
Compliance with statutorily required maintenance and safety training decreased

Statutorily required maintenance and safety training compliance for WSDOT employees was 79% this quarter, 2% less than last quarter. The safety training compliance was 78% on March 31, 2010, 3% less than last quarter, while the maintenance training compliance was unchanged at 81%. The graph below shows employee safety and maintenance training compliance between June 30, 2008, and March 31, 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 roadways safely.

Maintenance and safety training compliance

By percentage of employees in compliance
June 30, 2008 to March 31, 2010



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

New crane training course required in 2010

WSDOT employees operate cranes for maintenance and inspections on state highways and construction projects. Following a 2006 tower crane collapse in Bellevue, 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. As of March 31, five WSDOT employees were certified to operate mobile cranes.

Training compliance decreased in four 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. For the fourth quarter, two regions, Eastern and Southwest, met the 90% goal for safety and maintenance training compliance. Training compliance increased in two regions, and decreased in four regions from December 31, 2009, to March 31, 2010.

Region maintenance and safety training compliance

By percentage of employees in compliance on March 31, 2010

Region	Current quarter percent in compliance	Percent change from last quarter	Biennium average	Goal met
Northwest	66%	-6%	76%	
North Central	85%	-1%	81%	
Olympic	86%	2%	78%	
Southwest	92%	-3%	94%	√
South Central	87%	3%	84%	
Eastern	85%	-5%	92%	√

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

Statutorily required maintenance & safety courses

Maintenance courses
Aerial lift
Bucket truck
Drug & alcohol certification
Excavation, trenching & shoring
Emissions certification
Forklift
Hazardous materials awareness
Railway work certification

Safety courses
Blood-borne pathogens
Confined space entry
Drug free workplace
Electrical safety awareness
Fall protection
Fire extinguisher
First aid
Hearing conservation
Lead exposure control
Flagging & traffic control
Lockout/tagout
Personal protective equipment
Respirator protection
Supervisor return to work
Proper lifting
Hazard communications

For the quarter ending March 31, 2010

Project starts and updates

Project starts

I-5/SR 432 Talley Way Interchanges – Rebuild interchanges (Cowlitz)

In January, WSDOT and the local community joined together to break ground on a project to improve mobility on I-5, SR 432, and nearby roads. The I-5/SR 432 Talley Way Interchange project reconstructs the I-5 interchange at SR 432 (exit 36) and the adjacent SR 432 interchange at Talley Way to reduce the risk of collisions and address traffic flow and congestion issues. The project was funded with $45 million from the 2005 gas tax package and a $3 million federal grant provided by the Cowlitz-Wahkiakum Council of Governments. Construction began in February 2010 and is expected to be complete by 2012.

SR 14/West of White Salmon – Rockfall stabilization (Klickitat)

In March, crews began rock blasting and scaling on a SR 14 improvement project that will be taking place this spring and summer. This project on SR 14 White Salmon removes loose rock, unstable soil, and debris from steep slopes to reduce the risk of rocks falling onto the highway.

Though the project is named for the White Salmon area, there are two work zones within the project limits: one near Carson, just east of the Dog Mountain trail head (milepost 54), and one near White Salmon (milepost 64). Throughout the spring, crews near Dog Mountain will use carefully engineered "charges" planted deep in the slope above SR 14 to blast away 22,000 cubic yards of rock and dirt. WSDOT expects to close the highway and divert traffic at times, before completing the project in late summer 2010.

Crews prepare the SR 14 work zone for blasting.

I-82/Valley Mall Blvd Interchange – Rebuild interchange (Yakima)

The I-82 Valley Mall Boulevard interchange, the biggest American Recovery and Reinvestment Act (ARRA) project in the Yakima Valley, was awarded in March. WSDOT expects that improving connections to the interstate will encourage economic growth and development for the cities of Union Gap and Yakima. Crews will reconfigure the interchange to provide smoother traffic flow between I-82, Valley Mall Boulevard, and North Rudkin Road, using three roundabouts to circulate traffic more quickly through this congested area. The project will also replace the intersection of Main Street and Valley Mall Boulevard for the City of Union Gap. This includes providing four lanes with left and right turn lanes, a bus pull-out, sidewalks, updates to the storm water drainage systems, street lights, and a traffic signal. The estimated completion date for this project is fall 2011.

Computer generated picture of the improvements that are planned for the I-82 Valley Mall Boulevard Interchange in Yakima County.

Project updates

US 395/North Spokane Corridor – US 2 to Wandermere, and US 2 lowering – New alignment (Spokane)

In January, blasting work to construct twin bridges connecting the North Spokane Corridor to existing U.S. 395 at Wandermere continued. Crews will also grade the new route, lay an asphalt base, and set a final concrete surface for the new freeway. US 395 traffic was stopped for short periods between Wandermere Road and the Little Spokane River Bridge during blasting operations, for safety and debris cleanup. Wandermere Road was closed from US 395/Division Street to the Wandermere Estates and Golf Course entrance through March 1, 2010.

For the quarter ending March 31, 2010

I-90/Lake Easton vicinity to Bullfrog Rd interchange westbound – Replace concrete (Yakima)

WSDOT kicked off the I-90 construction season at the end of March by resuming work on the Recovery Act funded I-90 Lake Easton to Bullfrog project. Approximately 60 crew members from Gary Merlino Construction, based in Seattle, picked up where they left off last year by removing and replacing the remaining three miles of deteriorating concrete and asphalt shoulders in the right-hand lane of westbound I-90 from Nelson Siding Road to Lake Easton. They will also replace severely cracked panels in the left-hand lane and grind the surface of the road for a smoother ride. To complete this work, WSDOT will close the westbound on and off-ramps at exit 71, Easton Road, and the eastbound on-ramp at exit 70, Sparks Road, from early April to May 31. The $18.4 million Lake Easton to Bullfrog project is one of four construction projects on I-90 east of Snoqualmie Pass this year.

Ferries

Vessel Watch for mobile devices

In February, WSDOT's Ferries Division (WSF) launched a new version of Vessel Watch on its website. Based on customer feedback, WSF implemented many requested improvements such as an updated version of Vessel Watch for mobile devices including Blackberries and iPhones. The new mobile version of Vessel Watch uses the same modernized map as the website and is available at www.wsdot.wa.gov/ferries/vesselwatch.

Vessel classification named for new 64-car ferries

WSDOT Ferries Division (WSF) announced the vessel classification name of its new 64-car ferries: the Kwa-di Tabil Class. Kwa-di Tabil, (pronounced kwah DEE tah-bale) means "little boat" in the Quileute language. The first of the Kwa-di Tabil Class ferries, the *Chetzemoka*, is scheduled to begin service on the Port Townsend/Keystone route in late summer 2010.

WSF conducted a contest to name the new vessel classification with fourth-grade students from Chimacum, Port Townsend and Whidbey Island who are studying Washington state history. Guidelines stated that the name be unique to Washington state, representative of the local community, have symbolic maritime meaning, and be reflective of nature. The winning entry selected by five local and state officials, was submitted by a fourth-grade class at Blue Heron Middle School in Port Townsend. Governor Gregoire will visit the school this spring to present a plaque commemorating the selection.

Rail

Amtrak *Cascades* finishes 10th year with strong ridership and improved on-time performance

Amtrak *Cascades* wrapped up its 10th anniversary year with continued growth in ridership and improvement in on-time performance. A total of 761,610 passengers rode Amtrak *Cascades* in 2009, while on-time performance improved by eight percent. WSDOT released the Amtrak *Cascades* 2009 Performance Report, an annual summary of ridership, on-time reliability, operating costs, and revenue for the service, which is sponsored by Washington in partnership with Amtrak and Oregon.

Washington State 2010-2030 Freight Rail Plan identifies statewide freight rail needs

WSDOT recently completed the Washington State 2010-2030 Freight Rail Plan. The plan provides guidance for rail initiatives and investments in Washington State over the next 20 years.

Features of the plan include recommendations that will:

- Support Washington's economic competitiveness and economic viability.
- Preserve the ability of Washington's freight rail system to efficiently serve the needs of its customers.
- Facilitate freight system capacity increases to improve mobility and reduce congestion.
- Take advantage of freight rail's modal energy efficiency to reduce the negative environmental impact of freight movement in Washington.

The Washington State Freight Rail Plan complies with the Federal Railroad Administration (FRA) requirements that the state establishes, updates, and revises a rail plan in order to receive federal assistance.

For the quarter ending March 31, 2010

Air

Long Term Air Transportation Study (LATS)

The Long-term Air Transportation Study (LATS), which began in 2005, has now concluded. The completed study has generated two products: recommendations from the LATS Aviation Planning Council to address air transportation capacity in Washington State, and the *Washington Aviation System Plan*, which will become a component of the *Washington Transportation Multimodal Plan*.

The FAA will use the *Washington Aviation System Plan* during its long range planning for the *National Plan of Integrated Airport Systems*. The plan includes background information on the state's aviation system, aviation forecasts, state airport classification, and performance objectives and policies to address projected air transportation capacity in the state to 2030.

The plan will also allow WSDOT to identify capital and planning needs in the state, as well as funding needs and legislative initiatives to safeguard the air transportation system. More information, including recommendations from the Aviation Planning Council, can be found on WSDOT Aviation's website at: www.wsdot.wa.gov/aviation/lats/default.htm. (To read WSDOT's Aviation Annual Report, please see pp. 18-20.)

Traveler Information and Safety

Crews installing Smarter Highways to I-5, SR 520, I-90

Innovative traffic technology will debut on Puget Sound highways this summer, making them "smarter" and more efficient. The new system, called active traffic management (ATM), is a network of sensors and electronic signs on northbound I-5, SR 520, and I-90 that automatically respond to traffic conditions and gives drivers information about the conditions on the road ahead. Overhead, electronic signs will automatically alert drivers when a lane is closed ahead and adjust the speed limit to slow traffic before it reaches backed up or blocked traffic. This advance notice will help prevent the panic braking that leads to collisions.

Crews started work on this project last summer; they recently installed 15 new sign bridges on northbound I-5 in south Seattle and nine on SR 520 in Bellevue. Work continues as sign bridges on I-90 in Bellevue are constructed, and electrical wiring and sign brackets are installed. This summer, crews plan to introduce Smarter Highways on northbound I-5 between Boeing Access Road and I-90, and on SR 520 between Seattle and Bellevue; the system on I-90 between Seattle and Bellevue will be activated in spring 2011.

High-tech electronic signs will be a part of the Smarter Highways system on northbound I-5 in south Seattle, and on I-90, and SR 520 between Seattle and Bellevue.

New tools will help keep drivers moving during Alaskan Way Viaduct replacement construction

Real-time traffic information tools, including new traffic cameras, signal timers, and electronic overhead message boards, are being installed on Seattle's SR 99 and major routes leading to it. The SR 99 Intelligent Technology Systems Project is one of the ways in which WSDOT and the Seattle Department of Transportation (SDOT) are working together to keep traffic moving during construction of the Alaskan Way Viaduct replacement. Real-time traffic information tools will help keep cars, buses, and freight informed of backups and incidents that may affect traffic.

Public Transportation

I-5 Mountlake Terrace

Crews working on the $40.9 million Mountlake Terrace Freeway Station project were busy in February setting girders across the I-5 freeway lanes and shoulder. WSDOT and Sound Transit are building a bus-only transit station in the I-5 median at 236th Street SW in Mountlake Terrace. The station will provide buses with direct access to and from the I-5 HOV lanes, while an overhead, covered pedestrian bridge will connect the station to the Mountlake Terrace Park and Ride. The girders will support the new pedestrian bridge and connection to the park and ride on the east side of the freeway The Mountlake Terrace Freeway Station is the fifth direct access ramp project in Snohomish County undertaken as a partnership between Sound Transit and WSDOT.

Highlights of Program Activities

For the quarter ending March 31, 2010

Announcements, awards, and events

WSDOT advances statewide tolling program

WSDOT signed a contract on December 23 with Electronic Transaction Consultants (ETC) of Richardson, Texas, to establish and operate a new statewide customer service center for toll operations. With a statewide tolling system, drivers can use their *Good To Go!* accounts at any tolling facility in the state: they will have one account, one transponder and one customer service center contact. Under the contract, ETC will provide customer service for the Good To Go! electronic tolling program, as well as payment processing, violation collections, and business management. The five-year contract began on January 11, 2010, and is valued at about $23 million.

ETC was selected through a competitive bidding process from among five bidders. ETC will take over operation of customer service activities for the Tacoma Narrows Bridge and SR 167 HOT lanes, as well as initiate customer service activities for the SR 520 bridge, which will begin all-electronic tolling in spring 2011. ETC is known in the tolling industry for its innovations in large-scale electronic toll collection systems; the company currently collects about one-third of all toll transactions in the U.S.

WSDOT TEF Office recognized with national Green Fleet award

WSDOT's Transportation Equipment Fund (TEF) Office was awarded the Government Green Fleet award for 2009. The 100 Best Fleets Program award "recognizes and rewards peak performing fleet operations in North America…[and] identifies and encourages ever-increasing levels of performance improvement within the fleet industry." Out of 9,000 applications WSDOT ranked 28th out of the top 40 recipients that won the award. The award is open to all federal, state, and local government fleets in North America. The applications were evaluated on the basis of fleet composition (conventional fuel versus hybrid, electric, and/or alternative fuel vehicles), fuel and emissions levels, policy and planning strategies, and involvement at both the executive and employee levels.

Winning this award highlights WSDOT's efforts to meet its goal of reducing its carbon footprint, a major part of its initiative to address climate change. These efforts include the addition of more sidewalks, paths and trails for bicycling and walking, adopting a no-idling policy, and promoting a Commute Trip Reduction (CTR) program.

One of WSDOT's hybrid Toyota Prius cars.

WSDOT Maintenance earns international recognition

WSDOT gets more than just directions from its MAP.

MAP, WSDOT's Maintenance Accountability Process, offers the best route to measure the effectiveness of WSDOT's Maintenance program. In early January, the MAP program garnered international recognition, winning a 2009 Global Road Achievement Award from the International Road Federation (IRF). Eleven other projects from eight countries also won awards.

MAP is a performance-based maintenance approach. Each year, WSDOT Maintenance staff conduct field inspections of randomly chosen highway sections, evaluating the condition of the roadway and the adjacent features – everything from pavement repair to ditch maintenance, roadside vegetation to pavement markings, and more. These surveys give the information needed to manage and clearly communicate how program investments translate into roadway performance. The MAP program helps legislators, WSDOT management, field staff ,and Washington's citizens see how Washington's transportation system is keeping people and the economy moving, and protecting their investments into the future.

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)
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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)
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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

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

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

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

Americans with Disabilities Act (ADA) Information

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

Civil Rights Act of 1964, Title VI Statement to Public

Washington State Department of Transportation (WSDOT) hereby gives public notice that it is the policy of the department to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Persons wishing information may call the WSDOT Office of Equal Opportunity at (360) 705-7098.

Other WSDOT information available

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

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

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

For this or a previous edition of the *Gray Notebook*, visit www.wsdot.wa.gov/accountability.

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