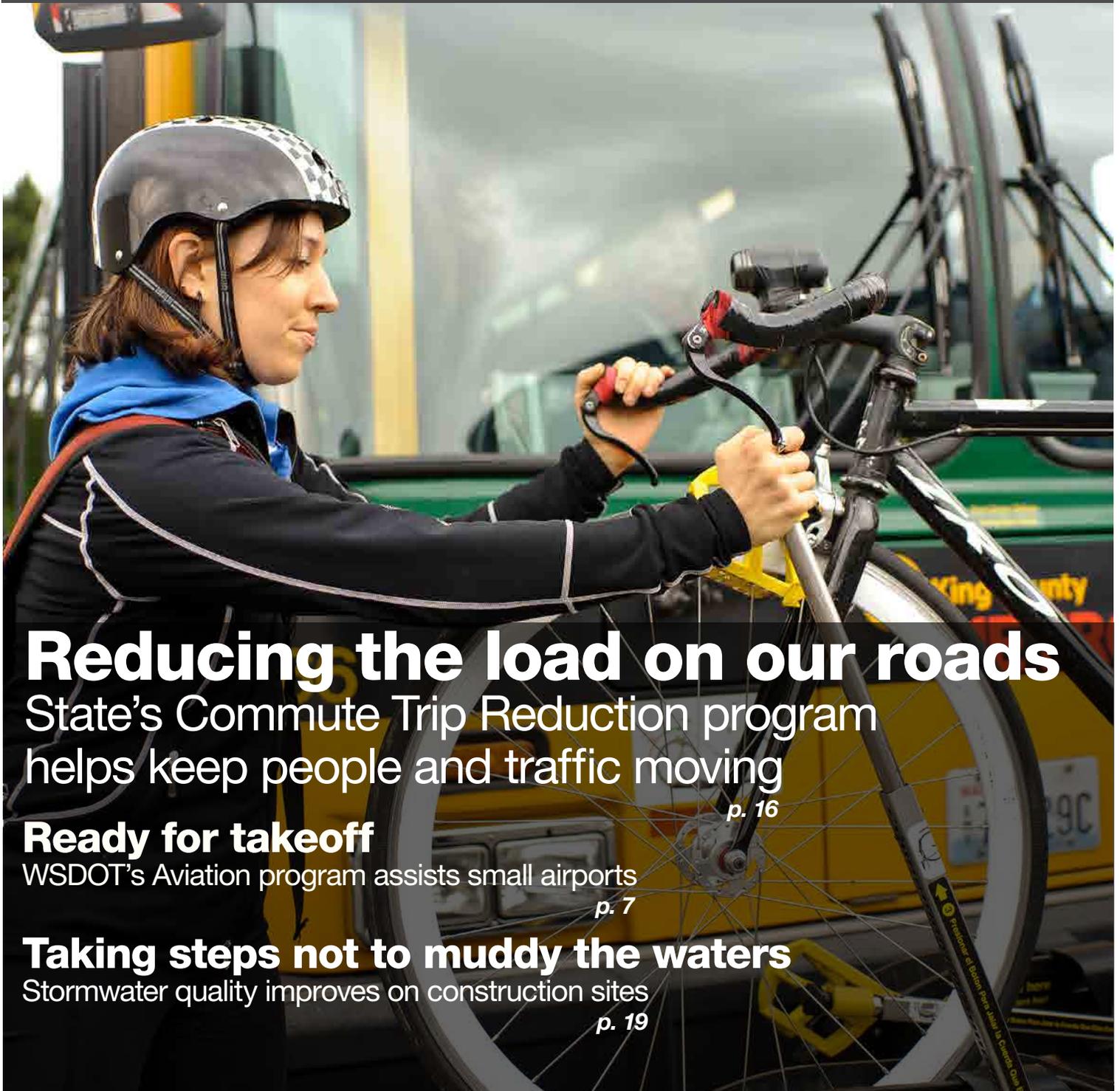


The Gray Notebook

WSDOT's quarterly performance report on transportation systems, programs, and department management
Quarter ending September 30, 2013 • Published November 22, 2013
Lynn Peterson, Secretary of Transportation



Reducing the load on our roads

State's Commute Trip Reduction program helps keep people and traffic moving

p. 16

Ready for takeoff

WSDOT's Aviation program assists small airports

p. 7

Taking steps not to muddy the waters

Stormwater quality improves on construction sites

p. 19



Navigating the *Gray Notebook*
 Quick Response Codes /
 A Guide to Understanding Reporting Periods
WSDOT's Goals, Performance and Trends
 Moving Ahead for Progress in the 21st Century
 (MAP-21)
 Worker Safety Quarterly Update
 Capital Facilities Annual Report
 Aviation Annual Report
 Incident Response Quarterly Update
 Washington State Ferries Quarterly Update
 Rail: Amtrak Cascades Quarterly Update
 Trip Reduction Biennial Update
 Water Quality Annual Report

[iii](#) Endangered Species Act Documentation Annual Report [22](#)
 Freight Rail Semi-Annual Update [24](#)
[iv](#) WSDOT's Capital Project Delivery Programs [27](#)
[v](#) **Beige pages** [27](#)
 Lean Quarterly Update [42](#)
[vi](#) **Table of Tables and Graphs** [44](#)
[1](#) *Gray Notebook* Edition Index [45](#)
[3](#) Americans with Disabilities Act (ADA)
 and other information [45](#)
[7](#)
[10](#)
[12](#)
[14](#)
[16](#)
[19](#)

No divider pages? In our continuous improvement quest, the *Gray Notebook* has eliminated divider pages. Articles are still arranged by Washington State Transportation Goals, found in the footer on article pages.

PERFORMANCE HIGHLIGHTS reported for the quarter ending September 30, 2013

67%
 of WSDOT's primary **buildings**
 are more than **25** years old

\$ 163.4 M
 WSDOT's primary building
 maintenance **backlog**

\$ 47.7 M
 WSDOT Capital Facilities
 2013-2015 **budget**

6,474
 aircraft **registered** by WSDOT
 this year

↑ **AND** ↓
 pavement condition **better**
 at large airports but **worse** at
 smaller airports

56
 projects funded through
airport aid grants
 in FY2014

76.4%
 of state-supported
Amtrak Cascades
 trains reached their
 destinations **on time**

7 M
 ferry **riders** this quarter

\$ 54.4 M
 ferry **farebox** revenues
 this quarter

↑ **15%**
 Grain Train
shipments increase

9
 Federally funded **rail**
projects under con-
 struction or complete

42
 Endangered Species Act
consultations completed
 in 2012

348
 Nickel and TPA **projects** complete since 2003

FOUR NEW PROJECTS COMPLETED THIS QUARTER

23 OF 23
 scheduled Pre-existing
 Funds **projects**
 advertised this quarter

8
projects added to
Watch List

\$ 5.64 B
 Nickel and TPA projects
completed since 2003

73 NICKEL AND TPA PROJECTS IN THE CURRENT TRANSPORTATION BUDGET ARE NOT YET COMPLETE

48 TO 2
 reduction in number of **hours** to process traffic
 data achieved through the **Lean** process

WSDOT HAS MORE THAN **15 LEAN** PROJECTS

1,804
stormwater facilities inspections
 completed in fiscal year 2013

\$ 19.1 M **12.9**
 economic **benefit** average number of
 provided by minutes WSDOT teams
 WSDOT Incident took to **clear** roadway
 Response incidents

12,002 INCIDENTS **CLEARED** BY WSDOT

↓ **22%**
 drop in employee **days away**
 from work due to workplace
injuries and illnesses

17,800
 cars removed from the road
 daily by participants in commute
trip reduction programs

754
 employers in the state
 applied for commute trip
 reduction **tax credits**

Transparency and accountability drive *Gray Notebook* reporting

This, the 51st edition of the *Gray Notebook*, features annual articles on capital facilities, aviation, water quality and Endangered Species Act documentation. Other features in this issue include trip reduction, worker safety, incident response, ferries, passenger rail, freight rail, Lean and Moving Ahead for Progress in the 21st Century (MAP-21). Information pertaining to project delivery and finance starts on [p. 27](#). The “beige pages,” still printed on beige paper, address the delivery of projects funded in the 2003 Transportation Funding Package (Nickel), 2005 Transportation Partnership Account (TPA), and Pre-existing Funds (PEF).

The *Gray Notebook* is published quarterly in February, May, August and November. Contents include quarterly and annual reports on key agency functions, providing regularly updated system and program performance information.

The *Gray Notebook* is available electronically; the publication, with hyperlinks, can be downloaded as a PDF and printed as needed. One recent improvement allows readers to scan Quick Response (QR) codes that provide instant links to background information for those who want to know more of the story. QR codes are found on some articles, linking readers to additional information. Read more about QR codes on [p. iv](#).

WSDOT also publishes a quarterly highlights folio of selected performance topics from the *Gray Notebook*, called *Gray Notebook Lite*.

Strategic plan in development

WSDOT’s Secretary of Transportation Lynn Peterson is leading the agency in the development of a new strategic plan, moving the agency in a new direction for the future while taking into account the programs and budgets authorized by the state Legislature and Governor.

WSDOT is an active participant in *Results Washington*, Governor Jay Inslee’s plan for building a working Washington. At the same time, WSDOT is preparing for future federal transportation reporting requirements (read about MAP-21 in [Gray Notebook 49, p. vii](#), and in this issue on [p. vi](#)).

Statewide transportation policy goals

Laws enacted in 2007 established policy goals for transportation agencies in Washington (RCW 47.04.280).

The six 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;
- **Economic Vitality:** To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy; and
- **Stewardship:** To continuously improve the quality, effectiveness, and efficiency of the transportation system.

These three efforts — WSDOT’s new strategic plan, Results Washington and MAP-21 — will all play a vital role in guiding future performance reporting.

The transportation progress report

The Washington State Office of Financial Management (OFM) is responsible for setting objectives and establishing performance measures for the state’s transportation policy goals. OFM reports on the attainment of the goals and objectives to the Governor and Legislature each biennium. The most recent *Attainment Report*, for 2012, is available online at <http://www.wsdot.wa.gov/Accountability/PerformanceReporting/Attainment.htm>.

Gray Notebook Credits

The work of many people goes into the production of the *Gray Notebook*. Produced by WSDOT’s Office of Strategic Assessment and Performance Analysis, each article features bylines indicating contributors. WSDOT’s graphics team, including Steve Riddle, Jinger Hendricks, Diana Lessard, Jessie Lin and Fauziya Mohamedali, create the majority of the graphics, while WSDOT communicators typically take the photographs. This quarter’s cover shot was snapped by Greg Phipps. The *Gray Notebook* is printed in house by a team including Deb Webb, Trudi Philips and Jordan Hansen. Linda Pasta coordinates distribution.

Quick Response codes

Quick Response codes, also known as QR codes, accompany many *Gray Notebook* articles. Many mobile operating systems have the ability to “read” QR codes and link the reader to Web pages. Readers with mobile operating systems can scan the codes to read other information related to articles found in this issue of the *Gray Notebook* (Google “QR Codes” to find a variety of these applications – while the *Gray Notebook* does not endorse any applications, some have been found to work better than others). A sampling of codes is presented here.

Gray Notebook 51 sampling of Quick Response codes

Scan to access additional information

Subject and hyperlink¹

Scan QR Code

WSDOT website
<http://www.wsdot.wa.gov/>



Gray Notebook online subject index
<http://www.wsdot.wa.gov/Accountability/GrayNotebook/SubjectIndex.htm>



Gray Notebook archives
http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm



2012 Biennial Transportation Attainment Report
<http://www.wsdot.wa.gov/Accountability/PerformanceReporting/Attainment.htm>



Note: 1 As an alternative to scanning the QR code, readers can type the hyperlink address into their Web browsers.

A guide to understanding reporting periods

Some performance measures addressed in the *Gray Notebook* refer to calendar years and their corresponding quarters, others to state fiscal years/quarters, and still others to federal fiscal years/quarters. While an effort is made to standardize reporting periods, WSDOT programs make the determination on the best time period in which to report their data. For example, a program that receives substantial federal funds may report performance based on the federal fiscal year.

The chart below illustrates the quarters discussed in the pages of the *Gray Notebook*. GNB 51 reports quarterly performance data for July through September 2013, which is the third quarter of the calendar year (Q3 2013). This time period is also considered the first quarter of the state’s current fiscal year (Q1 FY2014) as well as the fourth quarter of the federal fiscal year (Q4 FFY2013).

Calendar, fiscal and federal fiscal quarters

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
				GNB 49	GNB 50		GNB 51				GNB 52
				Q1 2013	Q2 2013		Q3 2013				Q4 2013
				Q3 FY2013	Q4 FY2013		Q1 FY2014				Q2 FY2014
				Q2 FFY2013	Q3 FFY2013		Q4 FFY2013				Q1 FFY2014

Notes: A calendar year begins January 1 and ends December 31. Washington state’s fiscal year (FY) begins July 1 and ends June 30. The federal fiscal year (FFY) begins October 1 and ends September 30.

There is the matter of biennial quarters. The Washington State Legislature sets a biennial budget. This issue highlights the first quarter of the 2013-2015 biennium. These quarters are as follows:

2013-2015 biennial quarters

Period	Biennial Quarter	Period	Biennial Quarter
July – September 2013	Q1	July – September 2014	Q5
October – December 2013	Q2	October – December 2014	Q6
January – March 2014	Q3	January – March 2015	Q7
April – June 2014	Q4	April – June 2015	Q8

WSDOT's Goals, Performance and Trends

51

Policy goal/Performance measure	Previous period	Current period	Goal	Goal met	Five Year Trend (unless noted)	Desired trend
Safety						
Rate of traffic fatalities per 100 million vehicle miles traveled (VMT) statewide (Annual measure: calendar years 2011 & 2012)	0.80	0.77	1.00	✓		↓
Rate of recordable incidents for every 100 WSDOT workers ¹ (Cumulative year to date 2012 & 2013 – trend shows 2 years)	4.9	4.9	5.0	✓		↓
Preservation						
Percentage of state highway pavement in fair or better condition (Annual measure: calendar years 2010 & 2011 [latest available])	92.0%	90.5%	90.0%	✓		↑
Percentage of state bridges in fair or better condition (Annual measure: fiscal years 2012 & 2013)	95.0%	96.0%	97.0%	—		↑
Mobility (Congestion Relief)						
Highways: Annual (weekday) vehicle hours of delay statewide at maximum throughput speeds ² (Annual measure: calendar years 2010 & 2012)	31.6 million	30.9 million	N/A	N/A		↓
Highways: Average clearance times for major (90+ minute) incidents on nine key western Washington corridors (Calendar quarterly measure: Q1 2013 is latest available data – trend shows last 5 quarters of available data)	143 minutes	N/A	155 minutes	N/A		↓
Ferries: Percentage of trips departing on time ³ (Fiscal quarterly measure: year to year Q1 FY2013 & Q1 FY2014)	93.4%	92.8%	95%	—		↑
Rail: Percentage of Amtrak Cascades trips arriving on time ⁴ (Calendar quarterly measure: year to year Q3 2012 & Q3 2013)	71.9%	76.4%	80%	—		↑
Environment						
Number of WSDOT stormwater management facilities constructed (Annual measure: fiscal years 2012 & 2013)	146	169	N/A	N/A		N/A
Cumulative number of WSDOT fish passage barrier improvements constructed since 1990 (Annual measure: calendar years 2011 & 2012)	257	269	N/A	N/A		↑
Stewardship						
Cumulative number of Nickel and TPA projects completed, and percentage on time ⁵ (Calendar quarterly measure: Q2 2013 & Q3 2013 – trend shows last 5 quarters)	344/ 88%	348/ 88%	90% on time	—		↑
Cumulative number of Nickel and TPA projects completed and percentage on budget ⁵ (Calendar quarterly measure: Q2 2013 & Q3 2013 – trend shows last 5 quarters)	344/ 91%	348/ 91%	90% on budget	✓		↑
Variance of total project costs compared to budget expectations ⁵ (Calendar quarterly measure: Q2 2013 & Q3 2013 – trend shows last 5 quarters)	under budget by 1.4%	under budget by 1.4%	on budget	✓		N/A

Notes: N/A = not available: new reporting cycle data not available or goal has not been set. Dash (—) = goal was not met in the reporting period. 1 WSDOT began reporting recordable incident rate in January 2012; trend shows two years. 2 Compares actual travel time to travel time associated with "maximum throughput" (defined as 70 to 85 percent of the posted speeds), where the greatest number of vehicles occupy the highway at the same time. 3 Washington State Ferries' "on-time" departures include any trip recorded by automated tracking as leaving the terminal within 10 minutes of scheduled time. 4 Amtrak Cascades' "on-time" arrivals are any trips that arrive at their destination within 10 to 15 minutes of scheduled time. 5 Budget and schedule expectations are defined in the last approved State Transportation Budget. See [p. 27](#) for more information.

Moving Ahead for Progress in the 21st Century (MAP-21)

MAP-21 is intended to increase the transparency and accountability of states in their investment of taxpayer dollars in transportation infrastructure and services nationwide, and ensure states invest money in transportation projects that collectively make progress toward achieving these national goals. Performance measures will be developed through the federal rule-making process. Final rules are anticipated by March 2015.

MAP-21 federal performance reporting requirements

MAP-21 goals by program area	Federal threshold/benchmark ¹	MAP-21 target ²	Penalty ³ Y/N	Existing WSDOT performance measures for this program area
Highway Safety Improvement Program				
Rate of traffic fatalities per 100 million vehicle miles traveled (VMT) on all public roads	No	TBD ⁴	Yes	Traffic fatality rates using the NHTSA ⁵ methodology, see Gray Notebook 50, p. 2
Rate of traffic serious injuries per million vehicle miles traveled (VMT) on all public roads	No	TBD	Yes	Serious injury rates using the NHTSA ⁵ methodology
Number of traffic fatalities on all public roads	No	TBD	Yes	Traffic fatalities using the NHTSA ⁵ methodology see Gray Notebook 50, p. 2
Number of traffic serious injuries on all public roads	No	TBD	Yes	Serious injuries using the NHTSA ⁵ methodology
Rate of per capita traffic fatalities for drivers and pedestrians 65 years of age or older	No	TBD	No	Traffic fatalities for pedestrians 65 years of age or older. See Gray Notebook 48, p. 8 , for an update on MAP-21 implications. The rate of traffic fatalities for older pedestrians is part of Washington state's Target Zero campaign
Rate of fatalities on high-risk rural roads	No	TBD	Yes	Traffic fatality rates on high-risk rural roads as part of Washington state's Target Zero campaign
Highway-railway crossing fatalities	No	TBD	No	Fatalities at highway-railway crossings
National Highway Performance Program				
National Highway System and Interstate pavement condition	TBD	TBD	Yes	Pavement structural and functional condition. See Gray Notebook 48, p. 16 , for an update on MAP-21 implications for pavement
Condition of bridges on the National Highway System	<10% of deck area on SD ⁶ bridges	TBD	Yes	Several measures of bridge condition including good/fair/poor condition rating and structural deficiency (SD) rating, see Gray Notebook 50, p. 4
Measures to be determined through federal rule-making	No	TBD	No	The 2012 Congestion Report details highway travel time and reliability trends in Washington state
National Freight Movement Program				
Measures to be determined through federal rule-making	No	TBD	No	WSDOT's freight mobility plan will address trucking, rail and marine freight. See Gray Notebook 49, p. 41 , for an update on MAP-21 freight implications
Congestion Mitigation and Air Quality (CMAQ) Program				
Measures to be determined through federal rule-making	No	TBD	No	The 2012 Congestion Report details the highway travel time and congestion trends in Washington state
Measures for on-road mobile source emissions to be determined through federal rule-making	No	TBD	No	Greenhouse gas emissions by source, including fleet vehicles and ferry vessel operations
Project Delivery				
Duration of NEPA ⁷ documentation preparation	No	TBD	No	Percent of projects completed early or on time, percent completed on or under budget, and duration for NEPA ⁷ document preparation

Data source: WSDOT Office of Strategic Assessment and Performance Analysis.

Notes: 1 Minimum threshold or benchmark to be established by the USDOT Secretary of Transportation. 2 Performance targets to be set for each performance measure by WSDOT in coordination with Metropolitan Planning Organizations (MPOs) statewide. 3 Penalties apply for some measures if the DOT or MPO does not attain the target within a given time frame. Penalties include minimum allocations of federal funding toward programs that advance progress toward the desired target. 4 TBD = To be determined. 5 NHTSA = National Highway Traffic Safety Administration. 6 SD = structurally deficient. 7 NEPA= National Environmental Policy Act.

Notable results

- *WSDOT's recordable incident rate is 4.9 per 100 full time employees, on track to meet the 2013 goal of 5.0*
- *Incidents involving employee days away from work due to workplace injuries and illnesses dropped 22% compared to the previous year*

WSDOT reduces incident rate

WSDOT reported 220 Occupational Safety and Health Administration (OSHA) recordable incidents in the first three quarters of 2013 (January through September), seven less than the 227 in same period of 2012. WSDOT continues to be guided by the core value that every employee should leave work at the end of their shift just as healthy as when they started.

WSDOT's recordable incident rate remains 4.9 per 100 full-time employees, the same in the first three quarters of 2013 and 2012, and is on track to meet the goal of 5.0

or fewer incidents per 100 full-time employees. See [Gray Notebook 47, p. 2](#), for additional details about these rates.

WSDOT's agency-wide days away, restricted duty, or job transfer (DART) rate was 2.1 for every 100 full-time employees, year to date through September 30, 2013, which is 22 percent better than the same period in 2012, when it was 2.7. See table below for information on how the rate is calculated. The longer term trend for DART rates shows an agency-wide improvement of 40 percent since 2010. WSDOT's injured workers are experiencing fewer injuries that require days away from work, restricted duty or a need for a job transfer.

WSDOT's "days away" rate¹ and recordable incident rate² improve

Year to date (January through September) 2012 and 2013; Rate percent change from YTD 2012 to YTD 2013

Region	Rate of incidents resulting in Days Away, Restricted duty, and/or job Transfer (DART)			Number of recordable incidents for every 100 full-time employees			
	Year to date 2012 ³	Year to date 2013	Rate % change ⁴	Year to date 2012	Goal 2013	Year to date 2013	Rate % change ⁴
Eastern	2.8	2.2	-21%	8.8	8.3	10.4	+18%
Headquarters	0.9	0.5	-44%	3.2	2.5	1.2	-63%
North Central	2.8	1.8	-36%	6.1	6.6	7.1	+16%
Northwest	2.4	2.3	-4%	4.5	5.2	6.8	+51%
Olympic	3.2	1.9	-41%	5.0	5.0	4.3	-14%
South Central	3.3	1.1	-67%	5.5	6.1	3.4	-38%
Southwest	3.7	1.9	-49%	4.6	5.6	4.5	-2%
Agency rate ⁵ excluding Ferries	2.4	1.6	-33%	4.8	4.9	4.7	-2%
Ferries Division	3.5	3.6	+3%	5.2	5.0	5.4	+4%
Agency-wide ⁵	2.7	2.1	-22%	4.9	5.0	4.9	0%

Data sources: WSDOT Office of Human Resources and Safety, Washington State Ferries, Washington State Department of Labor and Industries.

Notes: 1 The "days away" or DART rate is the count of recordable incidents involving days away, restricted duty, or job transfer, multiplied by 200,000 hours, and divided by the total hours worked. 2 The recordable incident rate is calculated as the count of recordable incidents multiplied by 200,000 hours (approximate number of hours worked by 100 employees in one year), divided by the total hours worked. An OSHA recordable incident is work related, and a new case that results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. 3 WSDOT identified a formula calculation error in the 2012 data resulting in 23% increase (over reported) in the first two quarters and 30% in the third quarter. The error was corrected by the fourth quarter. Corrected numbers for 2012 are shown in this table and will not match editions of the *Gray Notebook* prior to edition 49. 4 Incident rate changes: improved = decrease (-%); worsened = increase (+%). 5 Agency rates are not an average of regional rates, which are calculated as described in Notes 1 and 2, respectively.

Improvements are due to continued focus on a safety culture. In addition to messaging from our executive staff, WSDOT's safety staff meets with managers whose divisions have high incident rates, makes worksite visits to identify, reduce or eliminate hazards, and attends safety meetings. The staff provides safety consultation and safety training for a wide variety of work activities such as confined space training, fall protection, proper ladder usage, and more.

WSDOT to deploy new hearing protection tool

WSDOT is deploying a new tool in November 2013 to determine proper selection and fit of hearing protection devices. The

Worker Safety Quarterly Update

Hearing protection tool offers state-of-the-art best practices technology

tool will be used in conjunction with annual hearing tests, and for newly hired employees. Such hearing protection devices are necessary for employees exposed to dangerously loud noises that cannot be eliminated or reduced to safe levels.

In the past, WSDOT selected devices based on the hearing protection manufacturers' ratings. The new equipment exceeds OSHA requirements for protecting employees against hearing loss; WSDOT believes the \$17,050 investment in the equipment has the potential to save hearing and protect the agency against claims for hearing loss.

If hearing protection devices are not properly selected or correctly worn, they may not block enough noise, leaving the wearer at risk for hearing loss. Many factors determine the effectiveness of hearing protection, including the size and shape of an individual's ear canal and how the hearing protection is worn.

Equipment expected to reduce hearing loss

WSDOT now can quickly and inexpensively test the performance of employee hearing protection to ensure each individual is obtaining sufficient protection, as the new equipment takes the guesswork out of the process.

WSDOT's present hearing loss rate is 0.62 per 100 employees; this rate is preliminary, expected to be revised at year end and will be reported in future editions of the *Gray Notebook*.

WSDOT's Workers' Compensation claims for hearing loss to date in 2013 are more than \$43,000; the agency has paid maritime hearing loss claims of more \$217,000 this year alone. If the equipment prevents even a single claim, it will provide a good return on investment. The Department of Labor and Industries awards an individual \$93,334.53 for a permanent partial disability for complete loss of hearing in both ears, which is pro-rated based



Jessica Orr and Ernst Stahn from WSDOT's Office of Human Resources and Safety demonstrate WSDOT's new hearing protection tool.

on the amount of loss. For instance, complete loss of hearing in one ear equals a \$15,555.63 award.

The testing equipment has undergone research from the National Institute for Occupational Safety and Health (NIOSH), the research branch for occupational safety and health under the U.S. Centers for Disease Control (CDC) and has been shown to greatly improve employee protection and reduce hearing loss. The benefits of the technology are so well demonstrated that the Federal Occupational Safety and Health Administration (OSHA), NIOSH/CDC, and the National Hearing Conservation Association (NHCA) advocate use of this state-of-the-art best practices technology.

Contributors include Marlo Binkley, Kathy Dawley, Corey Lane, Alana Neal, Ernst Stahn, Bruce Ikenberry and Yvette Wixson



WSDOT's annual safety program budget is \$1.6 million, about \$247 per employee. This covers a Hearing Conservation Program, Hepatitis B shots, respirator fit testing, air monitoring, lead testing, Material Safety Data Sheets access, incident tracking software, training, safety support (i.e. research and guidance) and consultation services by WSDOT's safety professionals.

Notable results

- WSDOT completed 74% of the recommended preventive maintenance activities for building assets, 3% above the goal
- Of WSDOT's capital facilities primary buildings, 67% are more than 25 years old
- Primary buildings in poor condition increased from 37% in 2008 to 40% in 2012
- Consolidation of staff from leased to owned buildings is expected to save WSDOT \$6.5 million in lease payments

Critical building financial needs are growing at WSDOT

WSDOT's 2013-2015 biennial budget for capital facilities is \$47.7 million, up from \$30.8 million in the previous biennium. The budget includes \$26.2 million for operations (heating/cooling, lights and maintenance) and \$21.5 million for capital investments, of which \$13.5 million is for a new traffic management center.

WSDOT capital facilities biennial budget is \$47.7 million Dollars in millions

Category of expenditures	Funding
Operations (subcategories below)	\$26.2
Utilities, rent, and other operational activities	\$18.0
Preventive maintenance	\$4.2
Corrective maintenance	\$4.0
Capital investments (subcategories below)	\$21.5
Construct new traffic management center near Seattle	\$13.5
Code compliance, other mandated activities	\$4.8
Repair and preservation	\$3.2
Total	\$47.7

Data source: WSDOT Capital Facilities Office.

WSDOT's statewide facilities strategic planning efforts identified a \$473 million backlog of unmet needs for capital facilities in the next 10 years. This includes \$195 million for repairs and \$278 million for replacement of aging facilities. Of this, \$189 million would address the highest priority needs for facility repair and replacement. The repair and preservation category is currently funded at about \$3 million to \$5 million per biennium (\$22.6 million spanning 10 years). To meet the

highest priority facility replacement and preservation needs in the next 10 years, WSDOT will need an ongoing additional investment of \$30 million to \$40 million per biennium.

Aging buildings increase WSDOT's backlog of facilities renovation work

More than two-thirds of WSDOT's primary buildings (see definition in gray box below) are more than 25 years old (28 percent are more than 50 years old). WSDOT needs to invest \$163.4 million to replace some of the systems and upgrade others to meet current operational needs.

As homeowners know, a roof begins to show signs of wear and tear as the house ages. Ongoing maintenance helps prolong the life of the home's roof, but at some point, it needs to be repaired or replaced. Some WSDOT systems are reaching that point.

WSDOT primary building backlog at \$163.4 million As of September 2013; Dollars in millions

BUILDING AGE	NUMBER OF BUILDINGS	BACKLOG IN MILLIONS
25 YEARS or less	95	\$23.5
26 – 50 YEARS	110	\$80.1
51 YEARS or more	82	\$59.8
TOTAL	287	\$163.4

Data source: WSDOT Capital Facilities Office.

Note: The backlog total was revised from \$132.5 million in [Gray Notebook 47, p. 9](#), to reflect project delivery costs including Washington state sales tax, design, engineering, contract administration and project contingency. The total backlog was \$195.3 million, with \$31.9 million for non-primary capital facilities.

Primary buildings house most WSDOT employees

Primary buildings comprise a subset of all WSDOT-owned capital facility buildings (see table on [p. 5](#)). They are typically larger than 2,000 square feet and consist of office or crew space that supports the majority of the department's staff. They may also provide shop and storage space for vehicles, equipment and supplies. Primary buildings account for 21 percent of WSDOT's facilities by number (287 buildings) and 62 percent by square footage (2.3 million square feet).

Capital Facilities Annual Report

WSDOT delivers most of planned projects, but unable to fund others

Sixty percent of primary buildings are in fair or good condition in 2012

WSDOT conducts facility condition assessments every two years. In 2012, 40 percent of primary buildings were rated in poor condition, the same as two years prior, but worse than the 37 percent reported in poor condition in 2008.

Fifty-two percent of buildings are in fair condition 2012; WSDOT's primary buildings by condition rating



Data source: WSDOT Capital Facilities Office.

WSDOT strives to keep buildings and systems operating smoothly to support the needs of the agency's workforce as they deliver a wide range of services to the public. When a facility is in poor condition, systems have deficiencies, may be beyond their useful life, and can impose unexpected costs. For example, a heating, ventilation and air conditioning (HVAC) system in poor condition is inefficient, requires frequent maintenance and is at high risk for failure. Impacts of a failed HVAC system can result in a facility shutdown due to health concerns. A facility in good condition meets current standards. A facility in fair condition has functional systems that are in adequate condition with some component deficiencies not at risk of failure.

Emergency maintenance activities are rising

WSDOT works to prioritize preventive maintenance activities (\$4.2 million is budgeted in the 2013-2015 biennium) in order to avoid emergencies when possible (the corrective maintenance budget is \$4 million). With the aging infrastructure and constrained resources, the number of emergency repairs is rising.

Unfunded preventive maintenance escalates need for emergency repairs

WSDOT's maintenance staff responded to about 1,700 corrective maintenance service requests in 2012, for a total of more than 5,700 requests since 2009. The corrective maintenance budget is typically exhausted before the end of the biennium. Addressing these critical needs impacts the resources available to perform planned preventive maintenance on schedule.

Under the current funding scenario, only the most critical preventive maintenance activities are planned and completed, such as mandatory inspections for fire extinguishers and vehicle hydraulic lifts. Other preventive activities are needed to keep systems and equipment operating as efficiently as possible. Of the recommended preventive maintenance activities, about 71 percent were funded and planned in the 2011-2013 biennium for WSDOT building assets. The remaining 29 percent of recommended activities are not reflected in the Capital Facilities plan. Due to limited funds, WSDOT must at times apply more of a "quick fix" to a failing system, instead of replacing major components or the entire system.

The preventive maintenance is prioritized based on nine categories numbered two through 10 (number one is not defined). The table below illustrates the categories,

WSDOT's most critical preventive maintenance work complete according to Capital Facilities plan

2011-2013 biennium; Completion of work units compared to goal

Funded work priority categories	Goal for work units ¹ completed	Actual work completed	Goal met?	Work units completed
10 - Life safety	95-100%	97%	Yes	3,171
9 - Code compliance	95-100%	91%	No	1,543
8 - Critical systems	75%	86%	Yes	4,989
7 - Environmental compliance	75%	86%	Yes	966
6 - Primary systems	51%	51%	Yes	4,225
Total / Average	71%	74%	Yes	14,894

Unfunded work categories

5 - Secondary system	Unfunded
4 - Long-term cost effective measures	Unfunded
3 - Non-structural maintenance	Unfunded
2 - Appearance	Unfunded

Data source: WSDOT Capital Facilities Office.

Notes: See [Gray Notebook 47, p. 10](#), for definitions of activities within each work category. 1 A Work Unit is an individual service request forecasted (planned) and/or generated (completed or not completed) by the Computerized Maintenance Management System. There is no category 1.

WSDOT owns or leases 1,395 buildings and structures statewide

and how WSDOT prioritizes work in each of the top categories. On average, WSDOT completed 74 percent of the recommended preventive maintenance work in the 2011-2013 biennium, 3 percent above the goal.

Minor repair and preservation costs adding up

Current funding allows for minor repair and preservation projects that typically cost less than \$1 million each; a sample of projects is listed below. The combined total of minor works projects planned in the 2013-2015 biennium is \$3.2 million.

Select WSDOT facility minor works projects funded for the 2013-2015 biennium

Project description	Estimate
Projects addressing occupant safety and code compliance	
Northup code compliance improvements	\$318,800
Colfax septic system repairs	\$69,700
White Pass office/shop ventilation system replacement	\$41,600
Projects addressing preservation	
Vancouver shop roof replacement	\$265,710
Everett maintenance facility HVAC ¹ replacement	\$79,500
Pines maintenance facility exterior paint	\$43,000
Yelm overhead door replacement	\$16,700
Projects addressing building operations	
Tumwater Materials Lab HVAC ¹ controls	\$87,400
Coulee City maintenance facility lighting and heater replacement	\$13,200

Data source: WSDOT Capital Facilities Office.

Note: Projects can also fall into categories for environmental compliance, or emergent need (when there is a facility failure or immediate operational need). See [Gray Notebook 43, pp. 11-12](#), for WSDOT's minor works project prioritization. 1 HVAC stands for heating, ventilation and air conditioning.

WSDOT manages 3.7 million square feet of owned and leased space

WSDOT manages about 1,395 owned and leased buildings and structures, or about 3.7 million square feet of space. These facilities are strategically located to serve operational needs and to support WSDOT's workforce of

WSDOT prioritizes replacement projects

High-priority major capital facility replacement projects are identified by each WSDOT region. Each project is then prioritized statewide using a matrix that evaluates four criteria:

- Facility occupant deficiency
- Preservation deficiencies
- Operational deficiencies
- Facilities more than 50 years old

about 6,600 permanent and seasonal employees. They contain unique building systems and components to serve WSDOT's diverse functional needs. WSDOT buildings are critical to the delivery of programs and services such as construction, maintenance and operation of highways and ferries, and are grouped into two categories:

- Facilities that house employees: 1.2 million square feet of office buildings for staff in regions, headquarters, project engineering and operations.
- Facilities essential to manage and operate systems, ferries and highways: 2.5 million square feet of maintenance operations, tunnel and bridge operations, traffic management centers, ferry terminals, materials and equipment storage, and wireless communications buildings.

WSDOT is required to report on 3.3 million square feet of space in the Facilities and Property Oversight Plan. In addition to the condition of capital facilities reported here, WSDOT reported the condition of safety rest areas and ferry terminals in [Gray Notebook 49, pp. 10-16](#).

WSDOT's 1,395 buildings cover 3.7 million square feet As of September 2013; Owned and leased facilities by area and number

Type of facility	Square feet	%	Number	%
Maintenance facilities	1,949,141	52%	719	52%
Office space (owned and leased)	1,217,527	33%	82	6%
Ferry terminals, warehouses	234,850	6%	122	9%
Pits, quarries, stockpiles	161,104	4%	168	12%
Tunnels, bridge operations	77,081	2%	18	1%
Safety rest areas	66,901	2%	131	9%
Other/storage	20,718	0.6%	8	0.6%
Wireless communications	15,461	0.4%	147	11%
Total:	3,742,783		1,395	

Data source: WSDOT Computer Aided Facility Management System and other sources. Note: Primary buildings are a subset of maintenance facilities, owned office space, and pits, quarries and stockpiles. See [p. 3](#) for details. Percents may not add to 100% due to rounding.

More details are provided in [Gray Notebook 47, p. 9](#).

WSDOT is currently selecting a vendor to implement software to improve the prioritization process by January 2014. It will quickly run through prioritization scenarios, and is intended to provide a transparent decision making tool that is credible and accountable to stakeholders, executives and the Legislature. WSDOT will use the software to build the facility asset priorities for the 2015-2017 biennium.

WSDOT's consolidated oversight of facilities saves money

WSDOT completes the last of 221 accessibility compliance projects

In June 2013, WSDOT completed the last of the 221 items identified in the 2009 WSDOT Statewide Capital Facilities Americans with Disabilities Act (ADA) Transition Plan. The final project installed new door hardware at the Mount Vernon Maintenance Facility. See [Gray Notebook 43, p. 14](#), for details on the ADA projects. WSDOT will continue to assess and verify that statewide facilities meet public accessibility requirements, and ADA accessibility issues will be addressed when identified.

WSDOT moving ahead with construction of new traffic management center

Most of the work performed by WSDOT related to capital facilities is focused on building maintenance and renovation. The Legislature provided funding for WSDOT to construct a new traffic management center in the 2013-2015 biennium. The new facility will be in Shoreline, north of Seattle. WSDOT awarded the design-build contract on October 9, 2013; the contractor will begin design this fall and start construction in 2014. The building is scheduled to be substantially complete by April 15, 2015. This facility will house staff and Intelligent Transportation System equipment critical for operating the SR 99 Alaskan Way Tunnel (which is scheduled to replace the viaduct by the end of 2015) and the new SR 520 floating bridge that is currently under construction. This facility will be an energy efficient building meeting Leadership in Energy and Environmental Design (LEED) silver requirements per state law (RCW 39.35D).

WSDOT energy use for buildings and street utilities increases 5 percent

WSDOT's greenhouse gas (GHG) emissions from building use and highway utilities such as lighting and traffic cameras increased 5 percent since 2011, to 53,986 metric tons of carbon dioxide equivalent (MTCO₂e) in 2012. Increases of this small scale can be influenced by equipment added to the system, or weather variations like a particularly hot summer or a cold winter. These emissions account for about 21 percent of all WSDOT emissions. The largest contributor to WSDOT emissions (about 67 percent) are the Washington State Ferries vessels, detailed in [Gray Notebook 47, pp. 36-37](#).

All state agencies are required to report and reduce energy consumption, strategize energy conservation measures and benchmark facility energy performance. The statewide target for Washington state government agencies is to reduce emissions 15 percent from 2005 levels by 2020. The target is 221,954 MTCO₂e, for all sources managed by WSDOT including ferry vessels, fleet vehicles, building use and highway utilities. WSDOT plans to report agency-wide emissions and reduction strategies in future *Gray Notebook* editions.

Electric vehicle infrastructure planning underway for WSDOT worksites

WSDOT is developing a strategy to incorporate electric vehicles into its fleet and provide electric vehicle charging infrastructure. This strategy will help WSDOT reduce GHG emissions and meet sustainable transportation goals.

WSDOT's consolidated Facilities and Property Oversight Plan saves money

WSDOT is updating the Facilities and Property Oversight Plan due in December, as required by the Legislature. This update will document WSDOT's owned and leased facilities; the 2013 report will also include a property plan with a land inventory indicating where property is being held for right of way, disposition and for future operational facilities.

WSDOT established the Facilities and Lease Board (FLB) in 2011 to streamline building space decision-making and communicate needs across all department programs, while ensuring that building space is appropriate, functional and cost effective.

Consolidating offices reduces waste

With Facility Lease Board oversight since 2011, four Thurston County buildings were vacated (56,013 square feet) and 248 employees were moved into WSDOT-owned facilities. As discussed in [Gray Notebook 47, p. 8](#), WSDOT is taking steps to consolidate staff into fewer leased facilities, particularly in downtown Seattle and Thurston County. WSDOT has recognized a statewide reduction of 121,372 square feet in the same period, by vacating 11 buildings and reducing leased space in one other building. These efforts are expected to avoid \$6.5 million in lease costs from the 2009-2011 biennium through the 2015-2017 biennium.

Contributors include: Steve Holloway, Yvonne Medina, Thanh Nguyen, Zak Swannack, Dennis Tate and Anna St. Martin



Notable results

- WSDOT surpassed its aircraft registration goal of 6,004 for the year with 6,474 registrations – 154 more than in 2012
- Pavement conditions at small airports in Washington state slightly worsened by 4% between 2005 and 2012
- WSDOT helped 103 local airports prioritize and submit projects through the State Capital Improvement Program
- WSDOT used \$900,000 of state funds to leverage \$21.3 million in federal dollars to fund 56 airport projects in fiscal year 2014

WSDOT leverages \$21.3 million in federal funds for airport aid

WSDOT leveraged \$887,537 in state money to secure \$21.3 million in federal dollars benefitting 56 projects at 33 airports in fiscal year (FY) 2014. WSDOT's dollars are part of \$2 million in state funds for the Airport Aid Grant Program. The state and federal funds, combined with \$1.5 million in local matching contributions, amount to \$24.8 million in total award dollars for FY2014 (July 2013 through June 2014).

Combined aid dollars total \$24.8 million for airports
Fiscal year 2014 Airport Aid Grant funding; Dollars in millions

Funding source	Amount
Federal funds	\$21.3
State (WSDOT) funds	\$2.0
Local (matching) funds ¹	\$1.5
Total awarded	\$24.8

Data source: WSDOT Aviation.
Note: 1 A minimum 5 percent local match is required by WSDOT.

WSDOT's Airport Aid Grant Program supports pavement, safety, maintenance, security and planning projects, providing crucial assistance to public-use airports owned by local agencies, tribal governments, corporations and individuals.

Grant dollars improve pavement

In FY2014, 87 percent (\$21.5 million) of the \$24.8 million in federal, state and local aid investment dollars is slated for projects that improve airport pavement. Safety projects account for 10 percent (\$2.5 million) of the combined grant dollars, and planning, security and other improvements account for 3 percent (\$800,000) of the grant dollars. More information about WSDOT's Airport Aid Grant Program is available at <http://www.wsdot.wa.gov/aviation/Grants/> (QR code above).

Majority of Airport Aid funding preserves pavement
Fiscal year 2014 WSDOT Airport Aid Grant Program; Combined federal, state and local funds by project type



	Pavement	\$21.5 million	87%
	Safety	\$2.5 million	10%
	Planning, Security, Other	\$800,000	3%

WSDOT strengthens aviation in the state

WSDOT's mission is to enhance Washington state's aviation system interests in ways that strengthen the transportation system, economy and quality of life. Each year, airports in Washington state serve more than 34 million passengers, have 3.7 million aircraft landings and takeoffs, and move more than 600,000 tons of cargo. Aviation in Washington generates 248,500 jobs, \$15.3 billion in wages, \$792 million in tax revenue and \$50.9 billion in economic activity.



The 2013-2015 biennium budget for WSDOT Aviation is \$7.8 million. The state's aeronautics account funds 94 percent of the budget, primarily with aviation fuel tax, aircraft excise tax and aircraft registration fees. Federal funds make up the remaining 6 percent of the biennium budget. About 45 percent (\$3.5 million) of the biennium budget goes directly to airports through the Airport Aid Grant Program. The remaining 55 percent is used to manage WSDOT airports, manage aircraft registrations, direct air search and rescue missions and provide planning support to airports and local jurisdictions.

Study shows pavement conditions at many airports are deteriorating

Pavement condition index improves at state's primary commercial airports, declines at smaller airports

Pavement condition index (PCI) scale; 2005 and 2012 average PCI weighted by area for Washington state public-use airports



Data source: WSDOT Aviation.

Notes: 1 Washington state has 11 public-use airports that are considered primary airports in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS). 2 This category includes all airports with paved runways that are not designated as primary airports by FAA. 3 Fifty-three of the non-primary airports are included in the NPIAS. 4 Thirty-six of the non-primary airports in the 2013 report are not in the NPIAS.

System-wide airport pavement condition holds steady

WSDOT's overall goal of keeping the system-wide airport pavement condition index (PCI) at 75 or above was met in 2012, which indicates that preventive maintenance is keeping airport pavement in good condition. WSDOT's Airport Pavement Management System Report, released in 2013, shows that the average PCI for public-use airports in 2012, area-weighted, is 77 on a scale of 100 to zero (best to worst). Runway pavement at the few large airports with a lot of paved area have improved, while pavement at small airports — with less paved area — have worsened.

The pavement condition index combines several measures of pavement distress, such as cracking and weathering, into one rating. WSDOT monitors airport pavement conditions so the agency can work with airport owners and the Federal Aviation Administration (FAA) to identify and prioritize preservation needs.

Pavement conditions improve at larger airports, decline at smaller airports

Pavement conditions at large airports have improved from a PCI rating of 72 in 2005 to 80 in 2012. These are called primary airports and are in the FAA's National Plan of Integrated Airport Systems (plan), deemed important to national air transportation. There are 11 primary airports in Washington, including Seattle-Tacoma and Spokane international airports.

There are two classifications of smaller airports called non-primary airports: those included in the FAA's plan (53 airports) and those that are not (72 total, of which

36 are paved and 36 are unpaved). The area-weighted PCI for all 89 non-primary airports in the 2013 report declined 4 percent from 78 in 2005 to 75 in 2012, still meeting the goal. For non-primary airports not in the FAA's plan, the PCI rating declined 15 percent, from 78 in 2005 to 66 in 2012, due to limited preservation funds.

Pavement conditions at Washington's smaller airports likely to continue to decline

Approximately \$217 million is needed to eliminate the backlog of major pavement rehabilitation projects at non-primary airports in the next eight years. This funding amount is estimated to bring the PCI to 84 in 2020. If non-primary airports continue to receive the average level of pavement project funding of \$4.5 million annually (including federal and state funding sources), the PCI is expected to decrease from 75 to 71 by 2020 and the backlog of major pavement work is estimated to increase by 18 percent to \$257 million in 2020. If there is no funding for pavement projects at non-primary airports, the PCI is projected to deteriorate from 75 to 66 by 2020. WSDOT's Airport Aid Grant Program is particularly important for providing infrastructure improvement funds to these smaller airports.

WSDOT pavement study includes 100 airports

Of the 100 airports in the 2013 report, 95 were evaluated by WSDOT and five primary airports provided their own data. The 36 airports not included have unpaved landing strips of grass, gravel, turf or water. The 100 airports in the report represent about 150 million square feet of pavement — the equivalent of a two-lane highway stretching 1,400 miles from Seattle to Albuquerque, New Mexico.

WSDOT and local airports prioritize projects to target limited funds

WSDOT and the Federal Aviation Administration work with the state’s public-use airports to develop five-year project lists to determine strategic funding priorities through the State Capital Improvement Program (SCIP). As of September 30, 2013, 40 airports have submitted five-year plans (2014-2018) to WSDOT. Since the program began, 103 airports have submitted a total of 580 projects through the SCIP. WSDOT and the FAA award these projects based on federal, state and local funding priorities. The SCIP tackles the challenge of targeting limited state and federal resources and prioritizing aviation projects statewide.

WSDOT surpasses aircraft registration goal

WSDOT has registered 6,474 aircraft in 2013, which is more than in any of the past six years, and 154 more than in 2012, a 2.4 percent increase. WSDOT surpassed the goal to register at least 95 percent, or 6,004, of the active aircraft from 2012 before the close of FY2013 on June 30, 2013. By law, most aircraft in the state must be registered with WSDOT by January 1 of each year.

In 2012, aircraft registration and excise tax fees generated \$427,365 in revenue, of which \$156,227 was put back into the aeronautics account to directly support WSDOT’s airport preservation, maintenance and improvement programs. The rest of the revenue goes to the state general fund.

The increase in registrations is largely attributed to WSDOT’s outreach efforts. Two reminder letters are mailed to each aircraft owner and WSDOT attempts to contact individuals via email or telephone before issuing late penalties. WSDOT also contacts new aircraft owners to inform them of registration requirements.

WSDOT partners to enhance air cargo

WSDOT is reaching out to airport and freight partners in an effort to help develop the state’s Air Cargo Program by developing a strategy for airport infrastructure investments that enable air cargo growth. WSDOT is meeting with representatives of large commercial airports in order to gain a better understanding of the opportunities and challenges for air cargo growth. In September 2013, WSDOT solicited input from airport sponsors during a series of statewide aviation workshops to better understand the volume and operations of various types of air freight.

In 2013, WSDOT and the Spokane International Airport met with the Freight Mobility Strategic Investment Board to discuss collaborative air cargo opportunities that could lead to enhanced local, domestic and international air freight activity.

See the [Gray Notebook 49, p. 44](#), for air cargo information and performance measures featured in the annual Trucks, Goods and Freight Annual Report.

Contributors include Tristan Atkins, Rob Hodgman, Eric Johnson, John MacArthur, Nisha Marvel, Tracy Paul, Paul Wolf and Sarah Lowry



The Sullivan Lake State Airport, in northeast Washington, is managed by WSDOT and has a grass runway. This airport is commonly used for forest firefighting and recreation purposes during the summer months.

WSDOT manages 16 airports

There are 136 public-use airports in Washington state ranging from large commercial airports to backcountry grass landing strips. WSDOT owns or manages 16 of these airports, most of which are remote and have grass or gravel runways. Nine of these are state-owned, three are leased, and four operate under special use permits. These airports are used for a variety of purposes:

- Staging emergency management (natural disaster response, emergency medical evacuations, homeland security, law enforcement, and search and rescue)
- Staging natural resource and agricultural management
- Enhancing the overall level of safety for the state aviation system by providing emergency landing areas on major east/west air routes
- Providing transportation access to remote communities
- Providing access to recreational areas
- Supporting local economies

Notable results

- **WSDOT teams helped clear 12,002 incidents this quarter, providing an estimated \$19.1 million in economic benefit**
- **Incident Response units provided direct assistance to 3,026 drivers this quarter, helping them get safely on their way**

Incident Response provides assistance at 12,002 incidents

WSDOT's Incident Response (IR) teams responded to 12,002 incidents in the third quarter of 2013 (July through September). This averages out to a WSDOT IR team assisting at an incident every 11 minutes during the quarter. Incident Response teams cleared incidents in an average of 12.9 minutes. There were 464 — about 3.7 percent — fewer incidents responded to during the third quarter of 2013 compared to the same quarter in 2012. At the same time, the average incident clearance time was about 40 seconds longer.

In general, WSDOT's goal for the IR program is to clear incidents as quickly as possible as this translates to less incident-induced delay and less chance for secondary collisions to occur. A table summarizing the IR program's performance and benefits for the quarter is on [p. 11](#).

WSDOT's assistance at incident scenes provided an estimated \$19.1 million in economic benefits. The benefits are provided two ways. First, by clearing incidents quickly, WSDOT reduces the time motorists waste in incident-induced traffic delay. About \$10.7 million of IR's estimated economic benefit for the quarter is from reduced traffic delay. Second, by proactively managing traffic at incident scenes, WSDOT helps prevent secondary collisions. About \$8.4 million of IR's economic benefit is from preventing an estimated 2,293 secondary collisions.



The mission of WSDOT's Incident Response program is to clear traffic incidents safely and quickly, minimizing congestion and the risk of secondary collisions. The program is active in all six WSDOT regions with a biennial budget of \$9 million, funding about 47 full-time equivalent positions and 62 dedicated vehicles. Teams patrol 493 centerline miles of state highway on major corridors during peak traffic hours.

WSDOT Incident Response clearance times up, while total number of responses down

Third quarter (July through September) 2012 and 2013

2012 - Q3 **12,466** incident responses 12.2-minute average incident clearance time

2013 - Q3 **12,002** incident responses 12.9-minute average incident clearance time

incident responses decreased **3.7%** ↓ **clearance time** increased **5.7%** ↑

Data source: Washington Incident Tracking System.

Notes: Figures only account for incidents to which an Incident Response unit responded. Figures reported for the current quarter (Q3 2013) are considered preliminary. In *Gray Notebook 47* WSDOT reported that IR teams responded to 12,459 incidents in the third quarter of 2012. These numbers were updated and finalized in *Gray Notebook 48* to 12,466 to reflect refinements in the dataset. In the second quarter of 2013, WSDOT responded to 11,784 incidents, clearing them in an average of 12.1 minutes. These figures have been confirmed and are now finalized.

This means IR prevented a little more than one crash every hour on Washington highways during the quarter. Secondary collisions are crashes that occur in traffic after another incident and may be caused by distracted driving, unexpected slowdowns in traffic, or debris in the roadway. Teams work to alert drivers and clear the roadway to lessen the probability of a new incident. For every dollar spent on the IR program this quarter, WSDOT prevented an estimated \$16.97 in incident-related costs.

Incident-induced delay costs \$42.6 million

Traffic delay that occurred due to incidents on state highways cost motorists \$42.6 million in wasted time and fuel during the third quarter of 2013. This is about \$487,000 less than in the same quarter of 2012. Without WSDOT's assistance, this cost would have been \$53.3 million (\$10.7 million in prevented delay plus \$42.6 million in actual delay). For more on how WSDOT calculates these costs, see the Incident Response Phase 3 research from the Washington State Transportation Research Center at the University of Washington at <http://www.wsdot.wa.gov/Research/Reports/700/761.1.htm>.

WSDOT teams directly assist drivers to keep roads safe

WSDOT’s Incident Response prevents \$19.1 million in delay and secondary collisions

July through September 2013; Incidents by duration; Time in minutes; Costs and benefits in dollars

Incident duration	Number of incidents ¹	Percent blocking ²	Average incident clearance time ³	Cost of incident-induced delay	Economic benefits from IR program ⁴
Less than 15 minutes	8,997	16.4%	5.1	\$11.6 million	\$5.4 million
Between 15 and 90 minutes	2,865	40.9%	29.2	\$22.8 million	\$10.2 million
Over 90 minutes	140	84.3%	174.3	\$8.1 million	\$3.4 million
Total	12,002	23.0%	12.9	\$42.6 million	\$19.1 million⁵
Percent change from third quarter 2012	↓ 3.7%	↑ 2.8%	↑ 5.7%	↓ 1.2%	↓ 2.1%

Data source: Washington Incident Tracking System.

Notes: 1 Teams were unable to locate 551 of the 12,002 incidents. These incidents are included in the total count but are not factored into other measures. 2 An incident is considered blocking when it shuts down one or more lanes of travel. 3 Incident clearance time is the time between the IR team’s first awareness of an incident and when the last responder has left the scene. 4 Estimated economic benefits include benefits from delay reduction and prevented secondary collisions. See [Gray Notebook 43, p. 21](#), and the [2012 Congestion Report, p. 72](#), for WSDOT’s benefits calculation methods from reduced delay and prevented secondary incidents, respectively. 5 The total estimated economic benefit from the IR program was \$19,085,986 and was rounded to \$19.1 million.

Incident Response units deployed to eight incidents lasting more than six hours

WSDOT units were deployed to eight incidents lasting more than six hours, called “extraordinary incidents,” during the third quarter of 2013. This is two more extraordinary incidents than the same period in 2012. The eight incidents took an average of 479 minutes to clear, or close to eight hours. Four of the incidents involved semitrucks, two involved fatal collisions and two involved police activity. WSDOT teams provided traffic management in order to keep drivers moving and emergency responders safe.

If these extraordinary incidents are excluded, WSDOT’s average clearance time for over-90-minute incidents statewide would have been just under 156 minutes or 18 and a half minutes faster (see table above). Together, the eight incidents accounted for about 16 percent of delay costs caused by over-90-minute incidents.

Figures reported here are from WSDOT’s Washington Incident Tracking System, which tracks only incidents to which a WSDOT IR team responded.

Quarterly focus: Incident Response helps drivers, keeping them and roads safe

One of the Incident Response program’s main functions is to help drivers in need of assistance on state highways. IR units provided direct assistance to 3,026 drivers this quarter. This accounts for more than 26 percent of the 11,451 incidents at which IR teams were able help (12,002 total incidents minus 551 “unable to locate” incidents when IR teams were sent to a reported incident that apparently

cleared prior to their arrival). WSDOT assists drivers in order to reduce their exposure to dangerous conditions and help keep traffic moving safely. Incident Response teams were able to get drivers underway or move them to safer locations on average in less than 10 minutes.

WSDOT IR units are equipped to help stranded drivers in several ways. In many cases, all a driver needs to get back on the road is a gallon of fuel to reach the next gas station, or a jumpstart. Teams provided fuel or a jumpstart 409 times in the quarter, which is about 14 percent of all driver assistance incidents. Other times more involved work is required, like changing a flat tire. WSDOT teams changed flat tires or assisted with other minor repairs 499 times, or 16 percent of all driver assistance incidents. Finally, if a disabled vehicle is stopped in a dangerous location, IR units may push them a short distance to a safer place using push bars located on the front of IR vehicles. Teams assisted 328 disabled vehicles in this fashion, accounting for about 11 percent of all driver assistance incidents.

Most driver assistance tends to fall into the “other” category, which accounted for 59 percent of such incidents this quarter. This category is a catchall for the various situations IR units encounter while patrolling the morning and evening rush. Examples of “other” incidents this quarter ranged from assuring aid for drivers experiencing medical issues, helping safely secure a loose load and giving lost drivers directions. In all cases, WSDOT units’ first priority is keeping drivers and the roadway safe.

Contributors include Paula Connelley, Vince Fairhurst, Dianne McQuerty and Bradley Bobbitt



Notable results

- Ferries' farebox revenues were \$54.4 million for the first quarter of fiscal year 2014, making them the highest ever
- Ferries continues to exceed its system-wide reliability goal of 99%, making 99.6% of its scheduled sailings during the quarter

Ferries' farebox revenues come in at highest quarterly levels yet

A mix of increased ridership and ticket prices put Washington State Ferries' farebox revenues at \$54.4 million for the first quarter of fiscal year (FY) 2014 (July 2013 through June 2014), the highest on record. Revenues were \$1.5 million (2.8 percent) more than projected. In the same quarter last year, farebox revenues were \$53.7 million. Farebox revenues help offset costs of the system and reduce the subsidies necessary to provide ferry service.

Ferries exceeds reliability goal for quarter

Washington State Ferries (Ferries) missed 51 fewer trips in the first quarter (July through September) of FY2014 than during the same period last year, 169 as compared to 220. That's less than two out of 470 daily trips that were missed.

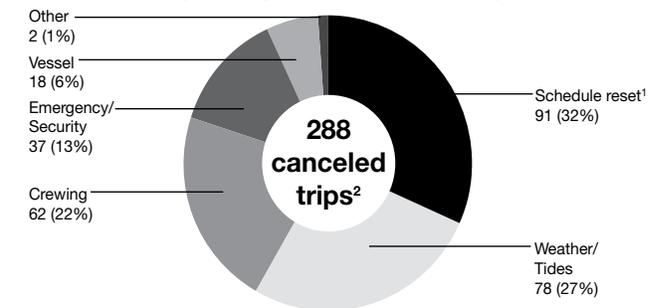
There were 42,702 regularly scheduled trips during the first quarter of FY2014. Ferries made 99.6 percent (42,533) of these trips, exceeding the reliability performance goal of 99 percent (see chart, [p. 13](#)).

Ferries canceled 288 trips and was able to replace 119 of them, which resulted in the 169 net missed trips for the quarter. Schedule resets accounted for 90 cancellations on the Fauntleroy – Vashon – Southworth route on three different days. Schedule resets typically occur when a vessel (or vessels) can no longer stay on its sailing schedule or is removed from service due to mechanical problems, heavy volumes, crewing issues or weather.

Crewing issues stemming from Ferries having insufficient staff on hand to operate vessels accounted for 62 cancellations on the Fauntleroy – Vashon – Southworth route and the Point Defiance – Tahlequah route.

Ferries is working to address future staffing shortages by hiring more deckhands. On the Port Townsend – Coupeville route, low tides resulted in 54 cancellations and poor weather resulted in 16 cancellations. Eight

Washington State Ferries cancels 288 trips First quarter (July through September), fiscal year 2014



Data source: WSDOT Ferries Division.

Notes: 1 A schedule reset typically occurs when a vessel (or vessels) can no longer stay on its sailing schedule due to mechanical problems, heavy volumes, crewing issues or weather. 2 Of the 288 canceled trips, Ferries replaced 119. Percentages may not equal 100 due to rounding.

other poor weather cancellations occurred system-wide throughout the greater Puget Sound area.

On-time performance improves on three of Washington State Ferries' routes

Ferries' on-time performance declined 0.6 percent from the same quarter last year to 92.8 percent for the first quarter of FY2014. This decrease put Ferries' performance for the first quarter of FY2014 below the annual on-time performance goal of 95 percent.

Higher traffic in the summer season brings challenges to the Ferries system and on-time performance is typically lower than during other times of year. While Ferries adjusts some sailing schedules and adds vessels to certain routes to accommodate its busy season, there is much higher strain on the system because of summer's increase in ridership. It takes longer to load and unload vehicles and passengers when ferry terminals and vessels reach full capacity and this can result in delays.

On average, 33 out of 470 trips a day did not leave the terminal within 10 minutes of the scheduled departure time in the first quarter of FY2014. Compared to the same quarter in FY2013, on-time performance improved on

Ridership increases compared to same quarter last year

three routes and worsened on six. Ferries had a notable improvement in on-time performance on the San Juan Island Domestic ferry route, which saw an increase of 5.3 percent compared to the same quarter in FY2013. The increase was due in part to the completion of construction work at the Lopez Island terminal, which impacted performance in the first quarter of FY2013.

The largest decrease in on-time performance was on the Seattle – Bainbridge Island route, which dropped 3.9 percent from the same quarter in FY2013. Access changes and terminal construction contributed to the decrease. The Vashon – Fauntleroy – Southworth (triangle) route saw a 3.8 percent drop in on-time performance from the same quarter last year. Loading challenges at the Fauntleroy Terminal coupled with the M/V *Klahowya's* speed limitations impacted on-time performance on the triangle route. Due to the characteristics of this route, if one ferry is unable to be on time then the other two ferries that serve the route are also delayed.

Ridership slightly exceeds projections

Approximately seven million riders used ferries during the first quarter of FY2014, slightly exceeding projections by 128,000 (1.8 percent). Ridership was 80,000 more (1.2 percent) than the same quarter in FY2013, putting it at levels that have not been seen on Washington State Ferries' runs since the first quarter of FY2010. Ferries transported more than 2.92 million

vehicles this quarter, providing drivers direct, cross-water routes between communities, reducing the number of vehicles on already busy state highways.

The Edmonds – Kingston route transported more than 580,000 vehicles during the quarter, saving each motorist about 90 minutes of what would be at least two hours in drive-around time, and 100 miles traveling between the Snohomish County and the Kitsap Peninsula on each trip. The route saved these drivers from traveling a cumulative 58 million miles, which would have taken more than 1.1 million hours.

Complaints show slight decrease for quarter

Out of seven million riders, there were 464 complaints and 47 compliments during the first quarter of FY2014. This is a slight decrease from the 482 complaints and about the same number of compliments compared to the same quarter in FY2013. The largest category increase in complaints was "General Service," which went from 25 to 47 and included comments ranging from higher fares to cabs at Colman Dock. The largest decrease in complaints was for ticketing issues, which dropped from 56 in the first quarter of FY2013 to 37 in the first quarter of FY2014. The decrease is due to improvements made to Ferries reservation system, and riders becoming more familiar with these changes.

Contributors include Theresa Greco, Matt Hanbey, Kynan Patterson and Joe Irwin

Washington State Ferries' on-time performance declines, trip reliability improves for the quarter

First quarter (July through September), FY2013 and FY2014; Annual on-time goal = 95 percent; Annual reliability goal = 99 percent

Route	On-time performance				System-wide reliability			
	FY2013	FY2014	Status	Trend	FY2013	FY2014	Status	Trend
San Juan Domestic	80.1%	85.4%	+5.3%	↑	99.6%	99.9%	+0.3%	↑
Anacortes – Vancouver, B.C.	88.5%	88.4%	-0.1%	↓	100.0%	99.4%	-0.6%	↓
Edmonds – Kingston	98.3%	98.9%	+0.6%	↑	100.0%	100.0%	0.0%	↔
Fauntleroy – Vashon – Southworth	94.7%	90.9%	-3.8%	↓	99.6%	99.4%	-0.2%	↓
Port Townsend – Coupeville	92.3%	91.5%	-0.8%	↓	97.0%	97.3%	+0.3%	↑
Mukilteo – Clinton	97.3%	98.5%	+1.2%	↑	99.7%	99.8%	+0.1%	↑
Point Defiance – Tahlequah	99.3%	98.5%	-0.8%	↓	99.6%	99.5%	-0.1%	↓
Seattle – Bainbridge Island	94.9%	91.0%	-3.9%	↓	100.0%	100.0%	0.0%	↔
Seattle – Bremerton	96.9%	93.5%	-3.4%	↓	98.9%	99.9%	+1.0%	↑
Total	93.4%	92.8%	-0.6%	↓	99.5%	99.6%	+0.1%	↑

Data source: WSDOT Ferries Division.

Note: A trip is considered delayed when a vessel does not leave the terminal within 10 minutes of the scheduled departure time.



Notable results

- **On-time performance for state-supported Amtrak Cascades trains improved from the third quarter 2012 to the third quarter 2013**
- **Nine of WSDOT's 20 federally funded rail projects were in construction or complete as of September 2013**

On-time performance improves compared to previous year

On-time performance for state-supported Amtrak Cascades trains averaged 76.4 percent in the third quarter of 2013, a 4.5 percentage point improvement compared to the same quarter in 2012. With this improvement, WSDOT is closer to achieving the on-time performance goal of 80 percent for the quarter. The top causes of delays were freight train interference and speed restrictions due to construction. The peak construction period on the railroad tracks occurs during summer months, so speed restrictions are common, which can cause freight and passenger train delays.

Ticket revenues and ridership trend upward

Both ticket revenues and ridership for state-supported Amtrak Cascades trains improved between the third quarters of 2012 and 2013. Amtrak Cascades' ticket revenue on state-supported trains totaled \$6.85 million in the third quarter 2013. This was an improvement of 1 percent compared to the same quarter in 2012, when ticket revenues were \$6.79 million. The increase in ticket revenues helps offset the subsidy provided by the state.

State-supported Amtrak Cascades' ridership increased 2.5 percent from third quarter 2012. Ridership for the third quarter was 170,876 compared to 166,629 for the same quarter in 2012. The increase in ridership was primarily along the Seattle to Vancouver, B.C., segment.

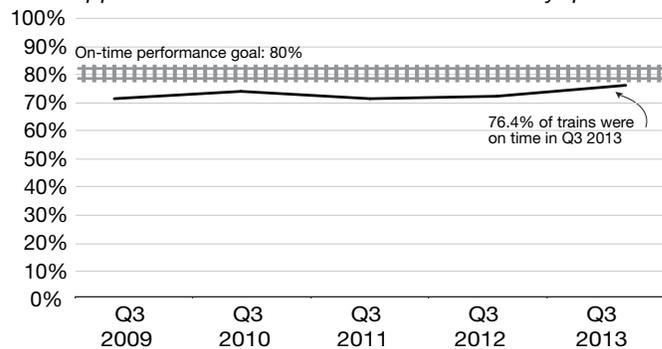
Draft Washington State Rail Plan open for public comment through December 2

The Draft Washington State Rail Plan (which can be accessed at <http://www.wsdot.wa.gov/Rail/staterailplan.htm>) was released for public review on September 30, 2013, and will be open for comment through December 2, 2013. The plan is based on technical analysis as well as input received from rail owners, operators, users, tribal governments, government agencies, community groups and individuals during six workshops and more than 30 briefings.

The purpose of the Washington State Rail Plan is to outline a strategy for addressing changes in rail transportation and to provide a blueprint for ensuring the continued support of a healthy economy. Consistent with federal and *continued on p. 15*

Amtrak Cascades' on-time performance increases to 76.4 percent

Third quarter (July through September), 2009-2013; Percent of state-supported Amtrak Cascades trains on time by quarter

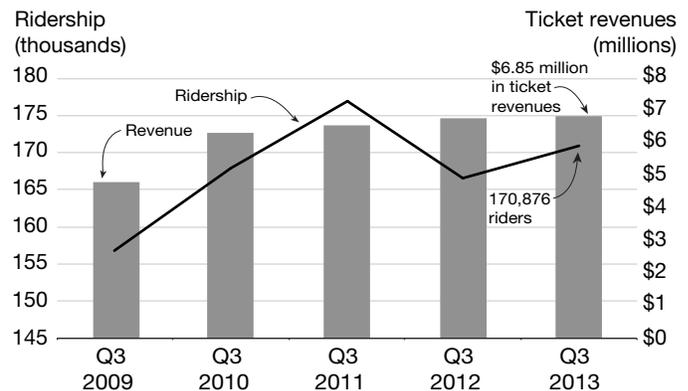


Data source: WSDOT Rail Division.

Notes: For Washington-funded trains only. On-time performance is calculated by dividing the number of trains that arrive at the endpoint on time by the number of trains in operation during a specific period. These calculations consider trains 10 to 15 minutes late as on time, depending on the route length.

Amtrak Cascades' state-supported ridership and ticket revenues increase compared to previous year

Third quarter (July through September), 2009-2013



Data source: WSDOT Rail Division.

Federally funded rail projects are on track for 2017 completion

Draft rail plan *continued from p. 14*

state requirements, the plan describes what is working well, identifies challenges, highlights policy priorities, and sets a course for state action and investment to ensure that these services can meet future transportation needs.

Federally funded rail projects move forward

Nine of WSDOT's 20 federally funded rail projects were under construction or complete in the third quarter of 2013. Work includes purchasing new locomotives, adding tracks to handle the increased train traffic, and upgrading tracks, signals and stations. More than 96 percent of the funding for these projects comes from the 2009 federal American Recovery and Reinvestment Act (ARRA).

Vancouver rail projects will separate passenger from freight trains

Three Vancouver, Wash., area rail projects represent a combination of improvements to reduce congestion through the Vancouver rail yard. This rail yard is essential as a major hub for freight and passenger rail, as well as for goods and cargo bound for the Port of Vancouver. The Vancouver – Freight Access project, involving the Port of Vancouver and scheduled for completion by February 2015, will create a trench under the existing BNSF mainlines allowing trains to access the port without blocking mainlines and causing delays to passenger and other freight rail traffic.

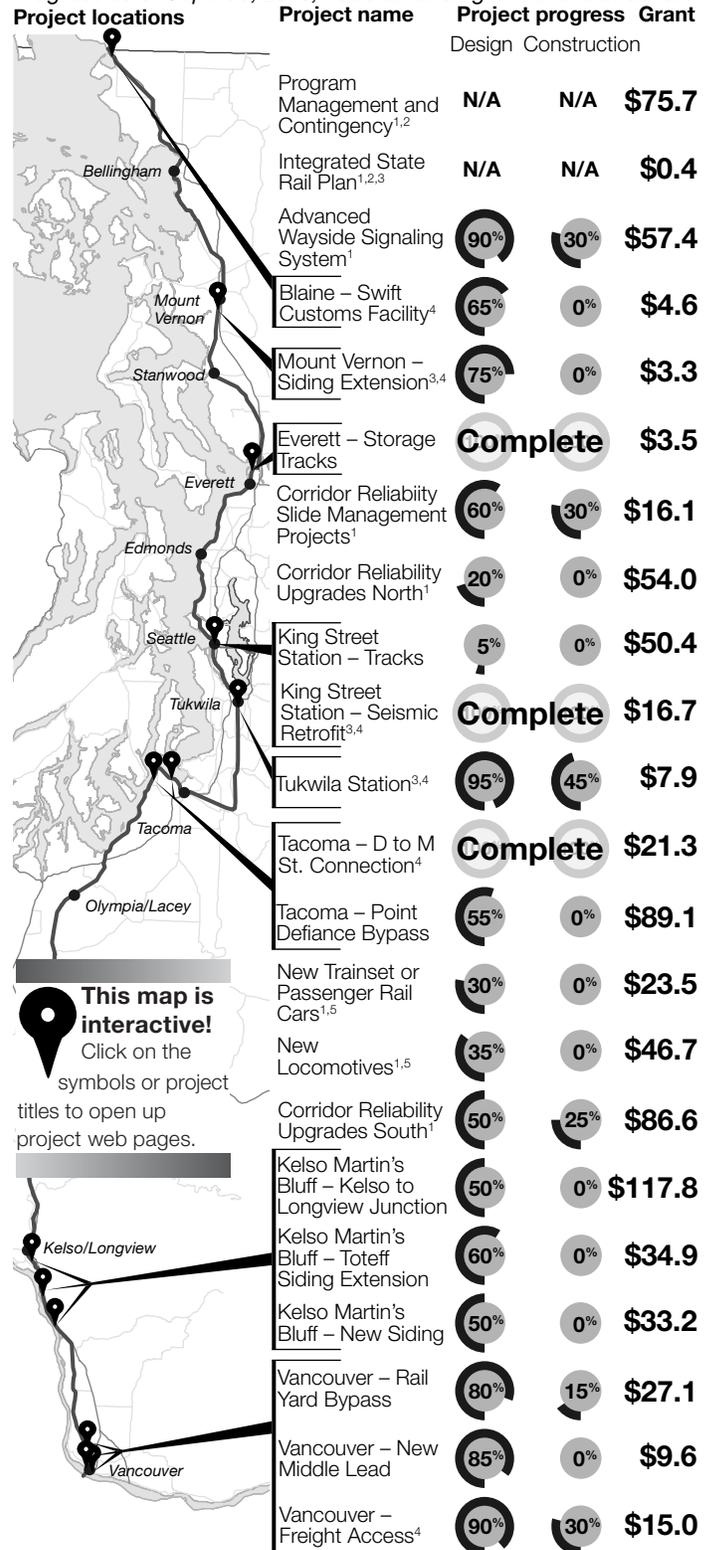
The other two projects (Rail Yard Bypass and New Middle Lead) reconfigure the BNSF Vancouver rail yard, and collectively provide an additional mainline connection for freight moving between Seattle and Pasco. The improvements also provide a new rail line along the east side of the Vancouver rail yard that allows freight trains to bypass the yard and associated operations. These projects are expected to be operationally complete by December 2015.

The total cost of these three projects is \$73.9 million, with \$51.7 million being funded by ARRA and the remaining \$22.2 million coming from the Port of Vancouver. Once complete, the projects will provide more options for freight rail traffic movements and will improve access to mainlines for passenger rail.

Contributors include Robert Fleming, Teresa Graham, Jim Mahugh, John Romero, Gayla Reese Walsh, Kerri Woehler, Bradley Bobbitt and Alison Wallingford

WSDOT makes progress on \$795 million in rail projects

Progress as of Sept. 30, 2013; Federal funding in millions of dollars



Data source: WSDOT Rail Division.
Notes: Some projects progress in stages with portions moving into construction while others are still in design. 1 Project not shown on the map. 2 Not a capital project. 3 These four projects are funded by Federal Rail Administration (FRA) non-American Recovery and Reinvestment Act (ARRA) grants and the remaining 16 are funded by ARRA. 4 Six projects are partially funded from non-FRA sources. 5 The construction stage for these projects consists of manufacturing and delivering train components.

Notable results

- *Employees at worksites with commute trip reduction programs are cutting greenhouse gas emissions by 80,600 metric tons annually*
- *Washington's Commute Trip Reduction Board is asking the Legislature to expand its program beyond commute trips to all trips*

Washington worksites reduce drive-alone to work rate by 3.8 percent

According to the Commute Trip Reduction (CTR) Board's latest report, between July 2007 and June 2012, employees at nearly 1,100 CTR worksites across Washington state reduced their drive-alone to work rate by 3.8 percent. Program participants are surveyed biennially to ascertain their impact on trip reduction. The report finds that they leave about 17,800 cars at home each day as they commute to work by bus, train, vanpool, carpool, walking, biking, or skip the commute altogether and "telework," which is working from home or a satellite office.

According to the report, during the same period, average vehicle miles traveled (VMT) per employee at CTR worksites dropped by 5.7 percent, with a total statewide reduction of 180 million VMT annually. This translates to 8.8 million gallons of fuel saved annually, saving commuters more than \$33 million each year in fuel costs.

Between 2007 and 2012, CTR affected employees reduced their annual GHG emission by 80,600 metric tons, which is equivalent to the carbon found in 346 railcars full of coal or to the carbon captured and stored annually by 66,000 acres of forests, according to the report.

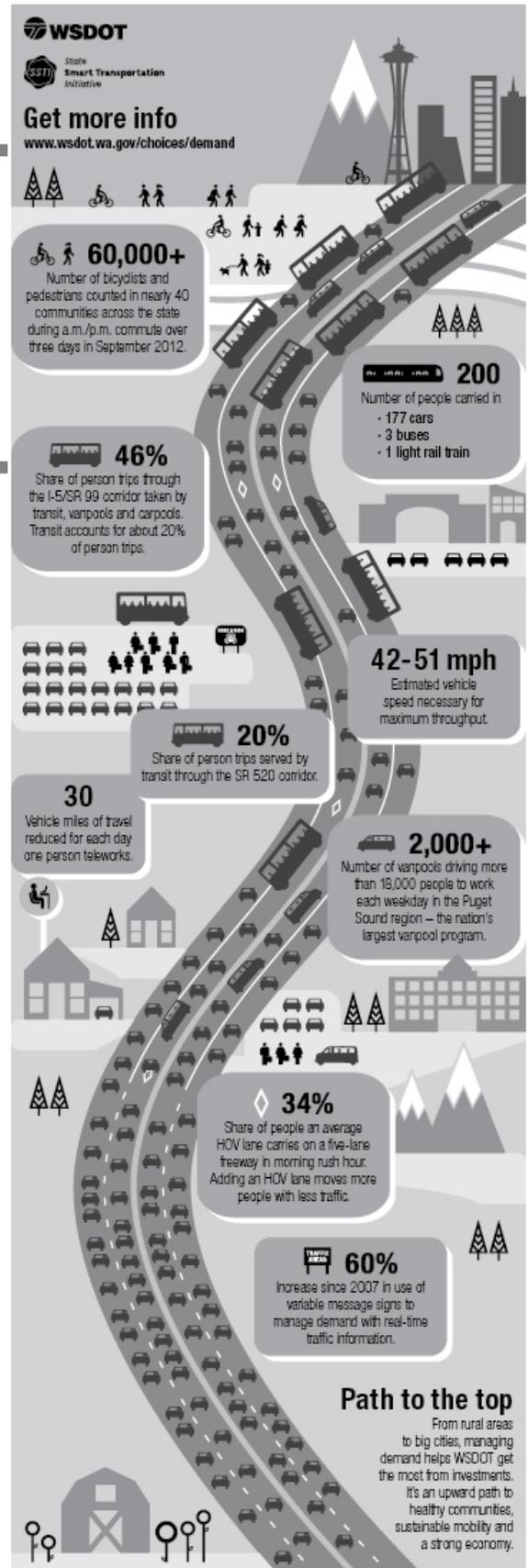
Employees continue reducing drive-alone rates

Washington State Commute Trip Reduction Law-affected employees biennial survey results

Outcome	2007-2008 baseline	2009-2010	2011-2012	Results compared to baseline
Drive alone rate	65.7%	62.6%	63.2%	-3.8%
Vehicle miles traveled (VMT) per employee	10.95	10.36	10.33	-5.7%
Annual gallons of fuel saved based on 2007-2012 VMT reduction				8.8 million
Annual fuel costs avoided based on 2007-2012 VMT reduction				\$33 million
Annual greenhouse gas emission reduction based on 2007-2012 VMT reduction				80,600 metric tons

Data source: Commute Trip Reduction survey database..

Note: Results reflect a relative reduction in drive alone rate and VMT.



DEMAND THE PATH TOWARD GREATER MANAGEMENT EFFICIENCY

Board recommends expanding program's scope to reduce all trips

In its 2013 Report to the Legislature released this fall, the Washington State Commute Trip Reduction Board, supported by WSDOT, is recommending that the Commute Trip Reduction (CTR) program move beyond reducing commute-to-work trips and expand its emphasis to all trips.

The CTR Board represents diverse perspectives of citizens, businesses, state agencies, transit agencies and jurisdictions around the state. Using these diverse interests, the board collaborates with employers to make CTR programs convenient, efficient and rewarding.

By changing the scope of commute reduction from work trips to all trips, the CTR Board would build upon and continue the contribution made by major employers, providing financial support for local jurisdictions through a new grant program to develop and implement community trip reduction plans. Locally designed, customized approaches would provide opportunities to meet both community and state goals, according to the report. It would authorize local jurisdictions to propose innovative plans that expand their markets for trip reduction and address the sources of congestion while enhancing public-private partnerships. This proposal fits into Governor Jay Inslee's new Results Washington program, including the goal to increase Washingtonians' use of alternative transportation to commute to work 33 percent by 2015.

A second recommendation asks the Legislature to update the method that determines which jurisdictions are affected by the CTR law (and thus required to have CTR plans and programs). The proposed change

uses air quality, congestion, population density and employment density to determine the affected jurisdictions; meeting three of four thresholds would qualify the jurisdiction. The law currently impacts major employers in the urban growth areas of the state with the greatest level of traffic congestion. The change would better identify jurisdictions that can most positively affect the state's air quality and transportation system.

Tax credit extension recommended

The CTR Board also proposes extending and amending the CTR tax credit. The cost of this recommendation is expected to be \$7 million per biennium; the 2011-2013 cost was \$5.5 per biennium. The change would broaden the availability of the credit to more employers.

Employers who provide financial incentives to employees who are reducing commute trips may apply for CTR tax credits against business and occupation or public utility taxes. The number of businesses applying for credits has more than doubled since 2008. In 2012, 754 employers in Washington state applied for about \$6.4 million in credits.

Law aims to reduce drive-alone commutes

The state's Commute Trip Reduction (CTR) law was enacted in 1991 to improve air quality, reduce traffic congestion and reduce the consumption of fossil fuels. The state Legislature passed the Commute Trip Reduction Efficiency Act in 2006. The law requires major employers — workplaces with 100 or more full-time employees in the most congested areas of the state—to develop and implement employee commute programs to reduce the number and length of drive-alone commutes made to work. The state provides grants to local governments to support employers and commuters. WSDOT staffs the CTR Board and provides technical assistance to jurisdictions and employers to get their programs up and running. WSDOT administers funding, guides the program with policies and procedures, and coordinates measurement and evaluation of the program. The CTR Board is appointed by the Secretary of Transportation, directs policy and funding for the program and reports to the Legislature every two years.



WSDOT administers the Commute Trip Reduction budget, which is \$6.1 million for the 2013-2015 biennium. The CTR Board proposes to expand the program to all trips, and is asking for \$20 million for the biennium. If funding remains at the \$6.1 million base level, \$3.9 million would be distributed to jurisdictions for implementation. If the expansion is funded, the CTR Board will determine the allocation of funding to implement the current basic CTR program, support the new competitive grant program, launch a public outreach campaign on energy efficient and active transportation choices, and create a new telework information and assistance system to encourage elimination of employee trips.

Trip Reduction Biennial Update

Projects showcase innovative trip reduction approaches



Astute commuters make the most of their commute to work by bus, using their non-driving time as an opportunity to make phone calls, read, and relax, and take full advantage of time usually spent behind the wheel.

The Board chose projects from Tacoma, Seattle, Tukwila, Yakima, Redmond and Snohomish County to pilot new approaches to trip reduction. These began in July 2013; through the next four years, they will test the feasibility of “outside the box” approaches to reducing greenhouse gas emissions, energy consumption and traffic congestion. The *Gray Notebook* will report the outcome of these pilots in future editions.

Growth and Transportation Efficiency Centers get a revival through pilots

The cities of Tacoma, Seattle and Tukwila are among the pilots that will expand Growth and Transportation Efficiency Center (GTEC) programs. In 2008-2009, the state funded the implementation of seven GTECs — commute trip reduction programs in compact, mixed-use urban areas that contain jobs or housing and support multiple modes of transportation.

Originally, GTECs were programs developed by jurisdictions that required ordinances aimed at exceeding their standard CTR goals. Centers allowed jurisdictions to reach beyond major employers and include small and medium businesses, colleges, universities and more in their commute trip reduction efforts. They accomplished projects that encouraged the use of commute alternatives, for example installing bike lockers or crosswalks. A victim of the recession, state funding for GTECs stopped in 2009, causing some of the centers to end while others struggled.

Tacoma’s pilot focuses on the downtown core, expanding outreach to residents and smaller businesses with a focus on downtown trips. Seattle’s pilot will test new

strategies for intervention before residents move into South Lake Union, an area that is seeing business and residential expansion. It will leverage transportation management plan (Plan) requirements for development. Seattle, Redmond, Kirkland and Bellevue require large buildings to have transportation management plans. These large buildings are usually occupied by several small businesses that would be otherwise unaffected by the CTR law. The Plan requires the building occupants to work together to reduce commute trips.

While maintaining its traditional program, the city of Tukwila’s pilot implements its previously unfunded GTEC in the urban center and in its manufacturing and industrial center (MIC). The pilot takes a corridor approach, focusing on parking and on MIC employers who have fewer than 100 employees in the MIC.

The city of Redmond’s pilot allows local CTR-affected businesses the option of continuing to offer their traditional CTR programs or to develop alternate models as part of a consortium of businesses.

Snohomish County’s pilot is targeting its Southwest Urban Growth Area with both traditional CTR and a transit-emphasis corridor approach. The county will merge its “Curb the Congestion” program with CTR into a unified Transportation Demand Management program for all trips within the urban growth area.

Yakima County’s pilot also maintains its traditional CTR program while actively soliciting seasonal-agricultural worksites, colleges and trade schools that have less than 100 full-time employees.

WSDOT divisions incorporate demand management strategies in project design

WSDOT recently created a brochure and companion infographic titled “Demand Management: the Path toward Greater Efficiency,” the cover of which is shown on p. 16. The brochure promotes the incorporation of transportation demand management strategies into corridor planning studies, corridor plans, project design and comprehensive plan updates.

Demand management strategies include education, promotion, outreach, ridematching services, employer programs and incentives, land use and transportation coordination and user fees.

Contributors include Alexandra DeMoss, Kathy Johnston, Kathy Leotta and Yvette Wixson

Notable results

- WSDOT has mapped 1,594 of the 1,660 miles required for stormwater outfalls
- WSDOT completed all of the 1,804 required stormwater facilities inspections by June 2013
- Between July 2012 and June 2013, 86% of construction site stormwater samples met water clarity targets
- In fiscal year 2013, 169 stormwater facilities were constructed to protect water quality

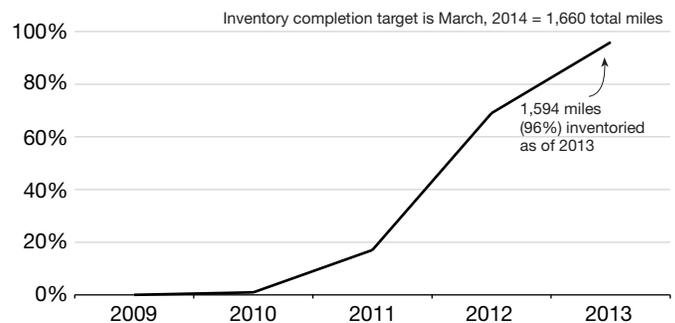
WSDOT on track to meet stormwater mapping deadline

During fiscal year 2013 (July 2012 through June 2013), WSDOT made substantial progress mapping the location of all known stormwater outfalls in urban areas of the state; the deadline is March 6, 2014. Meeting the deadline is a requirement of the municipal stormwater permit, which is designed to reduce the discharge of pollutants from stormwater. Since fiscal year (FY) 2012, WSDOT has inventoried outfalls on 630 miles of state highways.



A WSDOT crew member mapping a stormwater outfall from WSDOT's drainage system to Skookum Creek in Mason County.

WSDOT highway miles inventoried and mapped for stormwater outfalls in permit area near target 2009 through 2013



Data Source: WSDOT Environmental Services Office.

This work brings the total to 1,594 miles completed (96 percent) of the 1,660 miles required to be mapped, shown in the graph above. WSDOT is on track to complete the outfall inventory on the remaining 66 miles of highway segments.

A stormwater outfall is the point where stormwater flows from a system of pipes and roadside ditches into lakes, streams, wetlands, or groundwater

Mapping stormwater outfalls using Geographic Information Systems (GIS) software helps WSDOT track and manage the stormwater runoff from WSDOT property. For a definition of stormwater permits refer to <http://www.wsdot.wa.gov/Environment/WaterQuality/NPDES.htm>.

WSDOT built 169 stormwater facilities

During FY2013, WSDOT constructed 169 stormwater treatment and flow control facilities, like the first two shown

Water Quality Annual Report

Stormwater treatment facilities provide environmental benefits



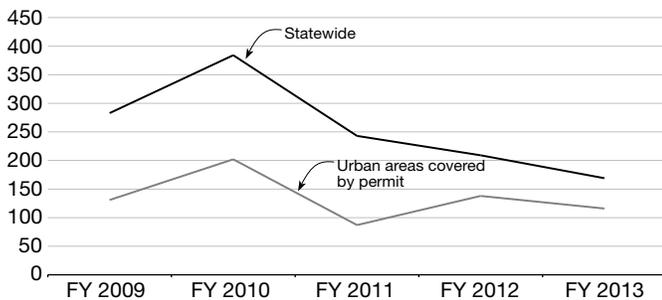
These photos depict three different types of stormwater treatment facilities. The first two, from left to right, are permanent facilities. Photo left: a bioswale, which is a shallow depression created to accept and convey stormwater, installed near State Route 2. Middle photo: a detention pond, which is used to manage stormwater runoff to prevent flooding and downstream erosion and improve water quality near the 164th street on-ramp to Interstate 5 southbound. Photo right: Snohomish River Bridge project on State Route 522, where mulch was used to protect the slope. A silt fence and sump system are used to keep the water in the ditch from being impacted by potential turbidity from the slope. This is a temporary stormwater facility used specifically for reducing and controlling erosion during a construction project.

on the left at the top of this page; the far right photo is a temporary structure. Of these, 116 are in urban areas of the state covered by the municipal stormwater permit.

Stormwater management facilities are usually constructed as part of a larger transportation project, like adding new lanes to a highway. The number of funded transportation projects in the construction phase directly affects how many stormwater management facilities WSDOT builds. Since 2010, existing transportation funding has declined due to the completion of 348 of 421 Nickel and Transportation Partnership Account (TPA) projects. The graph below shows a five-year declining trend in the number of stormwater treatment facilities built.

Five-year trend for WSDOT stormwater treatment facilities constructed declines with revenues

Fiscal years (July through June) 2009-2013; Statewide and in urban areas covered by stormwater permits



Data Source: WSDOT Environmental Services Office.

WSDOT constructs stand-alone stormwater retrofit projects solely to help manage stormwater runoff from existing highways. Stand-alone stormwater

retrofits target sections of highways where stormwater management can provide the greatest environmental benefits by preventing polluted stormwater from entering lakes, streams and other bodies of water.

WSDOT uses stormwater best management practices (BMPs), approved by the Washington State Department of Ecology, included in WSDOT’s Highway Runoff Manual (<http://www.wsdot.wa.gov/Environment/WaterQuality/Runoff/HighwayRunoffManual.htm>), and which meet the requirements specified by the municipal stormwater permit; to remove pollutants from runoff and to reduce flow and the erosive force of stormwater discharges downstream. WSDOT builds conventional BMPs such as detention ponds, and those WSDOT has developed specially for highway corridors, such as compost-amended embankment soils and engineered shoulders and ditches. Where appropriate, WSDOT utilizes the natural landscape and vegetation along roadsides to disperse and infiltrate stormwater runoff coming from WSDOT property.

WSDOT completes all of stormwater facilities inspections

WSDOT completed all of the 1,804 stormwater facility inspections in FY2013. The annual permit-required inspections revealed that older stormwater management facilities have a wide range of deficiencies. Typical deficiencies can be corrected by removing trash and debris, clearing plugged or clogged inlets and outlets, beaver dam removal, and noxious nuisance weed control.

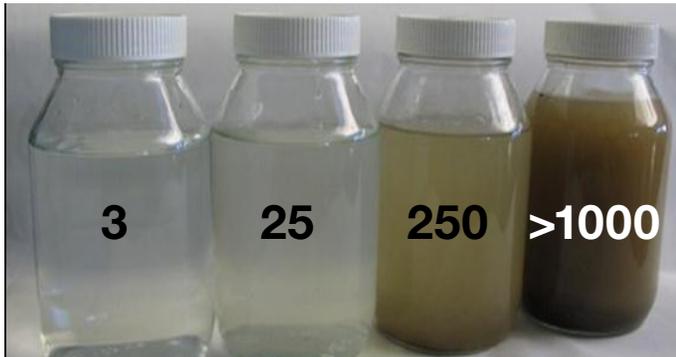
Stormwater quality improves on construction sites

Other deficiencies can be corrected by vegetation removal, sediment removal, and in some cases structural repairs.

The permit requires WSDOT to correct minor deficiencies identified during inspections within one year. Additionally, the permit requires non-typical maintenance repairs, including sediment removal, liner replacement, tree falling, and structural repairs costing less than \$25,000, within two years. Repairs costing more than \$25,000 must be prioritized and corrected as funding becomes available.

Most construction site stormwater samples show low turbidity

Between July 2012 and June 2013, 86 percent of construction site stormwater samples met the turbidity benchmark compared to 78 percent during the same time period in FY2012. Turbidity is the measure of suspended solids visible to the naked eye. The more suspended solids in the water, the murkier it appears and the higher the turbidity. There are a number of factors that affect turbidity levels, for example different soil types, amount of ground cover, location of the site, and the amount of rain.

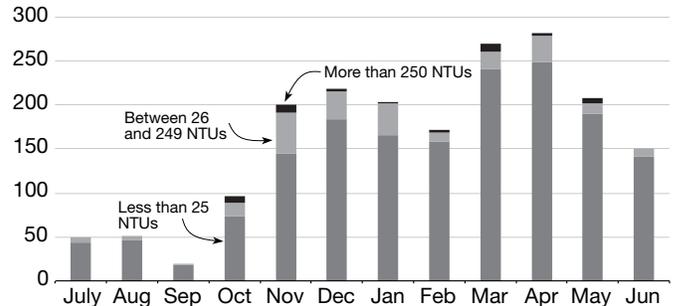


Water samples depicting Nephelometric Turbidity Unit levels. These are the units used to measure turbidity.

Discharges with turbidity values at or below the benchmark value of 25 Nephelometric Turbidity Units (NTUs—the unit used to measure turbidity) indicate the temporary erosion and sediment control best management practices (BMPs) are performing as required. Discharge samples with turbidity values above 25 NTUs mean WSDOT must lower turbidity levels by adapting existing BMPs or adopting new BMP strategies. The construction stormwater general permit requires WSDOT to immediately report and take corrective action when discharge samples reach or exceed 250 NTUs, because at this level there is a high likelihood surface water quality standards are being exceeded.

WSDOT's monthly compliance with construction permit turbidity benchmarks improves

Fiscal year 2013 (July 2012 through June 2013); Number of samples taken per month; Measurements in Nephelometric Turbidity Units (NTUs)



Data Source: WSDOT Environmental Services Office.

Note: Compliance is with the National Pollution Discharge Elimination System permit requirements. Less than 25 NTUs is best.

The graph above summarizes stormwater discharge data collected between July 2012 and June 2013. About 2 percent (44) of the 1,922 discharge samples exceeded 250 NTUs. This is a steady percentage rate since FY2012. In FY2013, 86 percent (1,655) of the samples were below the 25 NTU turbidity benchmark value. The increase of samples 25 NTU or less in FY2013 may represent improvements, resulting in better compliance, that were made to several BMPs in the past year, as shown in the picture on the right at the top of [p. 20](#).

Contributors include Dick Gersib, Gregor Myhr, Norm Payton, Sheena Pietzold, Elsa Pond, Cory Simon, and Joanne Wearley

Notable results

- In 2012, WSDOT reviewed 149 upcoming projects for compliance with the Endangered Species Act; 42 needed federal consultation
- WSDOT saved the equivalent of 181.5 workdays by completing 11 consultations through a programmatic process

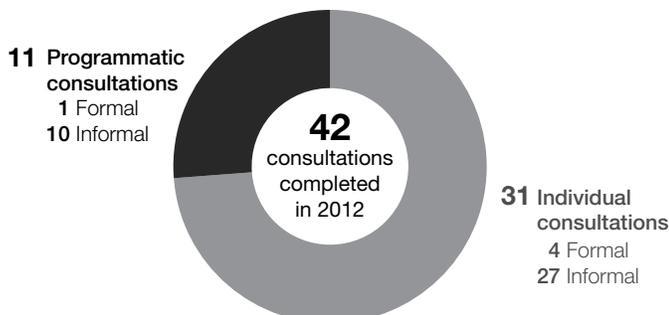
WSDOT streamlining process for environmental consultations

WSDOT estimates it saved the equivalent of 181.5 staff workdays by using programmatic consultations to complete 11 Endangered Species Act (ESA) consultations in 2012. This is the number of days a full-time employee would work from January through mid-September in a given year. WSDOT avoided more than \$82,000 in estimated labor costs with this time savings.

WSDOT partners with the U.S. Fish and Wildlife Service (Wildlife) and the National Oceanic and Atmospheric Administration's Marine Fisheries Service (Fisheries) to expedite ESA consultations, freeing resources for more complex projects. Programmatic consultations allow WSDOT to complete ESA consultations for projects that meet criteria agreed-upon by WSDOT and the federal services with a standardized form. Each programmatic consultation saves WSDOT 132 or more hours of staff time and helps the agency deliver projects faster.

WSDOT reviewed 149 upcoming projects for compliance with the ESA in 2012. Of those, 42 needed federal consultation. Eleven of the consultations were completed using WSDOT's programmatic consultation with Wildlife (no agreement was in place with Fisheries in 2012). This is 39 percent of the 28 consultations completed with Wildlife.

WSDOT able to expedite 26 percent of Endangered Species Act consultations with programmatic process 2012; Number of programmatic and individual consultations completed with number of formal and informal consultations



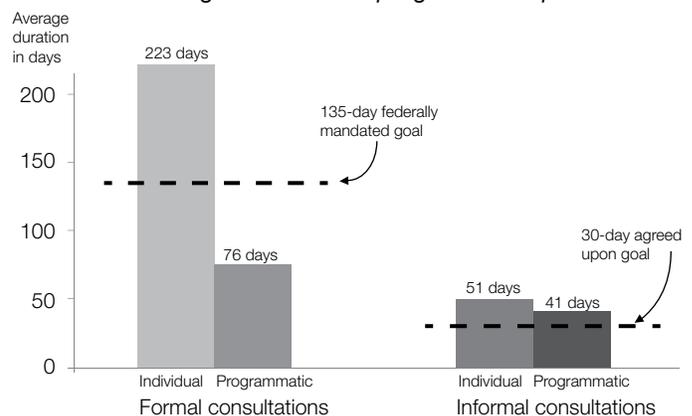
Data source: WSDOT Environmental Services Office.

WSDOT is required to review all of its projects for impacts to ESA-listed species. Projects which may effect ESA-listed species or habitat designated critical to their recovery go on for a formal or informal consultation with Fisheries, Wildlife or both. Formal consultations are conducted for projects which are likely to have an adverse impact on listed species. Informal consultations are for projects that are not likely to have an adverse impact. Consultations help the federal government ensure WSDOT complies with requirements of the ESA. Either consultation type can be completed using a programmatic consultation if the project fits the agreed-upon criteria.

For additional background information on ESA review and consultation processes see WSDOT's program website at http://www.wsdot.wa.gov/Environment/Biology/bio_esa.htm.

WSDOT, Fisheries and Wildlife completed formal consultations in an average of 223 days and informal consultations in an average of 51 days in 2012. This is a 36-day decrease in average duration from 2011 for formal consultations and a 7-day increase for informal

Programmatic processes for Endangered Species Act consultations with federal services save time 2012; Average duration in days of formal and informal consultations using individual and programmatic¹ processes



Data source: WSDOT Environmental Services Office.

Notes: 1 Programmatic consultations use a standardized process to review projects meeting criteria agreed to by federal agencies and WSDOT.

Programmatic consultations will play a critical role for fish passage

consultations. Staff turnover at Wildlife increased processing times, while streamlining efforts like the programmatic consultations facilitated faster consult times.

There is a legal mandate for the federal services to complete formal consultations within 135 days of WSDOT submitting its review to them. Informal consultations have no requirement but WSDOT and the services have an agreed-upon goal of 30 days. Factors such as federal staff availability, workload and project complexity influence the number of days needed to complete a consultation.

WSDOT puts 2012 streamlining groundwork into use in 2013, receives excellence award

The Federal Highway Administration recognized WSDOT's and Fisheries' work to expedite ESA consultations with an Environmental Excellence Award. WSDOT and Fisheries began developing a programmatic consultation process for routine activities such as guardrail installation, paving and bridge seismic retrofitting in 2012. The process has been in use since January 2013.

Between January and September 2013, WSDOT completed 10 ESA consultations for projects using the Fisheries programmatic consultation. The average review time at Fisheries was less than two days regardless of the type of consultation (half were formal and half were informal). During the same period, the average duration for individual consultations was 233 days for formal and 50 days for informal consultations, respectively. A total of 15 consultations were completed with Fisheries, meaning 67 percent of projects were able to use the programmatic consultation.

WSDOT's programmatic process agreements with U.S. Fish and Wildlife up for renewal

WSDOT has had an agreement in place for about 10 years with Wildlife which establishes two programmatic consultation processes, one each for eastern and western Washington. The agreement will expire at the end of 2013. WSDOT is working with Wildlife to create a new agreement similar to the one with Fisheries to cover all of the state. The agreement is expected to be completed and the process implemented by September 2014.

Increase in consultation workload due to fish passage injunction expected

About the time WSDOT began working with Wildlife to renew their programmatic consultation agreement, the



Fish passage projects like this one on SR 520 benefit Endangered Species Act-listed fish like Puget Sound Steelhead. A federal district court injunction may require WSDOT to complete up to 60 ESA consultations each year of the next 17 years for similar projects.

federal district court issued an injunction mandating WSDOT correct between 850 and 1,000 fish passage barriers within the next 17 years. At minimum, this averages out to 50 projects per year. However, because it will take time to implement the program, it is expected that WSDOT will need to construct up to 60 fish passage projects each year to comply with the injunction.

WSDOT must complete an ESA consultation for each of these projects before they can be constructed, and because most fish passage projects may involve the capture and handling of ESA-listed fish species, the majority are expected to require formal consultations.

Programmatic consultations are critical to the delivery of fish passage projects to comply with the injunction. WSDOT funds staff positions at Wildlife and Fisheries to help complete consultations for the agency's projects in a timely fashion. However, as Nickel and Transportation Partnership Account-funded project delivery winds down, WSDOT has reduced the number of staff from eight to three. The average number of individual formal consultations a liaison can complete each year ranges from two to four and depends on project complexity and the workload of informal consultations.

In order to complete the consultations for the 50 or 60 fish passage projects each year, WSDOT's goal is to complete 80 percent with programmatic consultations. The rest may not fit the criteria and will require individual consultations. In addition, WSDOT anticipates completing up to half of its normal highway construction, maintenance and preservation projects using programmatic consultations. While programmatic consultations will help facilitate compliance with the injunction, increased workload may require additional staff resources.

Contributors include Marion Carey and Bradley Bobbitt

Notable results

- *Intrastate freight rail tonnage increased 6.3% between 2010 and 2011*
- *Farm products comprised 29% of total commodities shipped by freight rail in 2011, a decrease from 35% in 2010*
- *Grain Train shipments increased 15% between the third quarters of 2012 and 2013*
- *WSDOT awarded \$9.4 million in grant and loan funding to support 13 freight rail projects throughout the state in 2013*

Freight rail shipments of locally produced goods increase

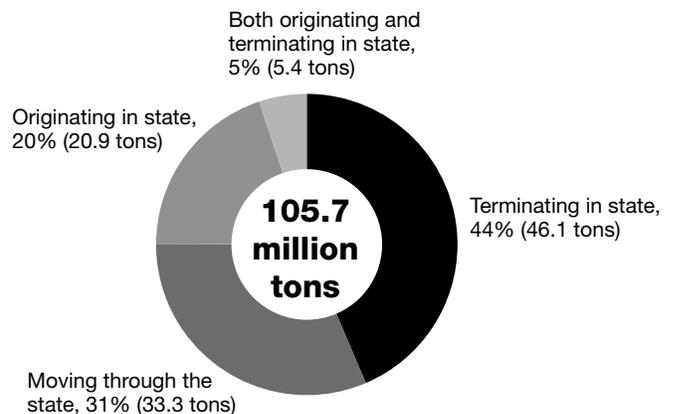
According to the most recently available data, railroads in Washington state transported 105.7 million tons of goods in calendar year 2011, a decrease of 8.8 percent from 2010 levels. Although farm products such as wheat and soybeans continue to be the largest commodity transported, these commodities also account for the drop in traffic. There was a decline of nearly 10 million tons (24.4 percent) of farm products between 2010 and 2011, due to fewer exports transported by rail from midwestern states. Other commodities shipped by rail, such as food and kindred products and chemicals, also saw substantial declines of 17.2 percent and 35.9 percent, respectively. Construction materials, clay, concrete, glass and stone were up more than 57 percent for the year.

About 44 percent of freight rail tonnage was shipped into and terminated in the state in 2011, either for international export or consumption within the state. This was a decline of 21 percent from 2010 levels, mainly due to fewer agricultural commodities being exported. Freight rail shipments moving through the state accounted for nearly one-third of tonnage and declined 2 percent between 2010 and 2011.

Imports and other cargo originating in Washington increased 13 percent for the year

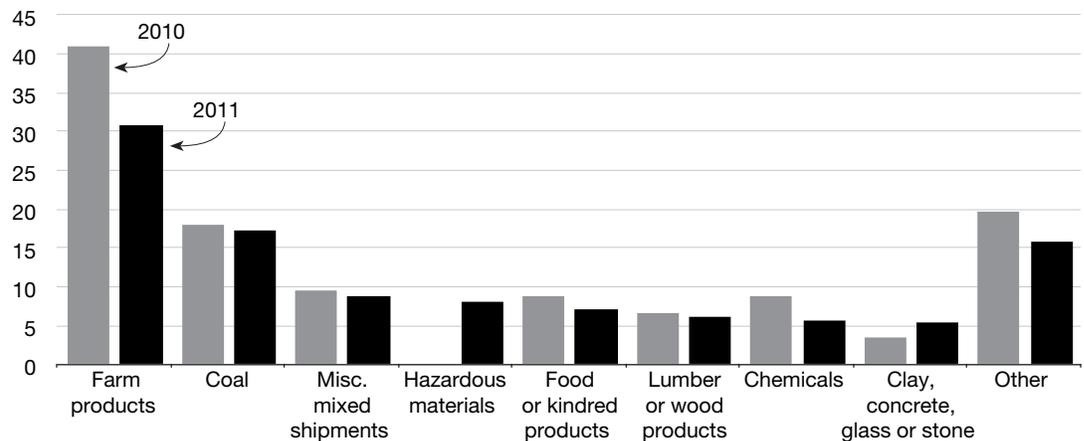
and accounted for 20 percent of all tonnage. There was an increase in the use of Washington's rail network to transport goods around the state in 2011 with a 6.3 percent increase in intrastate traffic (goods both originating and terminating within the state). In general, these shorter

Washington rail freight tonnage by type of movement Calendar year 2011; Millions of tons shipped



Data source: WSDOT Freight Systems Division, Surface Transportation Board Waybill Data.

Farm products and coal make up largest share of freight rail shipments 2011 compared to 2010; Commodities shipped by rail in millions of tons



Data source: WSDOT Freight Systems Division, Surface Transportation Board Waybill Data.
Note: Hazardous materials were included in "other" in the 2010 data.

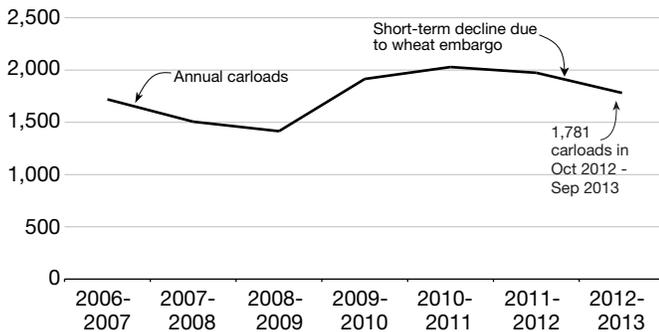
Wheat embargo negatively impacts annual Grain Train shipments

intrastate shipments are made by freight trucks. This increase in intrastate freight rail traffic is associated with fewer agricultural commodities being transported by trucks on Washington State Highways. Shipping by rail rather than trucks saves fuel, supports air quality initiatives, and reduces wear and tear on local roadways. This trend could also be related to increased consumption or export of goods produced within Washington, which supports local businesses and the state's economic vitality.

Quarterly carloads increase despite annual downward trend

Washington state Grain Train shipments declined 9.8 percent to 1,781 carloads between October 2012 and September 2013, from 1,974 carloads for the previous 12 months. In spite of this annual decline, Grain Train carloads for the third quarter of 2013 increased 15 percent compared to the same quarter in the previous year.

Annual Grain Train carloads decline 9.8 percent October through September, 2006-2007 through 2012-2013



Data Source: WSDOT Freight Systems Division.

Note: Grain Train carload data from Q4 2010 forward has been updated to correct previous under reporting. October of one year through September of the next year represents a crop-year, defined by harvest occurring in August and shipment of the agricultural products between October and September.

The annual decline was a result of a wheat embargo imposed by three Asian importers. Japan, South Korea and Taiwan halted imports on Washington-grown soft white wheat in early 2013 due to genetically modified organisms (GMOs) detected in an Oregon wheat field. This decline is expected to be a short-term trend as all three countries lifted their import embargo on wheat by the middle of the third quarter of 2013.

Barley shipments, predominantly for domestic consumption, made up 25 percent of total carloads

for the third quarter, which is significantly more barley than normally hauled by the Grain Train. Farmers planted more barley than usual in 2013 due to lower wheat prices and crop rotation.

The Washington state Grain Train, which WSDOT jointly manages with the ports of Whitman County, Walla Walla and Moses Lake, serves more than 2,500 cooperative members and farmers. The Grain Train carries thousands of tons of grain from eastern Washington to deepwater ports along the Columbia River and Puget Sound. This program moves products efficiently and reliably to domestic and international markets while supporting short-line railroads and rural businesses.

Palouse River and Coulee City Rail System rehabilitation moves forward

Track and bridge rehabilitation work on the WSDOT-owned Palouse River and Coulee City (PCC) Rail System is proceeding using a \$4 million grant awarded by the Washington State Department of Commerce. This work has been developed as two construction contracts. The first completed contract rehabilitated 19 miles of track on the Central Washington branch. The second contract, expected to be complete in late summer 2014, rehabilitates about nine miles of track and eight bridges on the Pleasant Valley Hooper and Palouse and Lewiston branch lines. See [Gray Notebook 47, p. 42](#), for a map of the PCC Rail System.

Other work on the PCC is being performed using \$2.4 million in rehabilitation funds allocated by the



A bridge on the PCC Palouse and Lewiston branch line being rehabilitated. This project, which is funded by a Department of Commerce grant, is expected to be complete by late summer 2014.

Freight Rail Semi-Annual Update

WSDOT supports freight rail projects throughout the state

Legislature for the 2013-2015 biennium. In conjunction with the PCC operator, WSDOT developed a work plan to address 79 defective crossings on the Central Washington and Palouse and Lewiston branches; the deficiencies were identified by the Utilities and Transportation Commission during inspections in October 2012 and April 2013. To date, 23 crossings have been repaired. Other projects will be developed to address \$400,000 for crossing and \$1.4 million for track and bridge rehabilitation.

WSDOT purchased the deteriorating PCC rail system in 2007 with the goal of improving rail access and protecting the infrastructure. These rehabilitation efforts will preserve a vital short-line rail system that serves eastern Washington grain cooperatives who purchase and ship grain from hundreds of farmers.

Thirteen projects receive funding

In 2013, WSDOT awarded a total of nearly \$9.4 million in grant and/or loan funding to 13 projects around Washington state as part of the Freight Rail Assistance Program and Freight Rail Investment Bank. These projects will create jobs while improving the state's long-term economic vitality. For example, the Port of Walla Walla – Relocate Tracks project is expanding rail track infrastructure at a multimodal facility that ships Washington-grown fruits, vegetables and locally-produced wines to east coast consumers. These programs also benefit short-line railroads in the state by allowing them to rehabilitate and modernize rail track.

A list of freight rail capital projects that were completed between October 1, 2012 and September 30, 2013, can be accessed at http://wsdot.wa.gov/publications/fulltext/graynotebook/GNB51_Extra/FRcapital_completed.pdf.

Contributors include Chris Herman and Alison Wallingford

WSDOT awards freight rail capital project funding to support infrastructure and economic vitality

Project status as of September 30, 2013; All incomplete projects by funding type; Funding in thousands of dollars

	STAGE OF PROJECT					FUNDING
	GRANTS	AGREEMENTS	DESIGN	CONSTRUCTION	CLOSE OUT	
Port of Royal Slope Improvements						\$750.0
Clark County – Lewis and Clark Rail Line ¹						\$455.0
Clark County – Chelatchie Prairie Railroad – Track Rehabilitation						\$200.0
Spokane County – Geiger Spur Rehabilitation ¹						\$198.0
Cascade and Columbia River Railroad ¹						\$684.0
Columbia Basin – Schrag Line ¹						\$392.0
Cooperative Agricultural Producers, Inc. "Co-Ag" ²						\$340.7
Lincoln County Economic Development ²						\$1,162.2
Clark County – Vancouver to Barberton Rail Improvements ²						\$674.8
Maytown Sand & Gravel, LLC ²						\$1,021.7
Port of Walla Walla – Relocate Tracks ²						\$750.0
LOANS						
Spokane County – Geiger Spur ³						\$180.0
Tacoma Rail – Yard Track Relay ⁴						\$363.9
Tacoma Rail – East 11th Street Grade Crossing ⁴						\$354.5
Port of Longview – Rail Loop Construction ⁴						\$857.7
Tacoma Rail – Yard Tracks 8 and 9 ⁵						\$823.2
Tacoma Rail – Taylor Way Track Rehabilitation ⁵						\$1,105.1
Tacoma Rail – West Loop Track ⁵						\$515.8
Tacoma Rail – East Loop Track ⁵						\$773.1
Tacoma Rail – Port Pass Track Upgrade ⁵						\$250.0
Tacoma Rail – North Yard Track Upgrade ⁵						\$366.4
City of Richland – Horn Rapids Rail Siding Construction ⁵						\$400.0
Port of Everett ⁵						\$900.0
Port of Walla Walla – Build/Relocate Tracks ⁵						\$250.0
FEDERAL						
Hoquiam Horn Spur Railroad Track Improvement Project						\$350.0

Data source: WSDOT Freight Systems Division.

Notes: 1 Project is funded by a 2011 Freight Rail Assistance Program (FRAP) grant. 2 Funded by a 2013 FRAP grant. 3 Project is funded by a 2011 Freight Rail Investment Bank (FRIB) loan. 4 Project is funded by a 2012 FRIB loan. 5 Project is funded by a 2013 FRIB loan.

Capital Project Delivery Programs Quarterly Update

51

Notable results

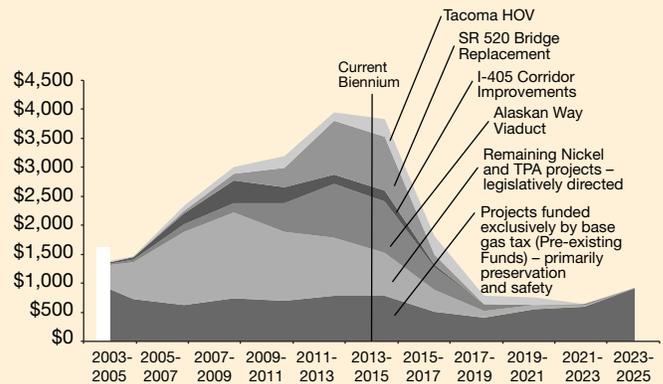
- **WSDOT has completed 348 of 421 Nickel and Transportation Partnership Account projects since 2003**
- **WSDOT is facing more than a \$1.23 billion shortfall in Nickel and Transportation Partnership Account revenues**

Four Transportation Partnership Account projects completed

WSDOT completed four Transportation Partnership Account (TPA) projects during the first quarter (July through September) of the 2013-2015 biennium. A total of 348 of 421 Nickel and TPA projects have been completed since July 2003, with 88 percent on time and 91 percent on budget.

Of the total \$16.3 billion in funding sources for Nickel and TPA projects, about \$11 billion has been spent. Approximately \$5.6 billion of the \$11 billion supported the 348 completed projects; \$5.4 billion has been spent supporting the remaining 73 incomplete projects. The value of these remaining projects, several of which are mega-projects, totals more than \$10.7 billion. With some of the larger projects well on their way or completed (see graph at right), WSDOT will see a sharp decrease in the funds needed to support these remaining projects starting with the 2013-2015 biennium.

2013-2015 Nickel and TPA funding for WSDOT starting steep decline this Legislative budget 2003-2005 through 2023-2025 bienniums; Dollars in millions



Data source: WSDOT Capital Program Delivery and Management.

Note: The graph shows cash flows of the projects listed. While \$11 billion has been spent on Nickel and TPA projects to date, about \$5.6 billion remains. As shown above the majority of the remaining funds will be spent prior to the 2015-2017 biennium. The SR 16 Tacoma Narrows Bridge project and reimbursements to Sound Transit are not included on the graph above.

WSDOT completes 348 Nickel and TPA projects July 2003 through September 2013; Dollars in thousands

Project status	Number of projects	Value in thousands
Projects completed in earlier biennia that are <i>not</i> included in the current transportation budget	131	\$732,902
Projects completed that <i>are</i> included in the current transportation budget	217	\$4,902,618
Completed projects subtotal:	348	\$5,635,520
Projects included in the current transportation budget that are not yet complete	73	\$10,727,383
Total:	421	\$16,362,903

Data source: WSDOT Capital Program Development and Management.

Nickel and TPA gas tax revenues still falling short of original projections

Gas tax revenues generated through the 2003 Nickel and 2005 TPA continue to come in below original revenue projections, due to gasoline consumption continuing to be lower than the 2003 and 2005 estimates, which is the result of people driving less and using alternate transportation modes. This is expected to leave WSDOT with \$1.23 billion less in funding for transportation projects statewide than originally anticipated. If this trend continues, the end result will be that a number

Goal is 90%

348 projects complete **88%** on time **91%** on budget **81%** on time and on budget **No change** Trend since Q3 2012

Data source: WSDOT Capital Program Development and Management.

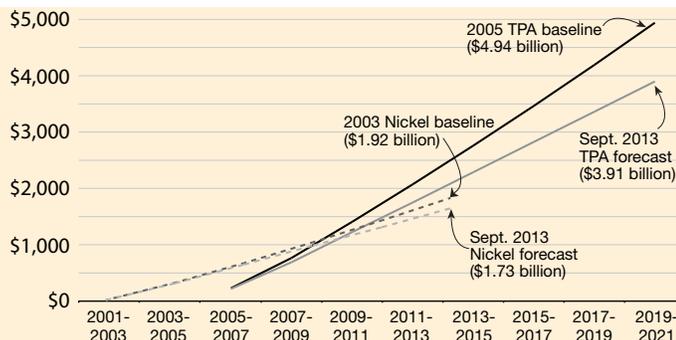
Notes: Projects complete are cumulative since 2003. A project is "on time" if it is operationally complete within the quarter planned in the last approved budget, and "on budget" if the final budget is within 5 percent of the last approved budget. Trend indicates the cumulative change in "on time and on budget" from the third quarter of 2012 (July through September).

Executive Summary

WSDOT completes 40 Nickel and TPA projects in 2011-2013 biennium

Nickel, TPA show growing gap in WSDOT's baselines and cumulative revenue forecasts

March 2003 and 2005 legislative baselines compared to September 2013 revenue forecasts; Dollars in millions



Data source: WSDOT Strategic Planning and Finance.

of projects that have been deferred from one biennium to the next will likely be delayed even longer.

The September 2013 revenue forecast for the Nickel account shows about \$1.73 billion in revenues for the 10-year period since its inception in 2003. This is 10.1 percent (\$195 million) less than the original 2003 Nickel projection of \$1.92 billion. As of September 2013, the revenue forecast for TPA gas tax revenues to date was \$2.29 billion, approximately \$470.9 million (20.6 percent) lower than the \$2.78 billion baseline amount TPA was expected to provide at this point.

The 16-year revenue projection for the TPA (shown above) is 21.1 percent below the 2005 cumulative baseline total. If this continues, there will be more than a \$1 billion difference from the \$4.94 billion in anticipated gas tax revenues set in 2005 and the \$3.91 billion forecast through June 2021. The state's gas taxes that fund Nickel and TPA projects are fixed per gallon and do not change with the price of gasoline. As a result, reduced consumption results in reduced revenues.

WSDOT meets its budget goal for Nickel, TPA projects during 2011-2013 biennium

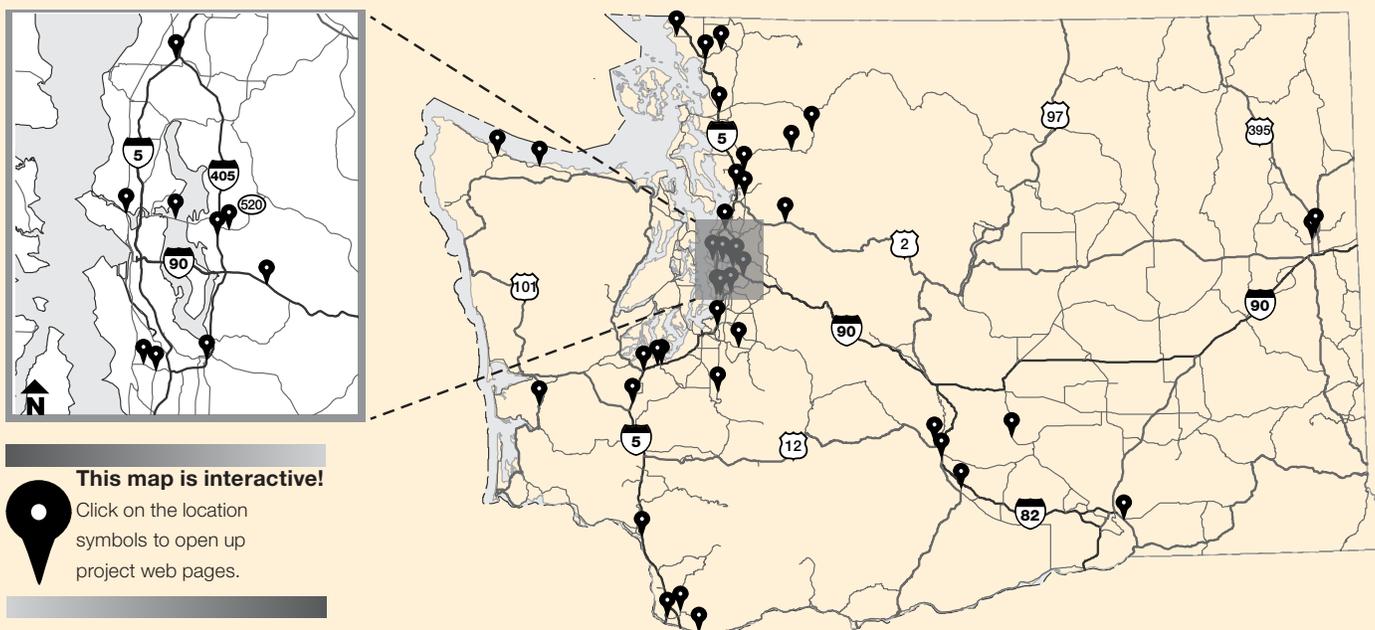
WSDOT completed 40 Nickel and Transportation Partnership Account (TPA) projects during the 2011-2013 biennium. Of the 40 projects, 31 (77.5 percent) were delivered on time, 36 (90 percent) were on budget and 30 (75 percent) were both on time and on budget.

WSDOT met its 90 percent goal for being on budget with 36 of the 40 projects at or below their original budgets. The original budget was more than \$1.48 billion, and the 40 projects were completed for \$1.46 billion, approximately \$26 million less than anticipated (This was confirmed after publication of *Gray Notebook 50*). However, WSDOT missed its 90 percent goal for projects being on time, completing 31 of 40 within the planned quarter.

Contributors to this section include Mike Ellis, Mitzi Frick, Penny Hauger, Heather Jones, Claudia Lindahl, Firas Makhoul, Theresa Scott, Dean Walker and Joe Irwin

WSDOT's Nickel and TPA projects helped keep Washington moving in the 2011-2013 biennium

Map shows locations of 40 projects completed in the 2011-2013 biennium



Current Legislative Evaluation and Accountability Program (LEAP)

WSDOT closes in on final 73 Nickel and TPA highway construction projects

Highway construction performance summary shows more than \$5.6 billion in projects completed

As of September 30, 2013; Dollars in thousands

Combined Nickel and TPA programs	Number of projects	Value of program
Projects completed in earlier biennia that <i>are not</i> included in the current transportation budget	131	\$732,902
Projects completed that <i>are</i> included in the current transportation budget	217	\$4,902,618
<i>Subtotal of completed projects</i>	348	\$5,635,520
Projects included in the current transportation budget but not yet complete	73	\$10,727,383
Total number of projects¹ in improvement and preservation budget	421	\$16,362,903

Schedule and budget summary Nickel & TPA combined: Results of completed projects in the current Legislative Transportation Budget and prior budgets.	Completed in 2013-2015 biennium budget	Total in current legislative budget	Cumulative program ²
Number of projects completed	4	217	348
Percent completed early or on time	100%	87%	88%
Percent completed under or on budget	50%	93%	91%
Percent completed on time and on budget	50%	81%	81%
Baseline cost at completion	\$27,808	\$4,902,618	\$5,635,520
Current cost at completion	\$25,279	\$4,826,149	\$5,556,724
Percent of total program over or under budget	9.1% under	1.6% under	1.4% under

Advertisement record: Results of projects entering into the construction phase or under construction are detailed on pp. 32-33 .	Combined Nickel & TPA
Total current number of projects in construction phase as of September 30, 2013	24
Percent advertised early or on time	88%
Total number of projects advertised for construction in 2013-2015 biennium to date (July 1, 2013 through June 30, 2015)	0
Percent advertised early or on time	N/A

Projects to be advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on p. 31 .	Combined Nickel & TPA
Total projects being advertised for construction bids October 1, 2013 through March 31, 2014	7
Percent on-target for advertisement on schedule or early	43%

Budget status for the 2013-2015 biennium:	WSDOT biennial budget
Budget amount for 2013-2015 biennium	\$3,037,686
Actual expenditures to date 2013-2015 biennium (July 1, 2013 through June 30, 2015)	\$189,541
<i>Total 2003 Transportation Funding Package (Nickel) expenditure</i>	\$18,322
<i>Total 2005 Transportation Partnership Account (TPA) expenditure</i>	\$106,947
<i>Total Pre-existing Funds (PEF) expenditures³</i>	\$64,272

Data source: WSDOT Capital Program Development and Management.

Notes: 1 The project total has been updated to show "unbundled" projects which may have been previously reported in programmatic construction program groupings (such as Roadside Safety Improvements or Bridges Seismic Retrofit). See [Gray Notebook 38, p. 55](#), for more details. 2 Cumulative projects completed from 2003 to September 30, 2013. 3 For full details of the Pre-existing Funds program, see [pp. 38-39](#).

Current Legislative Evaluation and Accountability Program (LEAP)

No new Nickel, TPA rail or ferries projects completed this quarter

While there were no new Nickel and Transportation Partnership Account (TPA) rail or ferries projects finished this quarter, WSDOT has completed 18 rail projects and 20 Washington State Ferries projects since 2003. Nickel and TPA funding supported some \$103.4 million in rail projects and another \$269.2 million in ferries projects to date. Four Nickel- and TPA-funded rail projects, with awards amounting to \$158.0 million, are under construction or entering the construction phase. Two Nickel and TPA Ferries projects, with awards amounting to \$224.8 million, are also under construction or entering the construction phase.

WSDOT finishes 18 rail construction projects

As of September 30, 2013; Dollars in thousands

	Nickel (2003)	TPA (2005)	Combined Nickel & TPA
Schedule, scope, and budget summary: Completed projects			
Cumulative to date (July 1, 2003 through September 30, 2013)	11	7	18
Percent completed early or on time ¹	100%	100%	100%
Percent completed within scope ¹	100%	100%	100%
Percent completed under or on budget ¹	100%	100%	100%
Percent completed on time and on budget ¹	100%	100%	100%
Baseline cost at completion	\$62,380	\$40,965	\$103,345
Current cost at completion	\$62,380	\$40,965	\$103,345
Percent of total program on or under budget ¹	100%	100%	100%

Advertisement record: Projects under construction or entering construction phase

Cumulative to date (July 1, 2003 through September 30, 2013)			
Total advertised	2	2	4
Percent advertised early or on time	100%	100%	100%
Total award amounts to date	\$130,878	\$27,081	\$157,959

Data source: WSDOT Capital Program Development and Management.

Notes: The rail projects are primarily delivered through master agreements with BNSF, which administers construction activities on the projects. The data above is unchanged from the previous quarter because no additional rail projects were completed. 1 Rail projects are commitments delivered by BNSF, Sound Transit, ports and operators. Master agreements between WSDOT and lead agencies become the documents that govern the delivery of the project including budget, scope and schedule. The administrative process allows for amendments enabling the projects to be delivered within the parameters of the new amended agreement (on time and on budget).

WSDOT finishes 20 Ferries' construction projects

As of September 30, 2013; Dollars in thousands

	Nickel (2003)	TPA (2005)	Combined Nickel & TPA
Schedule, scope, and budget summary: Completed projects ¹			
Cumulative to date (July 1, 2003 through September 30, 2013)	11	9	20
Percent completed early or on time ²	100%	100%	100%
Percent completed within scope ²	100%	100%	100%
Percent completed under or on budget ²	100%	100%	100%
Percent completed on time and on budget ²	100%	100%	100%
Baseline cost at completion	\$59,851	\$209,343	\$269,194
Current cost at completion	\$59,851	\$209,343	\$269,194
Percent of total program on or under budget ²	100%	100%	100%

Advertisement record: Projects under construction or entering construction phase

Cumulative to date (July 1, 2003 through September 30, 2013)	1	1	2
Percent advertised early or on time ²	100%	100%	100%
Total award amounts to date	\$109,400	\$115,345	\$224,745

Data source: WSDOT Capital Program Development and Management.

Notes: 1 Ferries completed projects record includes the three 64-car vessels, the Motor/Vessel (M/V) *Chetzemoka*, which started service in November 2010, the M/V *Salish*, which started service in July 2011, and the M/V *Kennewick*, which started service in February 2012. 2 The Legislature funds ferry projects at a grouped-project or BIN level for terminals and vessels; however, the delivery of construction projects requires that each of these BIN groups be broken into sub-projects with specific scopes, budgets, and schedules. The list of sub-projects is updated as the project progresses into the design phase and the budget and schedule are better defined. This process enables WSDOT to deliver the projects within the updated budget amounts and milestones (on time and on budget).

WSDOT starts new biennium with four projects completed on schedule

Biennial summary: WSDOT relying more on Transportation Partnership Account funds for capital projects
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	Completed on time and on budget
Current quarter reporting on capital project delivery								
2013-2015 biennium summary This information is updated quarterly throughout the biennium.	4 TPA	2 on time 2 late	4 on time	4	\$27,808	\$25,279	2 on budget 2 over budget	2 on time and on budget
Earlier reporting on capital project delivery								
2011-2013 biennium summary See Gray Notebook 50, p. 31 , for project listing.	5 Nickel 35 TPA	30 on time 10 late	31 on time 9 late	40	\$1,481,920 ¹	\$1,456,070 ¹	36 on budget 4 over budget	30 on time and on budget
2009-2011 biennium summary See Gray Notebook 42, p. 45 , for project listing.	16 Nickel 74 TPA	73 on time 17 late	80 on time 10 late	90	\$1,641,605	\$1,596,970	85 on budget 5 over budget	76 on time and on budget
Notes: In earlier editions of the <i>Gray Notebook</i> , WSDOT used a project count of 391 combined Nickel and TPA projects for project completion data. In conjunction with the 2009-2011 biennium wrap-up, the tables were reorganized to present the completed information for the current project count of 421. In the revised count, several projects that were developed as part of larger programs, like bridge, rail, and roadside safety, were included in the new count though they had been completed earlier.								
2007-2009 biennium summary See Gray Notebook 34, p. 58 , for project listing.	42 Nickel 69 TPA	91 on time 20 late	96 on time 15 late	111	\$1,685,749	\$1,685,219	102 on budget 9 over budget	90 on time and on budget
2005-2007 biennium summary See Gray Notebook 26, p. 5 , for project listing.	52 Nickel 24 TPA	71 on time 5 late	68 on time 8 late	76	\$673,858	\$668,778	67 on budget 9 over budget	59 on time and on budget
2003-2005 biennium summary See Gray Notebook 19, p. 5 , for project listing.	27 Nickel	25 on time 2 late	27 on time 0 late	27	\$124,580	\$124,409	25 on budget 2 over budget	25 on time and on budget

Data source: WSDOT Capital Program Development and Management.

Notes: 1 Numbers have been corrected from *Gray Notebook* 49. Prior *Gray Notebooks* may be accessed at http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.

Projects to be advertised

Seven projects in the six-month delivery pipeline for October 2013 through March 2014

Nickel and Transportation Partnership Account (TPA) projects planned to be advertised; Costs estimated at completion; Dollars in thousands

Project description (county)	Fund type	Original planned ad date	Current planned ad date	On schedule ³	Baseline estimated cost at completion	Current estimated cost at completion
SR 3/Belfair Area – Widening and Safety Improvements (Mason)	TPA	Jun-2012	Feb-2014	Late ¹	\$18,153	\$19,258
SR 6/Rock Creek Bridge East – Replace Bridge (Lewis)	TPA	Apr-2013	Dec-2013	Late ¹	\$8,767	\$10,168
SR 6/Rock Creek Bridge West – Replace Bridge (Lewis)	TPA	Apr-2013	Dec-2013	Late ¹	\$6,983	\$7,278
SR 9/84th Street Northeast (Gethcell Road) – Improve Intersection (Snohomish)	TPA	Oct-2013	Nov-2013	Late	\$17,035	\$14,567
U.S. 101/Hoh River (Site No. 2) – Stabilize Slopes (Jefferson)	TPA	Dec-2014	Feb-2014	√	\$9,616	\$9,461
SR 162/Puyallup River Bridge – Replace Bridge (Pierce) ²	TPA	Dec-2013	Dec-2013	√	\$15,563	\$15,564
SR 302/Key Peninsula Highway to Purdy Vicinity – Safety and Congestion (Pierce)	TPA	Oct-2013	Feb-2014	Late ¹	\$6,538	\$5,022

Data source: WSDOT Capital Program Development and Management.

Notes: 1 These projects are currently included on WSDOT's Watch List on [pp. 40-41](#) and at <http://www.wsdot.wa.gov/Projects/Reports/>.

2 This project was removed from the Watch List after the schedule risk was realized (See [Gray Notebook 47, p. 67](#)). Its schedule has since been reset.

3 A project is "on schedule" if it is advertised within the quarter planned in the last approved budget.

Advertisement Record

WSDOT tracks advertisement records for Nickel and TPA projects

Twenty-four WSDOT projects in construction phase as of September 30, 2013

Nickel and Transportation Partnership Account (TPA) projects; Costs estimated at completion; Dollars in thousands

Project description Cumulative to date (County)	Fund type	On-time advertised	Ad date	Contractor	Operationally complete date	Award amount
I-5 Concrete Rehabilitation Program (King) Multiple contractors have worked and will work on this project.	Nickel	√	Jul-2009		May-2023	\$9,875
I-5/Northeast 134th Street Interchange (I-5/I-205) – Rebuild Interchange (Clark)	Nickel	√	May-2011	Moore Excavation	Dec-2014	\$17,791
SR 99/Spokane Street Bridge – Replace Bridge Approach (King)	TPA	√	Oct-2012	MidMountain Contractors	Oct-2014	\$9,213
SR 28/Junction U.S. 2 and U.S. 97 to 9th Street Stage 1 – New Alignment (Douglas) This is a multi-contract project with several significant stages. Project operationally complete date delayed from October 2012 due to a contract delay caused by right of way acquisition and an error made in the original bid.	TPA	√	Sep-2009	Selland Construction	Oct-2013	\$4,565
SR 99/Alaskan Way Viaduct - Replacement (King) This project replaces an aging viaduct with a new viaduct on the south end and adds a tunnel in downtown Seattle.						
• SR 99/South Massachusetts Street to Union Street – Electrical Line Relocation	TPA	√	May-2008	Frank Coluccio Construction	Nov-2009	\$17,040
• SR 99/South Holgate Street to South King Street – Viaduct Replacement	TPA	√	Oct-2009 May-2010	Signal Electric Skanska USA Civil West	Sep-2013 Sep-2013	\$4,902 \$114,569
This subproject has several contract components; the contract awarded to Skanska USA in May 2010 began removal of the southern portion of the viaduct.						
• SR 99/Battery Street Tunnel – Safety Improvements Additional sign-bridges have some elements that were not initially planned. Additional environmental right of way work and review was needed.	TPA	√	Nov-2009	Signal Electric	Nov-2010	\$2,409
• SR 99/South King Street Vicinity to Roy Street – Viaduct Replacement	Nickel/ TPA	√	May-2010	Seattle Tunnel Partners	Dec-2015	\$1,089,700
U.S. 395/North Spokane Corridor (NSC) – Design and Right of Way – New Alignment (Spokane)	Nickel/ TPA					
• U.S. 395/NSC – Francis Avenue Improvements	Nickel	√	Apr-2012	Graham Construction	Nov-2013	\$14,046
I-5/Mellen Street Interchange to Grand Mound Interchange – Add Lanes (Thurston, Lewis)	TPA					
• I-5/Blakeslee Junction Railroad Crossing to Grand Mound Interchange – Add Lanes	TPA	√	Feb-2010	Tri-State Construction	Dec-2011	\$19,731
• I-5/Mellen Street to Blakeslee Junction – Add Lanes, Interchange Improvements	TPA	√	Mar-2012	Cascade Bridge	Oct-2013	\$21,596
• I-5/Mellen Street Interchange – Interchange Improvements	TPA	√		<i>Combined with project above for construction efficiencies</i>		
I-5/Chehalis River – Flood Control (Lewis)	Nickel	√	Mar-2012	Cascade Bridge	Oct-2013	\$21,596
U.S. 97/North of Goldendale – Wildlife Habitat Connectivity (Klickitat)	TPA	√	Apr-2012	Rotschy	Oct-2014	\$2,113
SR 502/I-5 to Battle Ground – Add Lanes (Clark)	TPA	√	Apr-2012	Tapani Underground	Oct-2015	\$5,194
SR 285/West End of George Sellar Bridge – Intersection Improvements (Chelan)	TPA	√	Apr-2012	Selland Construction	Nov-2013	\$9,787
SR 105/North River Bridge – Replace Bridge (Pacific)	TPA	√	Jun-2012	Scarsella Bros.	Sep-2014	\$23,009
SR 105/Smith Creek Bridge – Replace Bridge (Pacific)	TPA	√		Combined with the SR 105/North River Bridge project (above) for efficiency		
U.S. 101/Middle Nemah River Bridge – Replace Bridge (Pacific)	TPA	√	Jun-2012	SB Structures	Aug-2014	\$3,253
SR 9/Pilchuck Creek – Replace Bridge (Snohomish) The advertisement date was delayed due to a delay in the hydraulic report, which then delayed the shoreline permit.	TPA	Late	Jul-2012	Granite Construction	Jul-2014	\$8,900
SR 522/Snohomish River Bridge to U.S. 2 – Add Lanes (Snohomish)	Nickel	√	Apr-2010	Scarsella Bros.	Nov-2014	\$88,653
SR 11/Padden Creek – Fish Barrier Removal (Whatcom)	TPA	√	Feb-2013	Ram Construction	Oct-2013	\$1,761

WSDOT tracks advertisement records for Nickel and TPA projects, *continued*

Twenty-four WSDOT projects in construction phase as of September 30, 2013

Nickel and Transportation Partnership Account (TPA) projects; Costs estimated at completion; Dollars in thousands

Project description Cumulative to date (County)	Fund type	On-time advertised	Ad date	Contractor	Operationally complete date	Award amount
I-90/Snoqualmie Pass East – Hyak to Keechelus Dam – Corridor Improvement (Kittitas)	TPA					
• I-90/Snoqualmie Pass East, Phase 1A Hyak to Crystal Springs – Detour	TPA	Early	Feb-2009	KLB Construction	Oct-2009	\$3,298
• I-90/Snoqualmie Pass East Phase 1B Hyak to Snowshed Vicinity – Add Lanes and Bridges	TPA	√	Nov-2009	Max J. Kuney Company	Oct-2013	\$76,699
• I-90/Snowshed to Keechelus Dam Phase 1C – Replace Snowshed and Add Lanes	TPA	Late	Apr-2011	Guy F. Atkinson Construction	Oct-2017	\$177,144
Advertisement was delayed to address fire and safety issues with the original snowshed design resulting in long-term savings.						
SR 520/Bridge Replacement and HOV (King)	TPA					
• SR 520/Pontoon Construction (Grays Harbor, Pierce)	TPA	√	Aug-2009	Kiewit-General, A Joint Venture	Jul-2014	\$367,330
Portions of this project are now in construction, but were not previously captured in <i>Gray Notebook</i> "Projects to be advertised" tables.						
• SR 520/I-5 to Medina – Evergreen Point Floating Bridge and Landings	TPA	√	Dec-2010	Kiewit-General, A Joint Venture	Dec-2014	\$586,561
• SR 520/Medina to SR 202 Vicinity – Eastside Transit and HOV	TPA	√	May-2010	Eastside Corridor Constructors	Mar-2014	\$306,278
SR 6/Willapa River Bridge – Bridge Replacement (Pacific)	TPA	√	Mar-2013	Rotschy	Nov-2014	\$7,070
I-5/Tacoma HOV Improvements (Pierce)	Nickel/ TPA					
• I-5/Port of Tacoma Road to King County Line – Add HOV Lanes	Nickel	Late	Jun-2009	Tri-State Construction	May-2011	\$31,015
Advertisement date was delayed due to design challenges associated with stormwater and floodplain issues, resulting in a formal consultation with U.S. Fish and Wildlife and National Oceanic and Atmospheric Administration. Inflation factor applied in early July 2008 added \$6.6 million to project cost estimate. This project has received federal American Reinvestment and Recovery Act funds.						
• I-5/SR 16 Interchange – Rebuild Interchange	TPA	√	Jul-2008	Guy F. Atkinson Construction	Jun-2011	\$119,925
• I-5/SR 16/Eastbound Nalley Valley – HOV	Nickel/ TPA	√	Jun-2011	Mowat Construction Company	Mar-2014	\$74,688
SR 161/24th Street East to Jovita – Add Lanes (Pierce)	Nickel	Late	Feb-2011	Tri-State Construction	May-2014	\$11,928
Advertisement date was delayed to coordinate with local agencies. Project operationally-complete date delayed from June 2012 due to an error in the electronic bidding system, which required re-advertisement. Operationally complete date has been delayed from September 2013, marking a change from Gray Notebook 50, p. 33 .						
I-405/Kirkland Vicinity, Stage 2 – Widening (Snohomish, King)	Nickel/ TPA					
• I-405/SR 520 to SR 522 – Widening Stage 2	Nickel	Early	Nov-2010	Gary Merlino Construction	Dec-2015	\$10,694
• I-405/Northeast 195th Street to SR 527 – Northbound Widening	TPA	Early	May-2009	Kiewit Pacific	Jun-2010	\$19,263
SR 9/212th Street Southeast to 176th Street Southeast, Stage 3 – Add Lanes (Snohomish)	Nickel	Late	Apr-2011	Northwest Construction	Nov-2013	\$24,297
Advertisement was delayed because the ditches on the project required an individual permit under the jurisdiction of the U.S. Army Corps of Engineers. Operationally complete date has been delayed from August 2013, marking a change from Gray Notebook 50, p. 33 .						

Data source: WSDOT Capital Program Development and Management.

Original Legislative Evaluation and Accountability Program (LEAP)

Ferries: WSDOT completes two Nickel-funded Ferries projects since 2003

The performance summaries below and those on the following page provide status reports on WSDOT's delivery of the Nickel and Transportation Partnership Account (TPA) programs compared to the original legislative funding package as presented in the 2003 and 2005 Legislative Evaluation and Accountability Program (LEAP) lists.

The Legislature has approved changes to these funding packages and assigned funds to different projects since these funding packages were created. As a result, the data listed below and on the next page show the original funding package (LEAP) that differs from the current legislative budgets on [pp. 29-30](#).

The 2003 and 2005 tables feature all budget items including pre-construction and environmental studies that were in the original funding packages. Local program projects, on which cities, counties and tribes collaborate with WSDOT to complete, are not included in the tables.

These tables show the total number of projects and the percentage of projects that are complete, underway, scheduled to start in the future, or affected by a legislatively-approved change of project scope. They also provide budget updates showing original planned budgets and the current plan or actual expenditure, breaking out programs by category: highways, ferries and rail.

WSDOT project delivery update: Original 2003 Transportation Funding Package (Nickel)

As of September 30, 2013

	Total program		Highways		Ferries		Rail	
	Number of projects	Percent of total	Number of projects	Percent of program	Number of projects	Percent of program	Number of projects	Percent of program
Project number and phase	156		127		5		24	
Completed projects	117	75%	101	80%	2	40%	14	58%
Total projects underway	29	19%	26	20%	2	40%	1	4%
<i>In pre-construction phase</i>	16		15		1		0	
<i>In construction phase</i>	13		11		1		1	
Projects scheduled to start	1	1%	0	0%	0	0%	1	4%
Projects deferred or deleted from program	9	6%	0	0%	1	20%	8	33%
<i>Number of legislatively-approved scope changes</i>	20		18		0		2	
<i>Pre-construction starts within six months</i>	0		0		0		0	
<i>Construction starts within six months</i>	0		0		0		0	

Data source: WSDOT Capital Program Development and Management.

Notes: Totals do not include local programs projects. Percents may not equal 100% due to rounding.

WSDOT project budget update: Original 2003 Transportation Funding Package (Nickel)

As of September 30, 2013; 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 2011-2013 biennium	\$3,887,483	100%	\$3,380,124	100%	\$297,851	100%	\$209,508	100%
Actual expenditures, 2003 through 2011-2013 biennium	\$3,700,766	95%	\$3,297,724	98%	\$271,583	91%	\$131,459	63%
Original plan through 2013-2015 biennium	\$3,887,483	100%	\$3,380,124	100%	\$297,851	100%	\$209,508	100%
Current plan through 2013-2015 biennium	\$4,092,250	105%	\$3,542,263	105%	\$417,058	140%	\$132,929	63%
Actual expenditures, 2003 through September 30, 2013	\$3,739,800	96%	\$3,316,046	98%	\$292,034	98%	\$131,720	63%

Data source: WSDOT Capital Program Development and Management.

Notes: Expenditures are Nickel funds only. Totals do not include local programs projects.

Original Legislative Evaluation and Accountability Program (LEAP)

Rail: WSDOT completes seven TPA-funded rail projects since 2005

WSDOT project delivery update: Original 2005 Transportation Partnership Account (TPA)

As of September 30, 2013

	Total program		Highways		Ferries		Rail	
	Number of projects	Percent of total	Number of projects	Percent of program	Number of projects	Percent of program	Number of projects	Percent of program
Project number and phase	248		229		4		15	
Completed projects	180	73%	173	76%	0		7	47%
Total projects underway	50	20%	45	20%	1	25%	4	27%
<i>In pre-construction phase</i>	24		23		0		1	
<i>In construction phase</i>	26		22		1		3	
Projects starting in the future	7	3%	3	1%	1	25%	3	20%
Projects deferred or deleted from program	11	4%	8	3%	2	50%	1	7%
<i>Number of legislatively-approved scope changes</i>	23		23		0		0	
<i>Pre-construction starts within six months</i>	0		0		0		0	
<i>Construction starts within six months</i>	6		6		0		0	

Data source: WSDOT Capital Program Development and Management.

Notes: Totals do not include local programs projects. Percents may not equal 100% due to rounding. Since the TPA's passage in 2005, the Legislature has approved changes to the ferry construction program so that the current budget does not match the original budget. Among the changes, TPA funding was provided for the 64-car ferries.

WSDOT project budget update: Original 2005 Transportation Partnership Account (TPA)

As of September 30, 2013; 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 2011-2013 biennium	\$4,084,836	59%	\$3,886,331	58%	\$87,655	47%	\$110,850	94%
Actual expenditures, 2005 through 2011-2013 biennium	\$3,804,316	54%	\$3,656,151	55%	\$77,019	42%	\$71,146	60%
Original plan through 2013-2015 biennium	\$5,641,364	81%	\$5,386,836	81%	\$136,278	74%	\$118,250	100%
Current plan through 2013-2015 biennium	\$5,385,199	77%	\$5,228,662	78%	\$77,019	42%	\$79,518	67%
Actual expenditures, 2005 through September 30, 2013	\$3,911,263	56%	\$3,763,098	56%	\$77,019	42%	\$71,146	60%

Data source: WSDOT Capital Program Development and Management.

Notes: Expenditures are TPA funds only. Totals do not include local programs projects.

Definitions

Completed projects Projects operationally complete, open to traffic.

Projects underway Funded projects that have begun pre-construction or construction activities.

Projects in pre-construction phase Projects that have been funded and have started active work, such as environmental studies, design work, right of way purchase, preliminary engineering, and other activities that occur before ground-breaking.

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

Projects starting in the future Projects that are funded but not yet in a construction or pre-construction phase.

Projects deferred or deleted Projects that are 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, two have been completed, representing 40 percent of the total ferries program; two ferries projects are under way, representing 40 percent of the total program; and one ferries project has been deferred or deleted, representing the remaining 20 percent of the total program.

Completed Nickel and Transportation Partnership Account Projects

Four more Transportation Partnership Account projects complete

WSDOT completed four Transportation Partnership Account (TPA) projects in the third quarter (July through September 2013). Three projects replaced four bridges and made related roadway enhancements to improve travel for more than 2.8 million annual trips on sections of U.S. 2 in Chelan County and U.S. 101 in Pacific County. The fourth project replaced culverts under State Route (SR) 112 to enhance fish passage on Coville Creek in Clallam County.

Project delivery performance on completed projects' budgets and schedules is measured against the latest approved budgets in accordance with criteria established by the Legislature. For this quarter, it is the 2013 transportation budget.

In addition to the projects' last approved budgets and schedules, original legislative budgets and schedules are included to show changes that may have occurred during design and construction phases. The Nickel and TPA budgets and schedules reset whenever changes are made in the last approved legislative budget. For information on finished 2003 Nickel and 2005 TPA projects, visit <http://www.wsdot.wa.gov/projects/completed>.

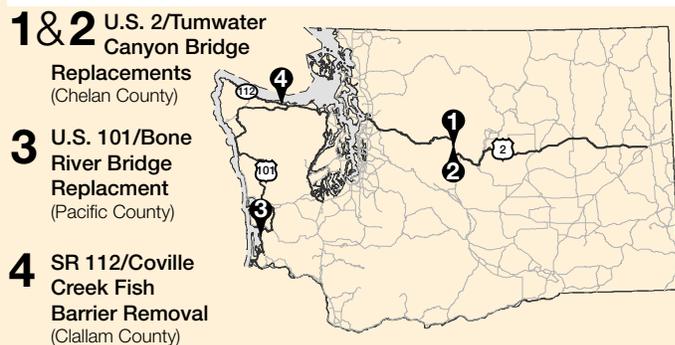
U.S. 2/Tumwater Canyon Bridge Replacements (combined projects) (Project includes U.S. 2/Wenatchee River Bridge Replacement, U.S. 2/Chiwaukum Creek Bridge Replacement, U.S. 2/Drury Creek Bridge Replacement) (Chelan County)

This TPA project replaced three bridges over the Wenatchee River and Chiwaukum and Drury creeks with wider, taller structures that meet current design standards. It also constructed new turn lanes into Tumwater Campground and added fish passage enhancements in the creek beds.

Project benefits: The project reduces the risk of collisions by better accommodating wider loads as well as pedestrians and bicyclists. The bridges are taller to reduce the potential for debris accumulation between the structure and the river, use concrete structures to eliminate bridge painting, and enhance fish passage.

Budget performance: The project was completed for \$14.3 million, on target with the last approved budget and about \$2.7 million less than the original 2006 budget of \$17 million.

Transportation Partnership Account projects replace bridges, improve fish passage July 1 through September 30, 2013



Data source: WSDOT Capital Program Development and Management.

Note: The bridge projects on U.S. 2 are listed as two separate above but were combined in the Tumwater Canyon Bridge Replacements as a cost-saving measure.

Schedule performance: The project was operationally complete in September 2013, on time with the last approved schedule and nearly three years later than the originally approved schedules of July 2010 for the Wenatchee River and Drury Creek projects, and December 2010 for the Chiwaukum Creek project.

Highlights/challenges: The bridge projects were combined in 2011 for efficiency and to reduce costs. The accepted bid for the project was \$390,000 lower than the engineer's estimate, but higher than normal water levels on the Wenatchee River delayed the start of construction. Some of the project's early savings were offset when construction costs increased by \$1.7 million and the operationally complete date was pushed to September 2013. This occurred after crews who were preparing to construct new bridge footings encountered large underground boulders within the river, which had to be removed.

U.S. 101/Bone River Bridge – Replace Bridge (Pacific County)

This TPA-funded project replaced the 1935 timber trestle that made up the U.S. 101 Bone River Bridge near Bay Center with a wider concrete structure that includes two 12-foot-wide lanes with six-foot-wide shoulders. The 1935 bridge was too narrow to accommodate the types and number of vehicles that need to cross it today, and did not meet current federal seismic, flood, or structural standards.

Completed Nickel and Transportation Partnership Account Projects

State Route 112 fish passage project wraps up in Clallam County



The new Wenatchee River bridge took shape next to the old bridge in 2012. It features a wider deck to better accommodate today's traffic.

Project benefits: The project reduces the risk of collisions by constructing a wider roadway, and installing concrete road barriers and new bridge railings. The project removed more than 70 creosote-treated timber piles from the Bone River and restored about 82 square feet of streambed.

Budget performance: The project was completed for \$8.95 million, approximately \$192,000 more than the last approved budget of \$8.76 million and \$3.85 million less than the original 2005 budget of \$12.8 million.

Schedule performance: The project was operationally complete in July 2013, four months ahead of the last approved schedule and one month later than the original 2005 schedule of June 2013.

Highlights/challenges: During construction, WSDOT built a temporary one-lane bridge on the west side of the existing Bone River Bridge to detour traffic around the work zone. The accepted bid in May 2012 decreased project cost by approximately \$3.8 million.

SR 112/Coville Creek – Fish Barrier Removal (Clallam County)

This project replaced existing drainage structures, which had been identified as fish passage barriers, with larger culverts designed to improve fish passage.

Project benefits: Removing the barriers at SR 112 and Eden Valley Road helps ensure that salmon and other fish have access to 9.7 miles of potential habitat for spawning and juvenile rearing in Coville Creek.

Budget performance: The project was completed for \$2 million, which was on target with the last legislatively-approved budget of \$2 million. This is \$1.1 million less than the original 2011 budget of \$3.1 million.

Schedule performance: The project was operationally complete in September 2013, two months ahead of the last approved schedule, and three months ahead of the original schedule of December 2013.

Highlights/challenges: The accepted bid for the project was 31.4 percent lower than the engineer's estimate. This reduced costs by more than \$792,000. Scope changes allowed for the removal of a right of way phase from project planning and resulted in additional savings.

Contributors include Mitzi Frick, Penny Haeger, Theresa Scott and Joe Irwin

WSDOT reporting change orders online

WSDOT approved more than \$76.8 million in change orders during the quarter, the majority of which (some \$71.2 million) was for the SR 520 project. WSDOT sometimes must change its engineers' original plans and specifications in order to complete projects. When this occurs, WSDOT issues a formal modification (or change order) to the contract, containing a description of the change and details about how or if the contractor may be compensated for it. Each month, WSDOT posts all change orders estimated to cost \$500,000 or more online at <http://www.wsdot.wa.gov/Business/Construction/ConstructionChangeOrders.htm>.

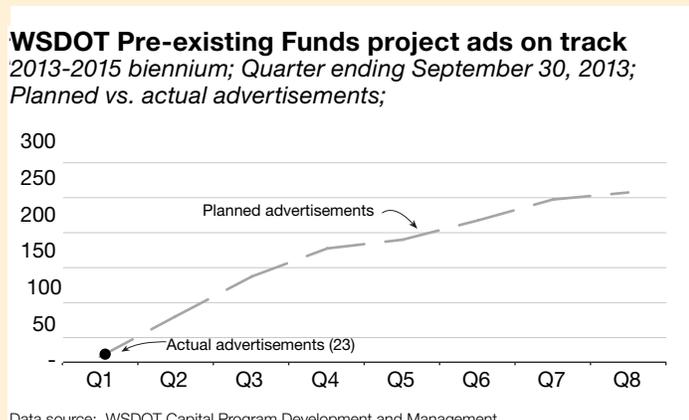


Pre-existing Funds

WSDOT advertises 23 Pre-existing Funds projects for the quarter

WSDOT advertised all 23 of its scheduled Pre-existing Funds (PEF) projects on time during the first quarter of the 2013-2015 biennium (July 1 through September 30). The majority of the projects advertised will tackle pavement-related repairs and replacement work across the state, improving the quality and safety of the highway system.

The current cost to complete the 23 PEF projects is about \$49.3 million. This is approximately \$200,000 more than the



Current cost to complete WSDOT's planned advertisements slightly higher for the quarter 2013-2015 biennium (July 2013 through June 2015); Dollars in millions

	Number of projects	Original value	Current cost to complete
Total PEF advertisements planned 2013-2015	258	\$574.5	\$582.7
Planned advertisements through September 30, 2013	23	\$49.1	\$49.3
Actual advertisements through September 30, 2013	23	\$49.1	\$49.3

Data source: WSDOT Capital Program Development and Management.

original value of \$49.1 million. Changes in advertisements for pavement repairs and crack sealing work in the South Central Region caused more than \$197,000 of the increase.

Unlike Nickel and Transportation Partnership Account (TPA) projects, which come from a fixed list of projects set by the Legislature and are funded with line item budgets, PEF projects are primarily funded at the program level through federal, state and local sources. This gives WSDOT flexibility with projects, such as pavement preservation, bridge rehabilitation and fish passage improvements.

WSDOT has 258 PEF advertisements planned during the 2013-2015 biennium. The current cost to complete them is \$582.7 million, about \$8.2 million (1.5 percent) more than the original value of \$574.5 million.

Improvement and preservation spending lower than planned during the quarter

While expenditures for the 23 advertised projects were fairly close to mark, actual expenditures for the PEF improvement program were 57 percent lower than planned. WSDOT had planned to spend \$209 million on improvement projects, but spent \$116 million less (\$87 million) during the quarter.

The PEF improvement program funds projects that optimize highway capacity to move more vehicles, enhance roadway safety, and reduce the environmental impact of highway construction projects.

The lower than expected spending was due to slowed work on two of WSDOT's mega projects. The State Route (SR) 99 Alaskan Way Viaduct ran into delays and work stoppages as issues were being

Definitions of PEF terms

The name Pre-existing Funds came about to help differentiate the funding source from more recently introduced funding methods like the 2003 Nickel and 2005 Transportation Partnership Account (TPA). Nickel and TPA funds have different timelines, reporting, sources and legislation.

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.

Advanced

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

Early

A project with an advertisement date originally scheduled for the current quarter but has its advertisement occur in an earlier quarter.

On time

A project that is advertised within the quarter and planned in the biennial budget.

Late

A project that is advertised in the current quarter but missed the original advertisement date.

Emergent

A new project that addresses unexpected needs, such as emergency landslide repair, and is advertised in the current quarter.

Projects not advertised on schedule fall into three categories:

Delayed

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

Deferred

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

Deleted

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

Paving work makes up majority of advertised projects this quarter

WSDOT advertises 23 Pre-existing Funds projects on time this quarter July through September 2013

U.S. 97/Dry Creek West of Ellensburg – Construct Bridge	I-90/1.0 Mile West of Snoqualmie Summit Eastbound – Rockfall Mesh Repair
Low Cost Pavement Repair 2013-2015	SR 17/Moses Lake Noise Barrier Wall – Drainage Repair
Olympic Region Low Cost Pavement Repair – Paving	SR 142/Glenwood Road Vicinity – Replace Failing Box Culvert
Southwest Region Low Cost Pavement Repair – Roadway Preservation	I-5/SR 18 to South 288th Street – Seismic Retrofit
SR 272/Colfax Hill Drainage – Channel Retrofit	SR 203/Tolt River Bridge to McDougall Street – Paving
SR 272/East of Colfax – Culvert Replacement	U.S. 2/Espanola Road to Fairchild Air Force Base – Paving
South Central Region Low Cost Pavement Repair and Region-wide Crack Sealing	U.S. 2/Fairchild Air Force Base to Junction I-90 – Paving
Olympic Region Major Electrical Rehabilitation – Rebuild Signals	U.S. 2/Flint Road – Intersection Improvements
U.S. 101/West of Benson Road to East of Doyle Road – Safety Improvements	I-90/Grant County Line to SR 21 – Paving
U.S. 101/0.5 Miles North of Raymond – Culvert Rehabilitation	I-90/Lincoln County Line to Salnave Road – Paving
SR 105/Heather Road – Culvert Rehabilitation	SR 904/Betz Road to I-90 – Paving
SR 507/Reynolds Avenue Signal Replacement	

Data source: WSDOT Capital Program Development and Management.

discussed with the Longshoreman’s union in Seattle. These delays pushed improvement work that was scheduled to be completed in the third quarter of 2013, and associated costs into future quarters.

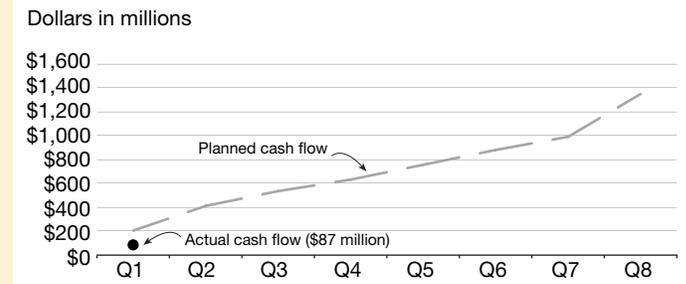
Likewise, repairs and related delays on the SR 520 project reduced costs expected to take place during the quarter. As work associated with pontoon repairs occurred, the more intensive construction that is required for building pontoons slowed down. The costs of these delays will be incurred as the project moves forward and work that was delayed during the quarter is completed in later quarters.

PEF preservation spending during the first quarter of the 2013-2015 biennium was also lower than WSDOT planned to spend, \$91 million instead of \$119 million. The 24 percent reduction, which amounts to about \$28 million, was due to favorable bids, projects being delayed to future quarters and design element changes that resulted in overall project savings.

The preservation program includes projects that maintain the structural integrity of the existing highway system including pavement, highway safety features, bridges, and other structures and facilities.

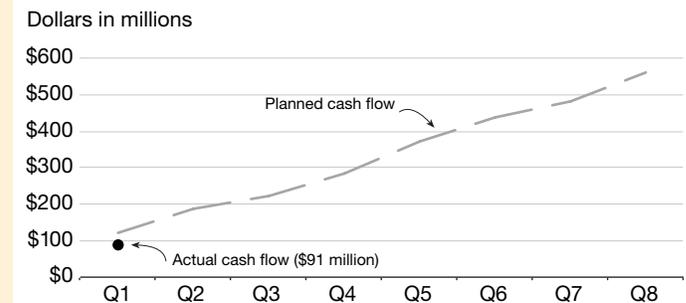
Contributors include Mike Ellis, Dean Walker and Joe Irwin

WSDOT Pre-existing Funds improvement cash flow 57 percent lower than planned level for quarter 2013-2015 biennium; Quarter ending September 30, 2013; Planned vs. actual



Data source: WSDOT Capital Program Development and Management.

WSDOT Pre-existing Funds preservation cash flow 24 percent lower than planned level for quarter 2013-2015 biennium; Quarter ending September 30, 2013; Planned vs. actual



Data source: WSDOT Capital Program Development and Management.

Watch List

Watch List keeps a close eye on WSDOT's ongoing projects

WSDOT added eight projects to its Watch List from July through September 2013. During the same period, nine projects were removed.

WSDOT maintains the Watch List to deliver on the agency's commitment to "No Surprises" reporting. WSDOT continuously monitors its projects' performance to ensure any issues affecting schedule or budget are spotlighted by the agency and brought to the attention of executives, legislators and the public. The Watch List provides information on issues currently affecting projects, and those that could potentially impact project schedules and budgets.

The Watch List helps WSDOT track these projects, providing status reports while explaining the reasons they are affecting delivery, and what WSDOT is doing to address them. Projects are removed from

the Watch List when these issues are resolved, and updated if new issues arise or old issues persist.

The list at the bottom of the page provides common issues that might land a project on the Watch List. The next page provides brief overviews of how these issues are affecting specific projects throughout the state.

Comprehensive Watch List available online

WSDOT's Capital Program Development and Management office provides monthly updates on Watch List projects online in the Delivery Progress Reports. The reports provide a more comprehensive look at the Watch List as well



as information on advertised and operationally complete Nickel and Transportation Partnership Account projects, which can be found at <http://www.wsdot.wa.gov/Projects/Reports/>.

Potential Watch List issues

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 additional 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 U.S. Fish & Wildlife Service, National Oceanic and Atmospheric Administration (NOAA) Fisheries, U.S. Forest Service or others may result in delays.

Inter-agency issues: Project may require more collaboration with local jurisdictions, or may require interlocal agreements, such as Memoranda of Understanding (MOUs) or Memoranda of Agreement (MOAs).

Tribal concerns: Consultation with tribes as required by Centennial Accord and specific treaties with each tribal government. 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 design time.

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 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 result in work schedules conflicting with events such as fish spawning season.

Weather: Weather unsuitable for construction work can temporarily halt the project.

Litigation

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

WSDOT adds eight projects to the Watch List during the quarter

WSDOT's Watch List projects with schedule or budget concerns

Quarter ending September 30, 2013

Project	Date added	Date removed	Watch List issue
I-90/Snowshed to Keechelus Dam Phase 1C - Replace Snowshed and Add Lanes (Kittitas)	Sep-2013		Contractor delays due to design revisions to new bridges and traffic lanes has delayed the completion date. Also delaying the project is slower-than-expected progress on construction of a wall supporting the westbound lanes.
SR 302/Key Peninsula Highway to Purdy Vicinity - Safety & Congestion (Pierce)	Sep-2013		The advertisement date may be delayed to complete right of way acquisition and utility relocation work. This may also delay the completion date.
SR 161/24th Street East to Jovita - Add Lanes (Pierce)	Aug-2013	Sep-2013	The cost has increased due to construction change orders. As a result, the project was delayed through the winter and the construction completion date is delayed. Both have been incorporated into the project.
I-5/M Street to Portland Avenue – HOV (Pierce)	Jul-2013		The schedule may experience a delay due to resource availability acquisition and geotechnical issues resulting from hazardous soils.
I-5/Ship Canal Bridge - Seismic Retrofit (King)	Jul-2013	Jul-2013	The project is in the design phase and the risks to the schedule, due to delay in finalizing the Bridge Seismic Analysis Report stemming from a lack of available resources, have been realized and accepted.
SR 16/Tacoma Narrows Bridge - Replace Maintenance Traveler (Pierce)	Jul-2013		The budget and schedule are at risk. Design revisions due to issues with the rail the maintenance traveler moves along have increased costs on this project and may delay the schedule.
SR 167/Puyallup River Bridge - Bridge Replacement (Pierce)	Jul-2013	Aug-2013	Design revisions and historical preservation requirements have delayed the operationally complete date and increased project costs.
SR 502/I-5 to Battle Ground - Add Lanes (Clark)	Jul-2013	Jul-2013	The schedule risk was realized and accepted. The operationally complete date was delayed due to the time required to acquire an extensive number of right of way parcels.
SR 520/I-5 to Medina - Evergreen Point Floating Bridge and Landings (King)	Jun-2013	Sep-2013	Completion has been delayed to allow additional time to repair pontoons and make changes to the construction of future pontoons.
I-5/Skagit River Bridge - Emergency Repair (Skagit)	May-2013	Aug-2013	The total project cost has increased due to WSDOT's underestimating of the time and costs associated with removing sections of the fallen structure from the river.
SR 6/Rock Creek Bridge East - Replace Bridge (Lewis) (Related project: SR 6/Rock Creek Bridge West - Replace Bridge)	Apr-2013	Aug-2013	Environmental permitting and right of way issues put the schedule at risk. WSDOT had delayed the schedule to obtain approvals from the Multi Agency Permit (MAP) Team, and right of way issues and acquisition.
SR 532/Davis Slough Bridge Replacement - Widening for Flood Prevention (Island, Snohomish)	Apr-2013		Design work due to ongoing environmental permitting issues delayed the schedule.
I-5/Portland Avenue to Port of Tacoma Road - Northbound HOV (Pierce)	Feb-2013		Design coordination with tribal concerns puts the schedule at risk. Ongoing negotiations with the Puyallup Tribe of Indians on project impacts delayed the schedule and the bid opening was canceled.
SR 3/Belfair Area - Widening and Safety Improvements (Mason)	Feb-2013		Design element changes put the schedule at risk. Revisions to the project limits delayed the schedule to review and approve the right of way acquisition plans.
SR 520 Pontoon Construction Project (Grays Harbor)	Jun-2012	Aug-2013	Construction materials problems may delay the schedule. Repair work on four pontoons may delay the schedule on this project and a related project to allow time for the repairs.
SR 520/Medina to SR 202 Vicinity - Eastside Transit and HOV (King)	Sep-2011	Sep-2013	Geotechnical issues are now anticipated to be solved in fall 2013. Weather prevented critical closures and caused construction delays. The project has budget and schedule risks.

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

Notable results

- *Two tolling division Lean projects initiated and completed this quarter will save about \$3,000 annually*
- *Phone calls from medical service providers decreased 80% as a result of a more efficient Lean bill paying process*
- *A Lean process resulted in reduced collision record processing time from 3.3 months in June down to 1.7 months this quarter*
- *The time to process data from the traffic data collection equipment decreased from 48 hours to 2 hours as a result of a Lean process*

WSDOT reviews tolling operations using Lean principles

In April 2013, the Washington State Legislature directed WSDOT to review tolling operations using Lean management principles in order to eliminate inefficiencies and redundancies, incorporate lessons learned, and identify opportunities to conduct operations more efficiently and effectively. This directive aligns with WSDOT's commitment to establish a Lean culture of continuous improvement throughout the agency.

WSDOT staff quickly took the initiative to improve some of their daily processes, and achieved cost and time savings. In one case, the tolling operations staff worked with the Lane System vendor to generate automated Toll Lane System reports on a daily basis. The first idea was to have the system automatically email the daily report to WSDOT staff, which was estimated to avoid about \$4,100 annually. Due to the size of the file, the

vendor asked to instead place the file on a secure file-sharing site online. WSDOT accepted this modification which resulted in a cost avoidance of about \$2,050 annually by saving about 11 minutes daily because staff no longer has to manually generate the daily reports.

Another improvement is related to the distribution and review of monthly invoices from the consultant. Originally, the consultant staff scanned and copied an invoice before submitting it to WSDOT. Once WSDOT received the printed invoice, WSDOT staff would also scan it: first to initiate the review process, and again when it was approved. WSDOT staff requested that the consultant staff share the original scan by email, so that this step is no longer performed repetitively. Eliminating the extra scans saved three hours every month, avoiding an estimated \$1,080 in labor costs annually. As an additional improvement, the invoices are now grouped by approver so that an approver does not hold up the entire process if there is a problem within their portion of the invoice.

Project, program and description

COMPLETED: Automate daily Toll Lane System reports

Tolling Division

Automate Toll Lane System reports, which were originally created daily by the Operations staff, to save time and money.

COMPLETED: Streamline General Toll Consultant invoice distribution

Tolling Division

Reduce repeated scanning of invoices to save time and money, and distribute groups of invoices to reduce likelihood of delays in approval.

Results achieved this quarter

- Initially, a new report emailed daily avoided about \$4,100 annually, based on saving about 22 minutes each day.
- Modified process at the vendor's request: The files are placed on a secure site online for WSDOT to retrieve each morning (instead receiving each file in an email). The estimated annual cost avoided is \$2,050, based on saving 11 minutes each day.
- Reduced 3 hours of administrative work per month by eliminating repetitive invoice scanning, avoiding an estimated \$1,080 in labor costs annually.
- Invoices are now grouped by approver so instead of holding up the entire invoice, each approver only holds up their portion of the process if there is a problem.

Table continued on p. 43

WSDOT completes three more Lean projects in the third quarter

WSDOT has initiated more than 15 Lean projects since August 2012 (see [Gray Notebook 50, pp. 43-44](#)) to improve the effectiveness of processes and better meet customers' needs. WSDOT has been learning about the Lean process and what it has to offer to address identified issues and improve the way the agency does business. This quarter's progress and benefits of six projects are presented here. Other Lean projects are also underway.

Table continued from p. 42

Project, program and description

Results achieved this quarter

COMPLETED: Streamline medical bill paying process

Office of Human Resources and Safety

Reduce the cycle time in receiving, reviewing, processing, and recording payments for medical bills.

- Trained one staff member to track and pay medical claims, research payment issues, and answer questions from medical providers. Staff task assignment changes reduced task trade-offs and opportunities for invoices and vouchers to be lost.
- About 80% fewer phone calls were received from providers in the last 6 months (from about 24 each week down to about 5).
- Time needed to process payments decreased by about 33%.

Reduce collision data backlog

Strategic Planning (Statewide Travel and Collision Data Office)

Supply customers with complete, accurate and timely collision data by streamlining collision data processing and reducing the data backlog.

- The time until a fully analyzed collision record becomes available to customers has been reduced from 3.3 months in June 2013 to 1.7 months at the beginning of October 2013.
- Staff completed project to provide x,y coordinates for collisions between 2010 and 2012. Next steps include testing and preparing customer documentation for how to spatially display the data.
- Based on customer needs, established criterion for each data field that determines when to return the report to the submitting officer for corrections, clarification or additional information.

Reduce WSDOT's fish passage project design timeline

Development Division (Environmental Services Office)

Increase collaboration efficiencies between WSDOT and the Washington Department of Fish and Wildlife during fish passage barrier correction project scoping, design and construct.

- Formed interagency specialized design delivery teams to implement the new process with the goal to scope and design 30 fish passage projects in the 2013-2015 biennium.
- Eliminated delays associated with interagency coordination because staff from both agencies are on collaborative teams.

Improve information and process flow for traffic data collection

Strategic Planning (Statewide Travel and Collision Data Office)

Reduce time between retrieving and validating data from permanent traffic data collection sites; Identify equipment issues sooner, reducing loss of traffic data.

- Worked with customer to eliminate duplications, reducing form submittals from 3 to 1 per trouble site.
- Automated the process for renaming files – eliminated the manual steps.
- Reduced the process time from 48 hours (worst case) to 2 hours (best case) for one staff.

Data source: WSDOT Strategic Planning, Tolling, and Development divisions, and Office of Human Resources and Safety.

Contributors include Lori Beebe, Dave Bushnell, Kathy Dawley, Lois Diemert, Cheryl Drake, Mark Finch, Jeff Hall, Nadine Jobe, Tyler Patterson, Patty Rubstello, Paul Wagner and Anna St. Martin

Table or graph title	page	Table or graph title	page
Performance highlights for the quarter	ii	Freight Rail, <i>continued</i>	
WSDOT's goals, performance and trends	v	Washington rail freight tonnage by type of movement	24
MAP-21 federal performance reporting requirements	vi	Annual Grain Train carloads decline 9.8 percent	25
Worker Safety		WSDOT awards freight rail capital project funding to support infrastructure and economic vitality	26
WSDOT's recordable incident rate and "days away" rate	1	Beige Pages	
Capital Facilities		WSDOT completes 348 Nickel and TPA projects	27
Capital facilities 2013-2015 biennial budget	3	2013-2015 Nickel and TPA funding starting steep decline this Legislative budget	27
Primary building backlog reaches \$163.4 million	3	Nickel, TPA show growing gap in baselines and revenue forecasts	28
Fifty-two percent of buildings are in fair condition	4	WSDOT's Nickel and TPA projects helped keep Washington moving in the 2011-2013 biennium	28
Most critical preventive maintenance complete	4	Highway construction performance summary shows more than \$5.6 billion in projects complete	29
Select WSDOT facility minor works projects	5	WSDOT finishes 18 rail construction projects	30
WSDOT's 1,395 buildings cover 3.7 million square feet	5	WSDOT finishes 20 Ferries' construction projects	30
Aviation		Biennial summary: WSDOT relying more on Transportation Partnership Account funds for capital projects	31
Combined aid dollars total \$24.8 million for airports	7	Seven projects in the six-month delivery pipeline for October 1, 2013 through March 31, 2014	31
Majority of Airport Aid funding preserves pavement	7	Twenty-four WSDOT projects in construction phase	32
Pavement condition index improves at primary commercial airports, declines at small airports	8	WSDOT project delivery update: Original 2003 Transportation Funding Package (Nickel)	34
Incident Response		WSDOT project budget update: Original 2003 Transportation Funding Package (Nickel)	34
Clearance times up, number of responses down	10	WSDOT project delivery update: Original 2005 Transportation Partnership Account (TPA)	35
WSDOT's Incident Response prevents \$19.1 million in delay and secondary collisions	11	WSDOT project budget update: Original 2005 Transportation Partnership Account (TPA)	35
Washington State Ferries		Transportation Partnership Account projects replace bridges, improve fish passage	36
Ferries cancels 288 trips	12	Pre-existing Funds project advertisements on track	38
Ferries' on-time performance declines, trip reliability improves for the quarter	13	Current cost to complete WSDOT's planned advertisements slightly higher for the quarter	38
Rail: Amtrak Cascades		WSDOT advertises 23 Pre-existing Funds projects on time this quarter	39
On-time performance increases to 76.4 percent	14	WSDOT's improvement program cash flow	39
Amtrak Cascades ridership and ticket revenues	14	WSDOT's preservation program cash flow	39
WSDOT makes progress on \$795 million in rail projects	15	Watch List projects with schedule or budget concerns	41
Trip Reduction		WSDOT Lean	
Employees continue reducing drive-alone rates	16	WSDOT completes three more Lean projects in the third quarter	42
Water Quality			
WSDOT highway miles inventoried and mapped for stormwater outfalls in permit area near target	19		
Five-year trend for stormwater treatment facilities constructed declines with revenues	20		
Monthly compliance with construction permit turbidity benchmarks improves	21		
Endangered Species Act Documentation			
WSDOT expedites 26 percent of consultations	22		
Programmatic consultations save time	22		
Freight Rail			
Farm products and coal make up largest share of freight rail shipments	24		

Calendar year	Edition number / Date (Washington state fiscal year and quarter)			
2001	1 / Mar 31, 2001 (Q3 FY2001)	2 / Jun 30, 2001 (Q4 FY2001)	3 / Sep 30, 2001 (Q1 FY2002)	4 / Dec 31, 2001 (Q2 FY2002)
2002	5 / Mar 31, 2002 (Q3 FY2002)	6 / Jun 30, 2002 (Q4 FY2002)	7 / Sep 30, 2002 (Q1 FY2003)	8 / Dec 31, 2002 (Q2 FY2003)
2003	9 / Mar 31, 2003 (Q3 FY2003)	10 / Jun 30, 2003 (Q4 FY2003)	11 / Sep 30, 2003 (Q1 FY2004)	12 / Dec 31, 2003 (Q2 FY2004)
2004	13 / Mar 31, 2004 (Q3 FY2004)	14 / Jun 30, 2004 (Q4 FY2004)	15 / Sep 30, 2004 (Q1 FY2005)	16 / Dec 31, 2004 (Q2 FY2005)
2005	17 / Mar 31, 2005 (Q3 FY2005)	18 / Jun 30, 2005 (Q4 FY2005)	19 / Sep 30, 2005 (Q1 FY2006)	20 / Dec 31, 2005 (Q2 FY2006)
2006	21 / Mar 31, 2006 (Q3 FY2006)	22 / Jun 30, 2006 (Q4 FY2006)	23 / Sep 30, 2006 (Q1 FY2007)	24 / Dec 31, 2006 (Q2 FY2007)
2007	25 / Mar 31, 2007 (Q3 FY2007)	26 / Jun 30, 2007 (Q4 FY2007)	27 / Sep 30, 2007 (Q1 FY2008)	28 / Dec 31, 2007 (Q2 FY2008)
2008	29 / Mar 31, 2008 (Q3 FY2008)	30 / Jun 30, 2008 (Q4 FY2008)	31 / Sep 30, 2008 (Q1 FY2009)	32 / Dec 31, 2008 (Q2 FY2009)
2009	33 / Mar 31, 2009 (Q3 FY2009)	34 / Jun 30, 2009 (Q4 FY2009)	35 / Sep 30, 2009 (Q1 FY2010)	36 / Dec 31, 2009 (Q2 FY2010)
2010	37 / Mar 31, 2010 (Q3 FY2010)	38 / Jun 30, 2010 (Q4 FY2010)	39 / Sep 30, 2010 (Q1 FY2011)	40 / Dec 31, 2010 (Q2 FY2011)
2011	41 / Mar 31, 2011 (Q3 FY2011)	42 / Jun 30, 2011 (Q4 FY2011)	43 / Sep 30, 2011 (Q1 FY2012)	44 / Dec 31, 2011 (Q2 FY2012)
2012	45 / Mar 31, 2012 (Q3 FY2012)	46 / Jun 30, 2012 (Q4 FY2012)	47 / Sep 30, 2012 (Q1 FY2013)	48 / Dec 31, 2012 (Q2 FY2013)
2013	49 / Mar 31, 2013 (Q3 FY2013)	50 / Jun 30, 2013 (Q4 FY2013)	51 / Sep 30, 2013 (Q1 FY2014)	52 / Dec 31, 2013 (Q2 FY2014)

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