Washington State
Department of Transportation

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The Gray Notebook

WSDOT's quarterly performance report on transportation systems, programs, and department management
Quarter ending September 30, 2014 • Published November 2014 Lynn Peterson, Secretary of Transportation

Aviation program ready for takeoff

WSDOT operates runways and airports from the beach to the prairie

p. 6

A clearer look at the state's stormwater picture

Water quality efforts continue to show positive results

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Construction contracts process builds on success

WSDOT works to improve the accuracy of its project cost estimations

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PERFORMANCE HIGHLIGHTS reported for the quarter ending September 30, 2014

$3.6 B
needed for WSDOT's **airports** in next 20 years

9,185
number of Washington-based aircraft with **registration compliance** in 2014

$7.8 M
how much WSDOT **leveraged** in federal funds to support 39 airport projects

68%
of WSDOT **primary buildings** are more than 25 years old

$475.5 M
WSDOT's **backlog** of facility and replacement needs in 2013

↑**7.2M**
ferry **riders**

↓**90.5%**
of ferry trips were **on time** this quarter

189
number of **stormwater treatment** facilities WSDOT built in FY2014

90%
of construction site stormwater samples met **water clarity** standards

↑**27.3%**
increase in **Amtrak Cascades operating costs** in the third quarter of 2014

361 OF 421
Nickel and TPA **projects** complete since 2003

FIVE NEW PROJECTS COMPLETED THIS QUARTER

9
scheduled Pre-existing Funds projects advertised **on time** this quarter

7
projects removed from **Watch List**

$5.7 B
Nickel and TPA projects **completed** since 2003

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

↓ **16%**
decrease in the number of **recordable incidents** for WSDOT employees

13 OF 36 WSDOT LEAN PROJECTS ARE COMPLETE

3,170
hours of staff time saved in 2014 by using a streamlined ESA-consultation process

$20.1 M
economic **benefit** provided by WSDOT Incident Response

12.1
average number of minutes it took WSDOT teams to **clear** traffic incidents

13,423 INCIDENTS **CLEARED** BY WSDOT

62.5%
of **construction contracts** awarded for below the WSDOT estimate

$858 M
cost of delay on state highways in 2013

↑**1.5%**
increase in the amount of **congestion** on state highways

On the cover: *One of the state's unique airports, the oceanfront landing strip at Copalis Beach.*

WSDOT's Goals, Performance and Trends

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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 2012 & 2013, data for 2013 considered preliminary)	0.77	0.77	1.00	✓		↓
Rate of **recordable incidents** for every 100 full time WSDOT workers (Annual measure: calendar years 2012 & 2013)	5.5	5.7	5.0	—		↓
Preservation						
Percentage of state **highway pavement** in fair or better condition by vehicle miles traveled (Annual measure: calendar years 2011 & 2012)	91.9%	91.9%	92.0%	—		↑
Percentage of **state bridges** in fair or better condition by bridge deck area (Annual measure: fiscal years 2013 & 2014)	91.7%	91.8%	90.0%	✓		↑
Mobility (Congestion Relief)						
Highways: Annual (weekday) vehicle **hours of delay** statewide at **maximum throughput speeds**[1] (Annual measure: calendar years 2012 & 2013)	30.9 million	32.4 million	N/A	N/A		↓
Highways: Average **incident clearance times** for all Incident Response program responses (Calendar quarterly measure: Q2 2014 & Q3 2014)	11.4 minutes	12.1 minutes	N/A	N/A	(Five-quarter trend)	↓
Ferries: Percentage of trips departing on time[2] (Fiscal quarterly measure: year to year Q1 FY2014 & Q1 FY2015)	92.8%	90.5%	95%	—		↑
Rail: Amtrak Cascades on time performance[3] (Annual measure: calendar years 2012 & 2013)	72.6%	76.9%	80%	—	(Three-year trend)	↑
Environment						
Number of WSDOT **stormwater management facilities** constructed (Annual measure: fiscal years 2013 & 2014)	169	189	N/A	N/A		Not applicable
Cumulative number of WSDOT **fish passage barrier improvements** constructed (Annual measure: calendar years 2012 & 2013)	270	285	N/A	N/A		↑
Stewardship						
Cumulative number of Nickel and TPA **projects completed,** and **percentage on time**[4] (Calendar quarterly measure: Q2 2014 & Q3 2014)	355/ 87%	361/ 87%	90% on time	—	(Five-quarter trend)	↑
Cumulative number of Nickel and TPA **projects completed** and **percentage on budget**[4] (Calendar quarterly measure: Q2 2014 & Q3 2014)	355/ 91%	361/ 91%	90% on budget	✓	(Five-quarter trend)	↑
Variance of total project costs compared to **budget expectations**[4] (Calendar quarterly measure: Q2 2014 & Q3 2014)	under budget by 1.7%	under budget by 1.7%	on budget	✓	(Five-quarter trend)	Not applicable

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 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. 2 WSDOT Ferries Division's "on time" departures include any trip recorded by automated tracking as leaving the terminal within 10 minutes of scheduled time. 3 On time performance is only available for the past three years. 4 Budget and schedule expectations are defined in the last approved State Transportation Budget. See p. 25 for more information.

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

MAP-21 federal performance reporting requirements

MAP-21 goals by program area	Federal threshold/ benchmark[1]	MAP-21 target[2]	Penalty[3] Yes/No	Date draft rule was released	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	3/11/14	Traffic fatality rates using the NHTSA[5] methodology, see *Gray Notebook* 54, p. 1
Rate of **serious traffic injuries** per 100 million vehicle miles traveled (VMT) on all public roads	No	TBD	Yes	3/11/14	Serious injury rates using the NHTSA[5] methodology, see *Gray Notebook* 54, p. 1
Number of **traffic fatalities** on all public roads	No	TBD	Yes	3/11/14	Traffic fatalities using the NHTSA[5] methodology, see *Gray Notebook* 54, p. 1
Number of **serious traffic injuries** on all public roads	No	TBD	Yes	3/11/14	Serious injuries using the NHTSA[5] methodology, see *Gray Notebook* 54, p. 1
Rate of per capita **traffic fatalities** for drivers and pedestrians 65 years of age or older	No	TBD	No	Guidance provided 10/1/2012	Traffic fatalities for pedestrians 65 years of age or older. See *Gray Notebook* 48, p. 8, for review of MAP-21 implications. The rate of traffic fatalities for older pedestrians is part of Washington state's Target Zero[6] campaign
Rate of fatalities on high-risk rural roads	No	TBD	Yes	Guidance provided 10/1/2012	Traffic fatality rates on high-risk rural roads as part of Washington state's Target Zero campaign
Highway-railway crossing fatalities	No	TBD	No	Guidance provided 2/22/2013	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* 52, p. 6, for an update on MAP-21 implications for pavement
Condition of bridges on the National Highway System	<10% of deck area on SD[7] bridges	TBD	Yes		Several measures of bridge condition including good/fair/ poor condition rating and structural deficiency (SD) rating, see *Gray Notebook* 54, p. 4
Measures to be determined through federal rule-making	No	TBD	No		The *2014 Corridor Capacity 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 review of MAP-21 freight implications
Congestion Mitigation and Air Quality Program					
Measures to be determined through federal rule-making	No	TBD	No		The *2014 Corridor Capacity 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		No existing performance measure
Project Delivery					
Duration of NEPA[8] documentation preparation	No	TBD	No		Percent of projects completed early or on time, percent completed on or under budget, and duration of NEPA[8] document preparation

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

Notes: 1 Minimum threshold or benchmark to be established by the U.S. Department of Transportation, 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 WSDOT or the MPO does not attain the target within a given time frame. Penalties include minimum allocations of federal funding toward programs to progress toward the desired target. 4 TBD = To be determined. 5 NHTSA = National Highway Traffic Safety Administration. 6 State strategic highway safety plan. 7 SD = structurally deficient. 8 NEPA= National Environmental Policy Act.

Results Washington 55

Results Washington, the state's performance management system, outlines Gov. Jay Inslee's priorities. This strategic framework sets the state's vision and mission, as well as the foundational expectations for state agencies to achieve goals collaboratively. Results Washington has five focus areas: World Class Education; Prosperous Economy; Sustainable Energy and a Clean Environment; Healthy and Safe Communities; and Efficient, Effective and Accountable Government. For more information, see http://www.results.wa.gov/.

Results Washington measures by goal area		Previous period	Current period	On target[1]	Current trend	Desired trend
Measures for which WSDOT is the lead agency						
Goal 2: Prosperous Economy						
Based on current funding levels, control the percent of state and local bridges[2] in poor condition from increasing over 10% by 2017 (Annual measure: fiscal years 2013 & 2014)		9.6%	9.3%	Yes	↓	↓
Based on current funding levels, control the percent of state and local pavements[2] in poor condition from increasing over 10% by 2017 (Annual measure: calendar years 2010 & 2012)		7.0%	6.0%	Yes	↓	↓
Based on current funding levels, control the percent of ferry terminal systems that are past due for replacement from increasing over 6% by 2020; control the percent of ferry vessel systems that are past due for replacement from increasing over 10% by 2020 (Annual measure: fiscal years 2013 & 2014)	Terminals	5.4%	6.0%	Yes	↑	↓
	Vessels	5.3%	6.8%	Yes	↑	↓
Maintain percentage of transit fleet that exceeds Federal Transit Administration minimum useful life scheduled at 2012 baseline levels of X%[3]		*Measure is under development. Expected to report in December 2014*				
Increase the percentage of Washingtonians using alternative transportation commute methods to 33% by 2015 (Annual measure: calendar years 2012 & 2013)		27.8%	27.3%	No	↓	↑
Improve travel and freight reliability on strategic corridors resulting from economic growth to within 5% of 2012 baseline		*Measure is under revision. Expected to report in December 2014*				
Maximize existing capacity of strategic corridors by increasing people and/or goods moved per corridor mile from X%[3] in 2012 to X%[3] in 2015		*Measure is under development. Expected to report in December 2014*				
Reduce the number of pedestrian and bicyclist fatalities on public roadways from 84 in 2012 to zero in 2030 (Annual measure: calendar year 2012)		N/A	84	N/A	N/A	↓
Measures for which WSDOT is not the lead agency, but has an interest[4]						
The following measures are led by other state agencies and will include accomplishments from WSDOT and other entities:						
Increase state agency and educational institution utilization of state-certified small businesses in public works and other contracting and procurement by 2017 to: Minority-owned businesses, 10%; Women-owned businesses, 6%; Veteran-owned businesses, 5%		*Measure is under development. Expected to report in December 2014*				
Goal 3: Sustainable Energy and a Clean Environment						
Reduce transportation related greenhouse gas emissions from 44.9 million metric tons/year (projected 2020) to 37.5 million metric tons/year (1990) by 2020 (Annual measure: calendar years 2009 & 2010)		42.6	42.2	No	↓	↓
Reduce the average emissions of greenhouse gases for each vehicle mile traveled in Washington by 25% from 1.15 pounds in 2010 to 0.85 pounds by 2020 (Annual measure: calendar year 2010)		1.15	N/A	N/A	N/A	↓
Increase the average miles traveled per gallon of fuel for Washington's overall passenger and light duty truck fleet (private and public) from 19.2 mpg in 2010 to 23 mpg in 2020 (Annual measure: calendar years 2010 & 2011)		19.2	19.3	No	↑	↑
Increase the number of plug-in electric vehicles registered in Washington from approximately 8,000 in 2013 to 50,000 by 2020 (Annual measure: calendar years 2013 & 2014)		2,757	7,896	Yes	↑	↑
Increase miles of stream habitat opened from 350 to 450 by 2016 (Annual measure: calendar years 2012 & 2013)		350	572	Yes	↑	↑
Increase number of fish passage barriers corrected per year from 375 to 500 by 2016 (Annual measure: calendar years 2012 & 2013)		375	431	Yes	↑	↑
Goal 4: Healthy and Safe Communities						
Decrease number of traffic-related fatalities on all roads from 454 in 2011 to zero in 2030 (Annual measure: calendar years 2012 & 2013)		438	436[5]	Yes	↓	↓

Data source: WSDOT Office of Strategic Assessment and Performance Analysis, Results Washington's GovStat Program.

Notes: 1 "On target" is defined as currently meeting the target or on track to meet the target. 2 This measure only includes assets on the National Highway System. 3 These target and baseline levels are to be determined. 4 In addition to the measures listed in the table above, WSDOT contributes performance information that will be combined and reported with data from all state agencies in Goal 5: Efficient, Effective and Accountable Government. 5 Data is preliminary.

55 Results WSDOT – Setting WSDOT's Direction

The strategic plan Results WSDOT directs the agency to work with partners and communities; emphasizes multimodal integration, strategic investments and technology; and focuses on how the agency makes investments and delivers projects with limited resources. For a copy of Results WSDOT go to http://www.wsdot.wa.gov/Secretary/ResultsWSDOT.htm.

WSDOT is developing cross-program work plans to define actions and deliverables to reach agency goals. As WSDOT begins to report progress on its work plans the results will be reported in the *Gray Notebook* (GNB). WSDOT is also continuing to improve performance and accountability by implementing its 10 reforms. The reforms will put into action common-sense changes that foster efficient, effective and accountable government. See GNB 53, p. ix-x for information on WSDOT's reforms.

Results WSDOT sets agency direction ***2014 through 2017 Strategic Plan***	**Recent *Gray Notebook* articles**
Goal 1: STRATEGIC INVESTMENTS Effectively manage system assets and multimodal investments on strategic corridors to enhance economic vitality	-Capital facilities: GNB 55, pp. 2-5 -Bridges: GNB 54, pp. 4-11 -Ferries preservation: GNB 54, pp. 12-17 -Highway maintenance: GNB 52, pp. 12-13 -Pavement conditions: GNB 52, pp. 6-11
Goal 2: MODAL INTEGRATION Optimize existing system capacity through better interconnectivity of all transportation modes	-Aviation: GNB 55, pp. 6-8 -Ferries: GNB 55, pp. 11-12 -Rail: Amtrak Cascades: GNB 55, pp. 13-14 -Trucks, goods and freight: GNB 54, pp. 28-32 -Trip reduction: GNB 51, pp. 16-18
Goal 3: ENVIRONMENTAL STEWARDSHIP Promote sustainable practices to reduce greenhouse gas emissions and protect natural habitat and water quality	-Water quality: GNB 55, pp. 17-19 -Endangered Species Act documentation: GNB 55, pp. 20-21 -General permitting: GNB 54, pp. 26-27 -Air quality: GNB 53, pp. 15-16 -Wetlands preservation: GNB 53, pp. 19-21 -Environmental compliance: GNB 52, p. 25 -Fish passage barriers: GNB 52, pp. 23-24
Goal 4: ORGANIZATIONAL STRENGTH Support a culture of multi-disciplinary teams, innovation and people development through training, continuous improvement and Lean efforts	-Worker safety and health: GNB 55, p. 1 -Lean: GNB 55, p. 24 -Worker training: GNB 53, pp. 28-29
Goal 5: COMMUNITY ENGAGEMENT Strengthen partnerships to increase credibility, drive priorities and inform decision making	-Highway system safety: GNB 54, pp. 1-3 -Bicyclist & pedestrian safety: GNB 52, pp. 2-5
Goal 6: SMART TECHNOLOGY Improve information system efficiency to users and enhance service delivery by expanding the use of technology	-Commercial Vehicle Information Systems & Networks: GNB 53, pp. 22-23 -Travel information: GNB 53, p. 14 -Tolling: GNB 52, pp. 31-33

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

Notable results

- *WSDOT continues five-year downward trend in its recordable incident rate*
- *WSDOT launches a new safety strategy to further reduce recordable incidents*

WSDOT employees "all in" with new safety strategy

WSDOT recently launched a new employee safety strategy, "Safe from the start, our journey to injury free," to accelerate progress toward its goal of zero recordable incidents. Since 2009, the recordable incident rate per 100 full-time employees has decreased by more than 4 percent, while the number of recordable incidents has decreased almost 16 percent, from 403 to 339 incidents in calendar year 2013. WSDOT is committed to implementing best practices, such as regular safety inspections and a formal safety pledge, to further reduce employee injuries.

WSDOT's average incident rate[1] trends downward
2009 through 2013; Annual number of recordable incidents for every 100 full-time employees

	2009	2010	2011	2012	2013	5-year % change[2]
Agency rate excluding Ferries[3]	5.0	5.2	5.8	5.4	5.5	+9%
Ferries Division	9.2	7.7	7.5	5.5	6.1	-34%[4]
Agency-wide	**6.0**	**5.8**	**6.2**	**5.5**	**5.7**	**-4%**

Data source: WSDOT Office of Human Resources and Safety.
Notes: 1 The recordable incident rate is calculated as the number of recordable incidents multiplied by 200,000 hours and divided by the total hours worked. 2 Incident rate changes: improved = decrease (-%); worsened = increase (+%). 3 The Ferries Division is separate due to its marine work environment. 4 The 34 percent decrease since 2009 is largely due to increased involvement by the Risk Management Office, as well as employee safety trainings.

WSDOT is cultivating a safety culture defined by a proactive approach to identifying and eliminating safety hazards, and is relying on employee participation to reduce incidents. The safety strategy is designed to help employees better understand improvement efforts, communicate roles and responsibilities, and standardize safety inspections and reports, which assists WSDOT's efforts to monitor and assess its progress. Elements of the strategy include:

- Commitment to excellence, with safety and health practices based on caring and the courage to intervene
- Employee driven culture, empowering employees to address potential problems
- Basics done well, with a focus on effective management, process reliability, and regulatory compliance
- Focus on greatest potential improvements, increasing the number of safety inspections and focusing on parts of the agency with the highest recordable incident rates
- Leadership support and accountability

The strategy is currently being rolled out and should be fully introduced to all WSDOT employees by the end of 2014.

Contributors include Marlo Binkley, Kathy Dawley, Jessica Orr, Kathy Radcliff, Ernst Stahn and Zoe Zadworny

WSDOT maintenance crews conduct a traffic control tailgate meeting prior to joint safety training with the Washington State Patrol.

Agency seeks Wellness Worksite designation

WSDOT continues to promote employee health with the creation of a cross-regional Wellness Committee. The committee is working to implement Gov. Jay Inslee's expectations for a healthy workforce as well as securing WSDOT's designation as a Wellness Worksite and member of Team WorkWell (for more information see *Gray Notebook* 53, p. 1). The committee has completed regional assessments to determine the resources available to support wellness activities, and conducted an employee wellness interest survey. Survey results will be reported in future editions of the *Gray Notebook*.

55 Capital Facilities Annual Report

Notable results

- *WSDOT completed 88% of the tasks recommended in its Preventive Maintenance Plan, 17% above the goal*
- *Primary buildings in poor condition increased from 37% in 2008 to 42% in 2013*
- *WSDOT's backlog of unmet repair and replacement needs for capital facilities grew $2.5 million to $475.5 million in 2013*
- *Of WSDOT's 284 primary buildings, 68% are more than 25 years old*

WSDOT met maintenance goals, needs remain

WSDOT has completed 88 percent of the preventive maintenance work recommended through the fourth quarter (April through June 2014) of the 2013-2015 biennium in its Preventive Maintenance Plan, 17 percent above the goal of 71 percent.

WSDOT has $4.5 million budgeted for preventative maintenance in the 2013-2015 biennium. The agency prioritizes preventive maintenance activities to ensure critical systems are operational, meet code compliance requirements, and avoid emergency repairs as much as possible. WSDOT groups needs into nine priority categories. The table at bottom left describes these categories, and how work is prioritized for each of them. Under the current funding scenario, only the most critical preventive maintenance activities are planned and completed. Other preventive activities are needed to keep systems and equipment operating as efficiently as possible.

WSDOT completes 88 percent of recommended maintenance in the Preventive Maintenance Plan
July 2013 through June 2014; Work units completed compared to goal[1]

Funded work categories	Goal for units[2] completed	Actual completed	Goal met?	Work units completed
10 Life safety	95-100%	100%	Yes	1,712
9 Code compliance	95-100%	100%	Yes	841
8 Critical systems	75%	78%	Yes	2,657
7 Environmental compliance	75%	91%	Yes	642
6 Primary systems	51%	89%	Yes	1,568
Total/Average	71%	**88%**	**Yes**	**7,420**
Unfunded work categories				
5 Secondary systems			Unfunded	
4 Long-term cost effective measures			Unfunded	
3 Non-structural maintenance			Unfunded	
2 Appearance			Unfunded	

Data source: WSDOT Capital Facilities Office.
Notes: There is no category 1. See *Gray Notebook* 47, p. 10, for activities included within each work category. 1 Goals are defined in the Preventive Maintenance Plan. 2 A Work Unit is an individual service request planned and/or generated (completed or not completed) by the Computerized Maintenance Management System.

Fifty-nine percent of primary buildings in fair or better condition

WSDOT completed its biennial facilities condition assessments in January 2014. Of the agency's 284 primary buildings, 58.5 percent were in fair or better condition and 41.5 percent of the agency's primary buildings were in poor condition. This is a 2 percent increase of buildings reported in poor condition from the previous two biennia and a 5 percent increase from the 37 percent reported in 2008.

WSDOT strives to keep buildings and systems operating smoothly to support its workforce as it delivers a wide range of services to the public. When a facility is in poor condition, systems have deficiencies and may be beyond

Fifty-nine percent of WSDOT's primary buildings are in fair or better condition
As of January 2014; Primary buildings by condition rating

Data source: WSDOT Capital Facilities Office.
Note: Percentages do not add up to 100 due to rounding. Height of buildings is proportional to percentage. 1 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. When a facility is in poor condition, systems have deficiencies, may be beyond their useful life, and can have unexpected costs.

WSDOT building conditions continue to decline

their useful life, which can lead to unexpected costs. These emergency costs take up funding the agency would have been able to use for other facility needs.

For example, a boiler at WSDOT's Dayton Avenue building in Shoreline failed in 2013. To avoid having to close the building, WSDOT installed a temporary boiler and had to defer planned repair projects to address this emergency need.

WSDOT's facilities backlog nears half a billion dollars

WSDOT's strategic planning efforts for its capital facilities statewide identified a $475.5 million backlog of unmet needs for the next 10 years. This includes $197.5 million for repairs and $278 million to replace aging facilities. Of this, $211 million would address the highest priority needs, such as the Olympic Region Headquarters Replacement project, which would replace buildings that do not adequately support the region's operations and have a repair backlog of $12.3 million.

Repair and preservation for capital facilities is currently funded at $3.3 million for the 2013-2015 biennium (see table at upper right) and is generally $3–5 million per biennium ($22.6 million spanning 10 years). To meet the highest priority replacement and preservation needs in the next 10 years, WSDOT needs an ongoing additional investment of $30–40 million per biennium.

WSDOT's current 2013-2015 biennial budget for capital facilities is $50 million, up from $47.7 million at the start of the biennium due to budget adjustments that reflect changing needs. This includes $26.1 million for operations (heating/cooling, lights and maintenance) and $23.9 million for capital investments. Of this, $14.4 million is for a new traffic management center to support operations at the Alaskan Way Viaduct replacement tunnel. The capital investments component of the budget was the main source of change, increasing from $21.5 million to enable delivery of the new traffic management center in the 2015-2017 biennium, and complete code compliance and repair and preservation work.

WSDOT budgets $50 million for capital facilities needs in the 2013-2015 biennium
Dollars in millions

Category of expenditures	Funding
Operations (subcategories below)	**$26.1**
Utilities, rent, and other operational activities	*$17.8*
Preventive maintenance	*$4.5*
Corrective maintenance	*$3.8*
Capital investments (subcategories below)	**$23.9**
Construct new traffic management center near Seattle	*$14.4*
Code compliance, other mandated activities	*$6.2*
Repair and preservation	*$3.3*
Total	**$50.0**

Data source: WSDOT Capital Facilities Office.

WSDOT's backlog of unmet needs for primary buildings increases to $165.5 million
As of July 2014; Dollars in millions

BUILDING AGE	NUMBER OF BUILDINGS	BACKLOG IN MILLIONS
25 YEARS or less	90	$19.6
26 – 50 YEARS	109	$85.4
51 YEARS or more	85	$60.5
TOTAL[1]	284	$165.5

Data source: WSDOT Capital Facilities Office.
Note: 1 The primary building backlog total was revised from $163.4 million in *Gray Notebook* 51, p. 3 to reflect results from updated condition assessments finalized in July 2014. The total backlog is $197.5 million, with $32 million for non-primary buildings. The primary building count was reduced by three to account for buildings where the occupying organization is responsible for maintaining the site (Eastmont Project Engineering Offices).

Renovation backlog increases as primary facilities continue to age

More than two-thirds of WSDOT's 284 primary buildings (see definition in gray box below) are more than 25 years old. About 30 percent are more than 51 years old. In 2013, four more primary buildings moved into the 25-50 old year category and three were added to the more than 51 years old category.

WSDOT needs to invest an estimated $165.5 million (up 1.3 percent from 2012) in its primary buildings to replace some systems and upgrade others that do not meet

Primary buildings house most WSDOT employees

Primary buildings are a subset of all WSDOT-owned and leased buildings. They are typically larger than 2,000 square feet and consist of office or crew space supporting the majority of the agency's staff. They may also provide shop and storage space for vehicles, equipment and supplies. The Capital Facilities program primary buildings account for 28 percent of WSDOT-owned capital facilities by number (284 buildings) and 76 percent by square footage (2.3 million square feet).

Emergency repairs for unfunded systems use up funds

current operational needs. Issues range from roofs and heating, ventilation and air conditioning (HVAC) systems needing replacement, to insufficient crew facilities and material storage. Ongoing maintenance helps prolong the life of these systems but, just like the roof of a house, at some point they will need to be repaired or replaced. Minor projects use up repair and preservation budget quickly.

Current funding typically allows for minor repair and preservation projects that cost less than $1 million; a sample of projects scheduled for the 2013-2015 biennium is given below. The total cost of minor repair and preservation projects planned in the biennium is $3.3 million. The nine minor repair and preservation projects given in the table account for more than $2.2 million or 68 percent of the total budget.

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

Project description	Estimate
Projects addressing occupant safety and code compliance	
Northwest Region boiler and controls project	$1,301,649
Colfax septic system repairs	$96,886
Projects addressing preservation	
Vancouver shop roof replacement	$260,580
Pines maintenance facility exterior paint	$43,000
Yelm overhead door replacement	$16,700
Wenatchee Avenue boiler replacement	$148,184
Southwest Region Headquarters HVAC[1] system controls upgrade	$122,046
Projects addressing building operations	
Tumwater Materials Lab HVAC[1] and access controls	$226,766
Coulee City maintenance facility lighting and heater replacement	$13,200
Total	**$2,229,011**

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 Heating, ventilation and air conditioning (HVAC).

WSDOT using new software to optimize selection of maintenance and replacement projects

WSDOT is now using Decision Lens 3, a software that facilitates improved collaboration, transparency, and effectiveness for project prioritization. A team representing all levels in the agency from administrators to maintenance engineers is developing a facilities project selection model. WSDOT will use the software to build an optimized plan for capital facilities projects in the 2015-2017 biennium.

WSDOT has spent 76 percent of its emergency repair budget for biennium

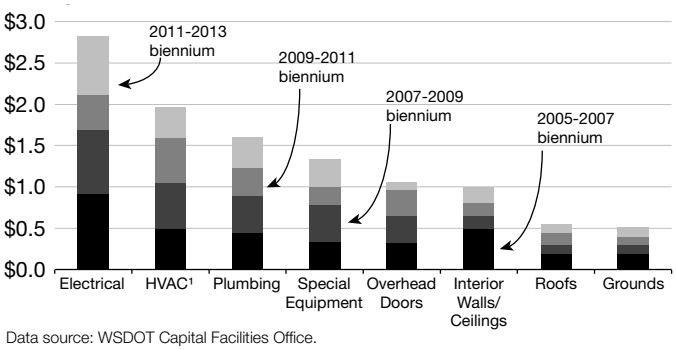
When an emergency repair is needed, like bringing in a temporary boiler at the Dayton Avenue building described earlier, the agency uses funds from its corrective maintenance budget, which is $3.8 million for this biennium. With aging facilities and constrained resources for preventive maintenance or replacement, the cost of emergency repairs has grown 23 percent from $2 million in 2010 to $2.5 million as of September 30, 2014.

WSDOT staff responded to 1,692 corrective maintenance requests in 2013 with 1,170 so far in 2014. This brings the total to more than 8,700 corrective maintenance requests since 2009. The corrective maintenance budget is typically exhausted before the end of the biennium. In the 2013-2015 biennium, WSDOT has spent $2.9 million on corrective maintenance or 76 percent of the budget.

When costs for corrective maintenance exceed the current budget, it impacts the resources available to perform planned preventive maintenance. Due to limited funds, WSDOT must at times apply a "quick fix" to a failing system, instead of replacing major components or the entire system. For example, if a facility needs a leaking water line to be replaced but it cannot be done due to funding constraints, WSDOT will patch the line until funding can be procured to replace the system.

The graph below shows the systems that have caused the most corrective maintenance costs during the last 10 years. Electrical and HVAC systems led the way, with repairs costing $2.7 million and $1.9 million, respectively. Plumbing, special equipment, and overhead doors each

Emergency repairs and unanticipated maintenance cost WSDOT more than $10.7 million over 10 years
2005-2007 biennium through 2011-2013 biennium; Total costs by system and biennium in millions of dollars



Data source: WSDOT Capital Facilities Office.
Notes: 1 HVAC = Heating, ventilation and air conditioning.

WSDOT facilities emissions decrease slightly in 2013

cost more than $1 million to repair during the same period. Many of the equipment and systems shown in the graph on p. 4 are costly to repair but are in the unfunded work categories for maintenance work shown in the table on p. 4. While these equipment and systems are necessary to keep a building functional, they are not associated with the higher priority maintenance activities of life safety, code/environmental compliance or primary systems. Maintenance needs for these systems are often addressed as unplanned emergency repairs.

WSDOT energy use for buildings and street utilities decreases 1 percent

WSDOT's greenhouse gas emissions from building use and highway utilities decreased 1 percent from 2012, to 53,572 metric tons of carbon dioxide equivalents ($MTCO_2e$) in 2013. It is difficult to pinpoint the source of a decrease this small, but it may be due to gains resulting from energy efficiency projects and staff education as part of an agency-wide effort to reduce emissions. These emissions account for about 21 percent of all WSDOT emissions. The agency's largest contributors to emissions (about 67 percent) are the WSDOT Ferries Division vessels, detailed in *Gray Notebook* 53, pp. 15-16.

All state agencies are required to reduce and report energy consumption, strategize energy conservation measures and track facility energy performance. The statewide target for all Washington state government agencies is to reduce emissions 15 percent from 2005 levels by 2020. The target is 221,954 $MTCO_2e$, for all sources managed by WSDOT including ferry vessels, fleet vehicles, building use and highway utilities.

Contributors include Steve Holloway, Yvonne Medina, Thanh Nguyen, Zak Swannack, Dennis Tate and Bradley Bobbitt

WSDOT maintains a total of 3.7 million square feet of owned and leased space

As of December 31, 2013, WSDOT managed 1,395 owned and leased buildings and structures, about 3.7 million square feet of space. These facilities are strategically located to serve operational needs and to support WSDOT's workforce of about 6,500 permanent employees as well as 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 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.

WSDOT is required to report on 3.3 million square feet of the space it manages in its Facilities and Property Oversight Plan. In addition to the condition of capital facilities reported here, WSDOT reported the condition of safety rest areas in *Gray Notebook* 53, pp. 2-6 and ferry terminals in *Gray Notebook* 54, pp. 12-17.

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

Type of facility	Square feet	%	Number	%
Maintenance facilities	1,949,141	52.1%	719	51.5%
Office space[1]	1,217,527	32.5%	82	5.9%
Ferry terminals, warehouses	234,850	6.3%	122	8.7%
Pits, quarries, stockpiles	161,104	4.3%	168	12.0%
Tunnels, bridge operations	77,081	2.1%	18	1.3%
Safety rest areas	66,901	1.8%	131	9.4%
Other/storage	20,718	0.6%	8	0.6%
Wireless communications	15,461	0.4%	147	10.5%
Total	**3,742,783**		**1,395**	

Data source: WSDOT Computer Aided Facility Management System.
Note: Primary buildings are a subset of maintenance facilities, owned office space, pits, quarries and stockpiles. See the gray box on p. 3 for more details on primary buildings. Percents may not add to 100% due to rounding. 1 Includes WSDOT-owned and leased space.

55 Aviation Annual Report

Notable results

- *WSDOT surpassed its 98 percent goal for registration compliance with 9,185 Washington-based aircraft for 2014*
- *WSDOT used $400,700 in state funds to leverage $7.8 million in federal dollars to fund 39 airport projects in fiscal year 2015*
- *WSDOT's Airport Investment Study identified $3.6 billion in airport needs for the next 20 years*
- *Three state-managed airports served as crucial emergency operations bases during the 2014 summer wildfires*

WSDOT exceeds its annual aircraft registration goals

In an effort to continuously improve the quality, effectiveness and efficiency of the aviation transportation system through a better aircraft registration process, WSDOT set a 2014 goal to either register or obtain registration exemption requests from at least 98 percent of the Federal Aviation Association's (FAA) 9,112 aircraft owners for aircraft based in Washington as of January 1, 2014. WSDOT exceeded the target by registering 6,542 and obtaining 2,643 registration exemptions, totaling 9,185 aircraft in October 2014. The total in October (9,185) surpasses the original FAA number of aircraft in January (9,112) due to the fluctuation of people buying and selling aircraft throughout the year.

WSDOT uses the FAA's database to identify and contact aircraft owners about the state registration requirement. The department mails two reminder letters and, if possible, attempts to contact aircraft owners via email and telephone before issuing late penalties.

Washington state law requires that most airworthy general aviation aircraft be registered annually with WSDOT in January. Aircraft registration fees directly support WSDOT's airport preservation, maintenance and improvement programs.

WSDOT leverages state funds to secure federal airport aid for projects

WSDOT leveraged $400,700 in state money to secure $7.8 million from federal sources, supporting 39 projects at 25 airports in fiscal year (FY) 2015. WSDOT's leveraged dollars are part of $1.8 million in total WSDOT funds for the Airport Aid Grant Program. The state and federal funds, combined with $1.1 million in local matching contributions, amount to $10.7 million in total dollars for FY2015 (July 2014 through June 2015).

The Lake Wenatchee State Airport is used as a staging area in 2014 for the Chiwaukum complex fires (smoke in the background).

In FY2015, 41 percent ($4.4 million) of the $10.7 million in federal, state and local aid investment dollars is slated for projects that improve airport safety. Pavement projects account for 36 percent ($3.9 million) of the combined grant dollars, and planning, security and other improvements account for the remaining 23 percent ($2.4 million).

For more information about WSDOT's Airport Aid Grant Program, see http://www.wsdot.wa.gov/aviation/Grants.

Combined aid dollars total $10.7 million for airports
Fiscal year 2015 Airport Aid Grant funding; Dollars in millions

Funding source	Amount
Federal funds	$7.8
WSDOT funds	$1.8
Local (matching) funds[1]	$1.1
Total awarded	**$10.7**

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

WSDOT plans state aviation system improvements

The capital improvement program increases consistency, efficiency

In its fourth year, the Statewide Capital Improvement Program (SCIP) continues to increase predictability, consistency and efficiency among airport authorities, the FAA, and WSDOT when prioritizing airport projects at the state's 134 public-use airports. WSDOT uses the improvement program to prioritize a five-year list of projects, which helps the state and FAA better target limited resources. The program also assists with the awarding of FAA and state grants.

As a result of the program improvement efforts, WSDOT partnered with the FAA to change the submission time frame to increase internal efficiencies by decreasing review time. From September 1 to October 31, 2014, WSDOT analyzed more than 600 projects totaling approximately $500 million worth of airport projects. WSDOT hosted four regional workshops in September 2014 to better inform airport authorities about SCIP.

WSDOT study seeks solutions for $3.6 billion airport funding gap

The first phase of the Airport Investment Study found that the state's 134 public-use airports will need $3.6 billion in projects over the next 20 years. WSDOT's Airport Aid Program provides an average of $1.1 million in state airport grants per year. Funding during the 20-year study period is forecasted to average $1.4 million per year. WSDOT estimates an average of $12 million per year is needed to meet the state's portion of the overall $3.6 billion in project needs.

WSDOT began its second phase of the Airport Investment Study during summer 2014 to assess solutions to meet Washington's aviation system needs. Known as the "Solutions Phase," this part of the study will address the funding gaps identified in the first phase. The study is expected to conclude in April 2015.

The Statewide Capital Improvement Program assisted with the Airport Investment Study by:

- Helping develop and document a clear and defendable overall total capital need for the short-term (zero to five years) and long-term (six to 20 years) planning periods.
- Determining the state's total public-use airport capital investment needs, which is critical to understanding how well current funding levels support the state's airports.

Washington Aviation System Plan update starts in winter 2014

It is the state's role to guide development of statewide strategies to ensure adequate aviation capacity exists at all public-use airports to accommodate current demand and predicted growth. The last system plan was completed in 2009 as part of the Long-Term Air Transportation Study.

An update to the Washington Aviation System Plan is scheduled to start in December 2014. WSDOT is spearheading the planning effort to help the state strategically maintain and improve its aviation system. The update focuses on several specific goals:

- Capturing changes at airports and determining future development needs
- Identifying and planning for emerging technologies and trends that support aeronautics and the aviation system
- Examining current and future commercial passenger service and air cargo needs
- Addressing changes in general aviation
- Establishing safety standards and performance metrics
- Updating performance objectives
- Seeking input from aviation stakeholders and the public

The system plan update will place an increased emphasis on air cargo and how it impacts Washington's aviation system and economy. WSDOT will also examine how multimodal transportation improves passenger and freight activity at airports.

Learn more about the Washington State Aviation System Plan at http://www.wsdot.wa.gov/aviation/Planning.

WSDOT now involved with inspections to update Airport Master Record

WSDOT has initiated the process to become involved with inspecting an airport's physical and operational characteristics at 123 of the 134 public-use airports (excludes primary commercial airports like Seattle-Tacoma International Airport) in order to update the Airport Master Record, filed with the FAA. WSDOT conducted 50 percent of the airport inspections and consultant

WSDOT-mangaged airports support firefighting efforts

contractors performed the remaining airport inspections in 2014; WSDOT will expand the program to accomplish 100 percent of inspections over the next two years.

The benefits of WSDOT's direct involvement in airport inspections include cost savings, an enhanced understanding of Washington's overall aviation system condition, and increased collaboration with the airport managers.

Five of 16 WSDOT-managed airports to receive new airport layout plans

Woodland, Lake Wenatchee, Bandera, Easton and Sullivan Lake state airports are slated to receive new airport layout plans during the next two years. This is the first step toward making five-, 10- and 20-year plans for improvement projects at these airports.

To develop the airport layout plans, WSDOT will inventory each airport, describe needs, and recommend site specific capital projects that would bring the airports into compliance with federal standards and state performance objectives.

WSDOT chose the five airports, in coordination with the Washington Army National Guard, to study and improve facilities for emergency management staging purposes. The state-managed airports support a variety of emergency services including firefighting and medical evacuation.

Inspections involve verifying the number of aircraft, available facilities and services, runway data and determining if any safety issues need to be addressed.

Contributors include Tristan Atkins, Rob Hodgman, Eric Johnson, John MacArthur, Nisha Marvel, Paul Wolf and Dan Davis

Firefighting teams use Washington airports extensively to battle summer wildfires

Airports took center stage during the state's 2014 summer wildfire season, with several of them serving as emergency operations bases. In particular, three WSDOT-managed airports – Lake Wentachee, Methow Valley and Tieton – dedicated resources and facilities in the effort to fight the fires.

WSDOT temporarily closed the Lake Wenatchee (Leavenworth) and Methow Valley (Winthrop) state airports to the public for safety reasons, designating them as staging areas for emergency-response helicopters and personnel. The Chiwaukum complex fires in Leavenworth and the Carlton complex fires in Methow Valley kept fire crews busy and the airports closed for approximately one month each. The Tieton State Airport in Yakima also served as a temporary staging area for minor firefighting helicopter activity.

Gov. Jay Inslee flew into Methow to observe the damage. Governor Inslee witnessed firsthand how critical helicopter staging at the airport was in saving more than 40 homes adjacent to the airport. Methow, Lake Wenatchee and Tieton are three of the 16 airports WSDOT manages

The Methow Valley State Airport functions as a helibase in 2014 for the Carlton complex fires.

across the state. In addition to supporting emergency services, the airports provide recreational opportunities, access to remote communities and benefits to local economies. Besides the WSDOT-managed airports, other public use airports were used to stage emergency firefighting response included Moses Lake, Pangborn Memorial, Ellensburg, Deer Park, Cle Elum and Twisp Municipal.

2014 *Corridor Capacity Report* Executive Summary

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Notable results

- ***Statewide congestion increased 1.5% between 2011 and 2013 reflecting Washington's improving economy***
- ***Delay on state highways cost drivers and businesses $858 million in 2013***
- ***In 2013, state ferries transported 22.5 million riders on more than 162,000 sailings with 95.6% on time performance***
- ***In 2013, about 102,400 commuters used express-transit daily***

Congestion rising, still below pre-recession levels

Driving in Washington is returning to what it was before the recession began in 2008. The statewide congestion indicator – vehicle hours of delay – increased 1.5 percent between 2011 and 2013, mirroring increases of economic indicators. What can be done to reduce the congestion that affects key commute corridors, resulting in lost time for drivers and costing the state as a whole, hundreds of millions of dollars?

The 2014 *Corridor Capacity Report* (CCR) was created to help inform WSDOT policy makers, planners and engineers as they examine the multimodal capacity opportunities for state highways. This report supports WSDOT's Practical Solutions and performance-based planning initiatives. It also apprises WSDOT, the Legislature, stakeholders, educational and research institutions, the media, and the public about highway system conditions and how they can work together to reduce congestion.

Partnerships are key for analyzing multimodal system performance

The 2014 *Corridor Capacity Report* reflects WSDOT's partnerships with transit providers, other state agencies and regional planning organizations to implement a multimodal systems and performance analysis framework. It not only tracks congestion trends, but also details usable capacity on state highways, mass transit and ferries. The report also considers congestion's impacts on air quality and people's wallets, providing a more complete picture of how traffic affects the state as a whole.

WSDOT and University of Washington experts analyzed data that span two years (2011 and 2013) to identify state highway system trends that cannot be evaluated by using a one-year comparison. The key capacity indicators include:

Statewide:

- WSDOT found 2009 was the least congested year statewide since the most recent recession began in 2008.
- The statewide congestion indicator – vehicle hours of delay – increased 1.5 percent between 2011 and 2013, mirroring increases of economic indicators (including taxable retail sales, and employment levels).
- In 2013, average per person delay remained steady at about 4 hours and 42 minutes, roughly the same amount of time spent in congestion in 2011.
- Delay on state highways cost drivers and businesses $858 million in 2013 compared to $845 million in 2011 (about $125 per Washingtonian, both in 2011 and 2013).
- In 2013, 1,026 (5.5 percent) of the 18,662 state highway lane miles experienced congestion, compared to 1,007 highway lane miles in 2011. More than half of the congested lanes were on urban commute corridors (Interstate 5, I-90, I-205, I-405, State Route 167 and SR 520).
- In 2013, vehicle miles traveled (VMT) on all public roadways statewide increased 0.4 percent from 2011, hitting an all-time high of 57.211 billion.
- In 2013, per person (per capita) VMT was the second lowest recorded since 1988. Per person VMT was 8,313 miles annually on all public roads and 4,598 on state highways.

The 2014 Corridor Capacity Report was developed in partnership with

Change in person hours delayed in traffic vary by region

Regional:

- Per person hours of delay on highways in the Puget Sound area remained at 8 hours and 23 minutes in both 2011 and 2013.
- Per person hours of delay on Vancouver area highways decreased from 23 minutes in 2011 to 17 minutes in 2013, partly due to a successful capacity expansion project on SR 14 in Camas and Washougal.
- Per person hours of delay on Spokane area highways remained at eight minutes in both 2011 and 2013.
- Per person hours of delay on Tri-Cities area highways decreased from 35 minutes in 2011 to 12 minutes in 2013 due to lower employment levels at Hanford.

Commute corridors:

The *2014 Corridor Capacity Report* analyzed 84 urban commute corridors on state highways that span 720 miles. As some of this information was not in the *2011 Congestion Report*, comparisons to data from that year are not possible for all measures.

- In 2013, there were 165 miles of routinely congested segments, resulting in 63 hours of congestion daily.
- In 2013, there were 1,506 transit vehicles in service during peak periods; 570 had more than 90 percent utilization daily.
- About 102,400 commuters used express-transit service daily in 2013, almost twice the capacity of Seattle's Safeco Field. This eliminated 1.03 million miles of solo-vehicle travel and 873,000 pounds of greenhouse gas emissions daily.
- Ferry vessels made more than 162,000 sailings with an on-time performance of 95.6% and an annual ridership of 22.5 million in 2013.

Changes to the 2014 report

Based on the positive feedback received for last year's *2013 Corridor Capacity Report*, WSDOT continues to enhance the multimodal aspects of system performance evaluation from a corridor perspective. For this year's edition, multimodal capacity is evaluated along with travel time analyses for all major urban areas statewide where data is available.

This year's publication has three parts:

- The *2014 Corridor Capacity Report* compares congestion conditions recorded in 2013 with those in 2011.

The 2014 Corridor Capacity Report, Appendix *and* Handbook for Corridor Capacity Evaluation.

- A data *Appendix* covers detailed performance measures in the form of tables, additional graphs, and information on all commute routes.
- A detailed methodology report (first edition of the *Handbook for Corridor Capacity Evaluation*) is a tool for implementing system performance measurement as part of the agency's accountability initiatives and the federal Moving Ahead for Progress in the 21st Century (MAP-21) requirements.

Contributors include Daniela Bremmer and Sreenath Gangula

WSDOT expands multimodal measures

WSDOT's 2014 *Corridor Capacity Report* is the agency's 13th annual statewide analysis of multimodal system performance. This report further "fine tunes" the multimodal and environmental measures introduced in the *2013 Corridor Capacity Report*, expanding them statewide to all urban areas where data is available.

This report provides average annual transit statistics for each commute, which include ridership and percent of seats occupied, along with the number of peak transit trips with more than 90 percent utilization. Transit information also notes vehicle trips removed from the single occupant vehicle lanes and greenhouse gas (GHG) emissions avoided by transit ridership along the urban commute corridors. It also reports GHG emissions (measured in pounds of carbon dioxide equivalents emitted) as well as congestion's cost per person during peak periods.

WSDOT Ferries Division Quarterly Update

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Notable results

- *Ferries exceeded the reliability goal of 99% for 42,749 scheduled trips for the first quarter of fiscal year 2015*
- *Ferries farebox revenues were $57.1 million, up 4.7% ($2.7 million) compared to the same quarter in fiscal year 2014*

Ferries ridership swells above seven million mark

WSDOT Ferries Division (Ferries) ridership was about 7.2 million during the first quarter of fiscal year (FY) 2015 (July through September 2014). This is roughly equivalent to the population of Washington state. Ridership was about 181,000 (2.6 percent) more than projected in June 2014, and 202,100 more (2.7 percent) than the same quarter in FY2014.

While the number of riders brought in record farebox revenues, it also put a strain on the ferry system's on time performance for the quarter as more vehicles and riders take longer to load and unload.

Ferries miss more trips during quarter, still meet reliability goal

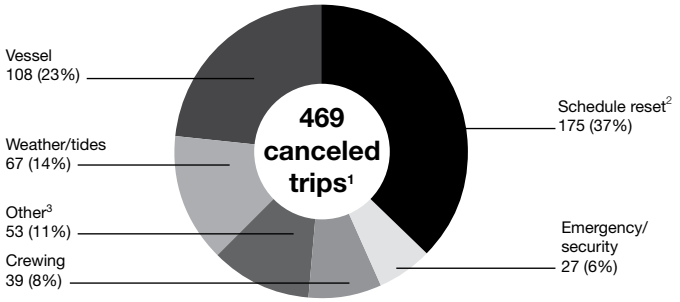
Mechanical issues with several vessels was the primary reason why Ferries had 143 more net missed trips in the first quarter of FY2015 than during the same period in FY2014, 312 compared to 169.

Ferries canceled 469 trips and was able to replace 157 of them, which resulted in 295 net missed trips for the quarter. There were 42,749 regularly scheduled trips during the fifth quarter of FY2014. Ferries made 99.3 percent (42,437) of them, exceeding its annual reliability performance goal of 99 percent (see table on p. 12).

Schedule resets, which occur when vessels cannot maintain their sailing schedule and cause subsequent sailings to be late, accounted for 175 cancellations. Many of these cancellations were made up with replacement trips.

The Motor/Vessel (M/V) *Tacoma* losing power near Bainbridge Island, and a temporary maintenance need on the M/V *Evergreen State* assigned to the Fauntleroy – Vashon – Southworth route accounted for 63 of the 108 vessel mechanical cancellations during the quarter. The remaining 45 of these cancellations were spread across eight different vessels with no single event accounting for more than nine cancellations.

Schedule resets top reason for canceled ferries trips
First quarter (July through September), fiscal year 2015



Data source: WSDOT Ferries Division.
Notes: 1 Ferries replaced 157 of the 469 canceled trips. 2 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. 3 "Other" includes events like disabled vehicles, issues at terminals, environmental reasons or non-ferries related incidents that can impact operations.

All 67 weather- and tide-related cancellations for the quarter were on the Port Townsend – Coupeville route. The route typically has cancellations due to these factors. Crewing issues accounted for 39 cancellations in the quarter, 21 fewer than the same quarter last year. The number of cancellations due to crewing issues has fluctuated since the U.S. Coast Guard started requiring more staff with higher levels of training on multiple vessel classes.

Ferries on time performance decreases for the quarter

On time performance was 2.3 percentage points lower than the same quarter in FY2014, decreasing from 92.8 percent to 90.5 percent for the first quarter of FY2015. As a result of this drop, Ferries did not meet its annual on time performance goal of 95 percent for its scheduled trips this quarter.

On time performance decreased on five of nine routes. On average, 44 out of 465 daily trips did not leave the terminal within 10 minutes of the scheduled departure time

Farebox revenues highest yet for the summer quarter

in the first quarter of FY2015. This is an increase from the 33 daily trips that were late during this period last year.

The Mukilteo – Clinton route had a 5.8 percentage point decrease in on time performance over the same quarter last year. This was the ferry system's largest decrease and is linked to the arrival of the M/V *Tokitae* on the route last quarter. With new vessels it takes time for the crews to streamline the loading and unloading process, the M/V *Tokitae* also provided 24 more vehicle spaces than the vessel it replaced.

As the quarter progressed, terminal and vessel staff refined loading and unloading techniques for the *Tokitae,* which resulted in steadily improving on time performance for this quarter — increasing from 87.9 percent in July, and 92.4 percent in August, and to 97.8 percent in September 2014.

The Fauntleroy – Vashon – Southworth had a similarly large decrease of 5.6 percentage points compared to July through September 2014, and was directly related to the use of the M/V *Evergreen State* during the final two months of the quarter. The *Evergreen State* was scheduled for retirement, but was called back into service as part of a series of boat moves associated with the M/V *Tacoma* being removed from service due to mechanical problems. Being a slower vessel, the *Evergreen State* had problems keeping the schedule on the Fauntleroy – Vashon – Southworth route during peak travel times.

Farebox revenues increase

Ferries farebox revenues continued their upward trend, coming in at $57.1 million for the first quarter of fiscal year (FY) 2015, the highest yet for the summer quarter (July through September). Farebox revenues were $2.7 million (4.7 percent) more than the first quarter of FY2014 — and $1.5 million (2.7 percent) more than the September 2014 projections, which are based on the state's economic and population growth forecasts.

Rider complaints increase due to drop in on time performance

In total, Ferries received 580 complaints and 62 compliments from the 7.2 million riders served during the first quarter of FY2015. This is a 20 percent increase from the 464 complaints and 47 compliments from the same quarter in FY2014. The largest increase of complaints was in the general service category, which increased from 47 to 81 compared to the same quarter in FY2014. This reflects the lower on time performance and vessel problems that occurred this quarter.

Complaints about crewing decreased 90 percent, from 30 to three, when compared the first quarter in FY2014. This significant drop is related to the reduction in crewing based cancellations this quarter compared to the same quarter in FY2014.

Contributors include Matt Hanbey, Kynan Patterson and Joe Irwin

Ferries' on time performance misses goal, trip reliability exceeds goal for the first quarter of fiscal year 2015
First quarter (July through September), FY2014 and FY2015; Annual on time goal = 95 percent; Annual reliability goal = 99 percent

	On time performance				Trip reliability			
Route	**FY2014**	**FY2015**	**Status**	**Trend**	**FY2014**	**FY2015**	**Status**	**Trend**
San Juan Domestic	85.4%	86.2%	+0.8%	↑	99.9%	99.8%	-0.1%	↓
Anacortes/Friday Harbor – Sidney, B.C.	88.4%	85.2%	-3.2%	↓	99.4%	97.1%	-2.3%	↓
Edmonds – Kingston	98.9%	96.5%	-2.4%	↓	100.0%	99.4%	-0.6%	↓
Fauntleroy – Vashon – Southworth	90.9%	85.3%	-5.6%	↓	99.4%	99.0%	-0.4%	↓
Port Townsend – Coupeville	91.5%	93.9%	+2.4%	↑	97.3%	97.4%	+0.1%	↑
Mukilteo – Clinton	98.5%	92.7%	-5.8%	↓	99.8%	99.4%	-0.4%	↓
Point Defiance – Tahlequah	98.5%	99.3%	+0.8%	↑	99.5%	100.0%	+0.5%	↑
Seattle – Bainbridge Island	91.0%	88.1%	-2.9%	↓	100.0%	99.5%	-0.5%	↓
Seattle – Bremerton	93.5%	96.7%	+3.2%	↑	99.9%	99.9%	0.0%	↔
Total	**92.8%**	**90.5%**	**-2.3%**	↓	**99.6%**	**99.3%**	**-0.3%**	↓

Data source: WSDOT Ferries Division.
Note: FY = fiscal year. A trip is considered delayed when a vessel leaves the terminal more than 10 minutes later than the scheduled departure time.

Rail: Amtrak Cascades Quarterly Update

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Notable results

- *Third quarter ticket revenues increased 14.7% while operating costs increased 27.3% due to a cost shift from federal to state responsibility*
- *Annual on time performance increased to 76.9% in 2013, up from 72.6% in 2012*

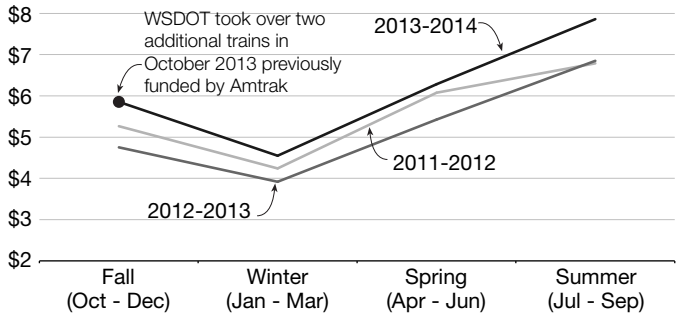
Amtrak operating costs, ticket revenues increase

The Passenger Rail Investment and Improvement Act (PRIIA) took effect in October 2013 and shifted the funding for all Amtrak Cascades services to states. Operating costs rose 27.3 percent and ticket revenue for Washington-sponsored passenger trains increased 14.7 percent as compared to the same quarter (July through September) last year. This increase is due to WSDOT taking over the two trains formerly funded by Amtrak. This means WSDOT receives the additional ticket revenue and the associated increase in the operating costs. The cost shift of two trains is reflected in the increase in ticket revenue and operating costs. (See *Gray Notebook* 52, p. 21, for more details on PRIIA).

Ticket revenue fluctuates by season. The quarter from July through September is historically the highest because more people travel in the summer. Starting in the fall quarter (October through December) of 2013, ticket revenue and operating costs increased compared to the previous years.

Ticket revenue supports nearly 60 percent of Amtrak Cascades' operating costs. The remainder of the operating costs for the trains is jointly funded by WSDOT and the Oregon Department of Transportation. WSDOT funds three daily round trips between Seattle and Portland, one daily round trip between Portland and Vancouver, British Columbia, and one daily round trip between Seattle and Vancouver, British Columbia; Oregon funds two daily trips between Eugene and Portland.

Ticket revenues highest during summer months
Fall 2011 through Summer 2014; For Washington-sponsored trains only; Ticket revenues in millions of dollars



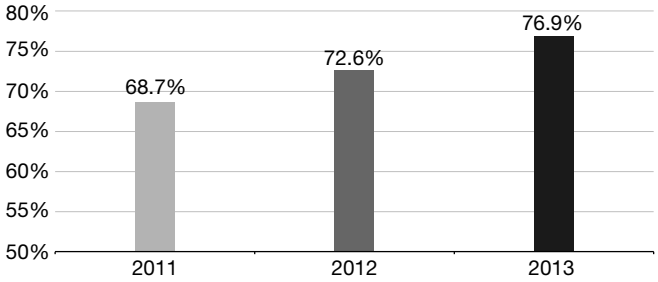
Data source: WSDOT Rail Division.

On time performance improves to 76.9 percent in 2013

State-sponsored trains' on time performance has continued to improve during the last two years. In 2013, on time performance was 76.9 percent, an improvement from 72.6 percent in 2012 and 68.7 percent in 2011. State-sponsored on time performance improved slightly in 2013 primarily due to additional time added to train schedules to accommodate WSDOT's railroad construction program.

On time performance measures how often the trains arrive at their final station on time. On time is within 10 minutes for trains operating on the Vancouver, British Columbia to Seattle segment and the Seattle to Portland segment; or 15 minutes for trains operating on the Vancouver, British Columbia to Portland segment.

On time performance improves for past two years
Calendar years 2011 through 2013; For Washington-sponsored trains[1] only



Data source: WSDOT Rail Division.
Note: A train is considered on time if it is within 10 minutes of trains operating the Vancouver, British Columbia to Seattle segment and Seattle to Portland segment; or 15 minutes of scheduled arrival times for trains operating the Vancouver, British Columbia to Portland segment.
1 There were eight Washington-sponsored trains in 2011 and 2012, and 10 trains in 2013.

King Street Station track improvements move forward

WSDOT gains approval for King Street Station track design

WSDOT took a major step forward on the Seattle King Street Station Track Improvement project by beginning the preliminary engineering phase in summer 2014. The Federal Railroad Administration (FRA) approved the conceptual design in June 2013.

The King Street Station Track Improvement project has several phases, all designed to provide more flexibility for trains switching between tracks as they approach and depart the station. The improvements will reduce congestion and delays for train passengers. New tracks and switches will be added, existing tracks will be extended, and a new platform and canopy will be added to the station.

The busy station and existing services will remain open during construction. In addition to Amtrak Cascades, Coast Starlight and Empire Builder customers, the King Street Station serves Sound Transit and BNSF trains.

Construction is tentatively scheduled to begin in summer 2015, and scheduled for completion by the end of 2016.

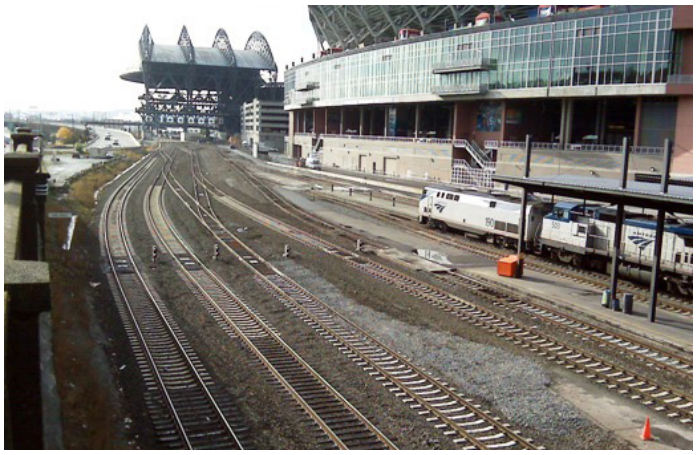
King Street Station restoration project receiving national acclaim, award

The restoration of Seattle's historic King Street Station was nationally honored in November 2014 in Savannah, Georgia. The restoration received a National Preservation Honor Award, one of the Richard H. Driehaus National Preservation Awards.

The restoration made the century-old station more structurally sound, while modernizing utilities and infrastructure. It also returned the lobby to its former grandeur, restoring plaster ceilings, marble columns and tile work at the Pacific Northwest's busiest train station.

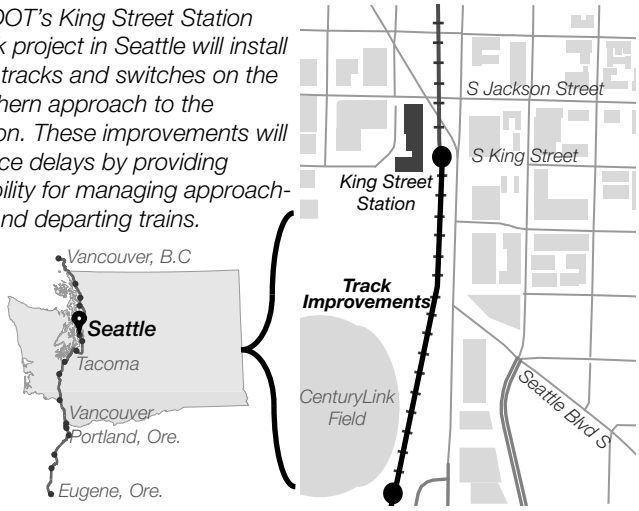
WSDOT is listed as a co-recipient along with the City of Seattle and other funding partners for the King Street Station restoration project, which is part of WSDOT's federally funded high-speed rail improvement program.

Contributors include Jason Beloso, Chris Dunster, Teresa Graham, Barbara LaBoe, Gayla Reese Walsh and Alison Wallingford



Fourth Avenue looking south shows the existing two mainline tracks, and connecting tracks at King Street Station.

WSDOT's King Street Station Track project in Seattle will install new tracks and switches on the southern approach to the station. These improvements will reduce delays by providing flexibility for managing approaching and departing trains.



Interactive online map shows progress of the 20 federally funded rail projects

As of September 30, 2014, WSDOT had nine passenger rail projects in the construction phase and eight in the design phase with three projects complete. Work includes purchasing new locomotives, adding tracks to handle increased train traffic, and upgrading tracks, signals and stations. More than 96 percent ($774.7 million) in federal funding for these projects is from the American Recovery and Reinvestment Act of 2009.

When the program is completed in 2017, passengers will benefit from the addition of two daily round trips between Seattle and Portland with an expected travel time reduction of 10 minutes. In addition, WSDOT is committed to an average of 88 percent on time performance for trains traveling from Portland to Seattle and Seattle to Vancouver, B.C. To view the most recent map of the federally funded rail projects visit http://bit.ly/GNBrailmap.

Incident Response Quarterly Update 55

Notable results

- *WSDOT teams helped clear 13,423 incidents this quarter, providing an estimated $20.1 million in economic benefit*
- *Teams cleared incident scenes in an average of 12 minutes and six seconds, reducing traffic delay and risk of secondary crashes*

WSDOT teams provide help at 13,423 incidents

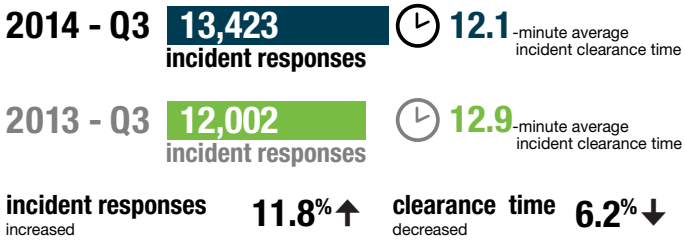
WSDOT's Incident Response (IR) teams responded to 13,423 incidents during the third quarter of 2014 (July through September). This averages to a WSDOT team assisting at an incident scene roughly every 10 minutes during the quarter. The agency responded to 1,421 more incidents — about 11.8 percent — during the third quarter of 2014 than in the same quarter of 2013. Incident Response teams cleared incidents in an average of 12 minutes and six seconds. This is 48 seconds faster than the average incident clearance time for the same quarter last year.

WSDOT's goal is to clear incidents as quickly and safely as possible, as this means less incident-induced delay and less chance for secondary collisions to occur. Secondary collisions are incidents that occur in traffic resulting from another incident and may be caused by distracted driving, unexpected slowdowns, or debris in the roadway. The IR teams help alert drivers about incidents and clear the roadway to reduce the likelihood of new incidents. A table summarizing the IR program's performance and benefits for the quarter is on p. 16.

WSDOT's assistance at incident scenes provided an estimated $20.1 million in economic benefit by reducing the impacts of incidents on drivers. These benefits are provided in two ways. First, by clearing incidents quickly, WSDOT reduces the time and fuel motorists waste in incident-induced traffic delay. About $11.3 million of IR's economic benefit for the quarter is from reduced traffic delay. Second, by proactively managing traffic at incident scenes, WSDOT helps prevent secondary collisions. About $8.8 million of IR's economic benefit is from preventing an estimated 2,553 secondary collisions and related delay. Based on WSDOT's budget for IR (see box at lower left), every $1 spent on the program this quarter provided drivers roughly $18 in economic benefit.

$ 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 (approximately 80 trained IR drivers) and 62 dedicated vehicles. Teams patrol 493 centerline miles of state highway on major corridors during peak traffic hours.

WSDOT Incident Response clearance times faster than last year while number of responses are up
Third quarter (July through September) 2013 and 2014



Data source: Washington Incident Tracking System.

Notes: Data above only account for incidents to which an IR unit responded. IR data reported for the current quarter (Q3 2014) are considered preliminary. In the previous quarter (Q2 2014), WSDOT responded to 13,153 incidents, clearing them in an average of 11.4 minutes. These numbers have been confirmed and are now finalized.

WSDOT provides economic benefit by reducing incident-related delay

Traffic delay on state highways cost motorists $45.3 million in wasted time and fuel during the third quarter of 2014. This is about $2.7 million more than in the same quarter of 2013. Without WSDOT's assistance, the cost would have been $65.4 million ($20.1 million in prevented delay and secondary incidents plus $45.3 million in actual delay).

For more information on how WSDOT calculates these costs and all IR performance metrics see *WSDOT's Handbook for Corridor Capacity Evaluation*, pp. 40-42.

Number of six-plus-hour incidents increases

WSDOT's Incident Response prevents $20.1 million in delay and secondary collisions
July through September 2014; Incidents by duration; Time in minutes; Costs and benefits in millions of dollars

Incident duration	Number of incidents[1]	Percent blocking[2]	Average *incident* clearance time[3]	Average *roadway* clearance time[4]	Cost of incident-induced delay	Economic benefits from IR program[5]
Less than 15 minutes	10,460	16.8%	4.9	4.1	$13.0	$6.0
Between 15 and 90 minutes	2,830	48.4%	30.2	25.2	$23.7	$10.5
Over 90 minutes	133	85.0%	194.4	181.6	$8.6	$3.6
Total	**13,423**	**24.1%**	**12.1**	**19.5**	**$45.3**	**$20.1**
Percent change from third quarter 2013	↑ **11.8%**	↑ **1.1%**	↓ **6.2%**	↑ **13.4%**	↑ **6.3%**	↑ **5.2%**

Data source: Washington Incident Tracking System.
Notes: 1 Teams were unable to locate 656 of the 13,423 incidents. These incidents are included in the total count because an IR team attempted to respond but are not factored into other performance 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 an IR team's first awareness of an incident (when a call comes in or the incident is spotted by a patrolling IR unit) and when the last responder has left the scene. 4 Roadway clearance time is the time between the IR team's first awareness of an incident and when all lanes are available for traffic flow. This metric applies to blocking incidents. 5 Estimated economic benefits include benefits from delay reduction and prevented secondary collisions. See *WSDOT's Handbook for Corridor Capacity Evaluation*, pp. 40-42 for WSDOT's benefits calculation methods from reduced delay and prevented secondary incidents. Numbers may not add up due to rounding.

Highways saw longer delays with fewer incidents lasting over-90-minutes

WSDOT incident response units provided assistance at the scenes of 133 incidents that lasted more than 90 minutes during the third quarter of 2014. This is seven fewer incidents — roughly 5 percent — than the same quarter in 2013. While these over-90-minute incidents accounted for less than 1 percent of all incidents, they created 19.1 percent of incident-related costs.

Eleven of the over-90-minute incidents took six hours or more to clear (referred to as extraordinary incidents). This is three more extraordinary incidents than the same quarter in 2013. The 11 extraordinary incidents took an average of nine hours and five minutes to clear. Of these, five involved commercial vehicles such as semitrucks and eight involved collisions. Together, the 11 extraordinary incidents accounted for 4.6 percent of all incident-induced delay costs for the quarter.

Altogether, WSDOT crews cleared over-90-minute incidents in about three hours and 14 minutes on average. This is 19 minutes slower than the same quarter in 2013. The higher number of extraordinary incidents is likely contributing to this increase in clearance times. Excluding the 11 extraordinary incidents, WSDOT's average clearance time for over-90-minute incidents would have been two hours and 43 minutes.

Performance data reported in this article is from WSDOT's Washington Incident Tracking System, which tracks incidents to which a WSDOT IR team responded.

Contributors include Paula Connelley, Vince Fairhurst, Ida van Schalkwyk and Bradley Bobbitt

A WSDOT Incident Response unit uses its arrow board at an incident scene, alerting drivers of the need to merge. This technique protects emergency responders and drivers as well as helps manage traffic flow.

Customer feedback:

WSDOT IR teams give comment cards to drivers they assist. Below are sample comments from people who received help during the third quarter of 2014:

- The service is perfect and completely saved the day. Excellent use of our tax dollars. Please keep it up!
- Kim was on the scene before I had finished my call with AAA. I am so glad my tax dollars go toward real life superheroes!
- Randy was kind and worked very fast! I am so thankful! He even helped me merge back into traffic when finished.
- Jan was extremely helpful and helped me get on my way within 10 minutes of having my tire blowout. Thanks.

Notable results

- *WSDOT completed the required mapping of stormwater outfalls on 1,290 miles of highways in 2014*
- *WSDOT inspected 98% of its 1,804 stormwater management facilities*
- *WSDOT built 189 stormwater treatment and flow control facilities to help mitigate adverse water quality effects from stormwater runoff*
- *90% of construction site stormwater samples met the water clarity benchmark criteria*

WSDOT completes outfall mapping process on time

In March 2014, WSDOT completed a six-year process to map stormwater outfalls along 1,290 miles of highways as required by WSDOT's municipal stormwater permit. The original number of 1,660 miles reported in *Gray Notebook* 51 included 370 miles within cities, which are responsible for mapping their own outfalls. The permit is designed to reduce the discharge of pollutants from stormwater.

WSDOT maps its stormwater facilities to aid in documenting their location, determining the level of maintenance needed and how retrofit projects are prioritized. For more information on WSDOT's stormwater permits refer to http://www.wsdot.wa.gov/Environment/WaterQuality/NPDES.htm.

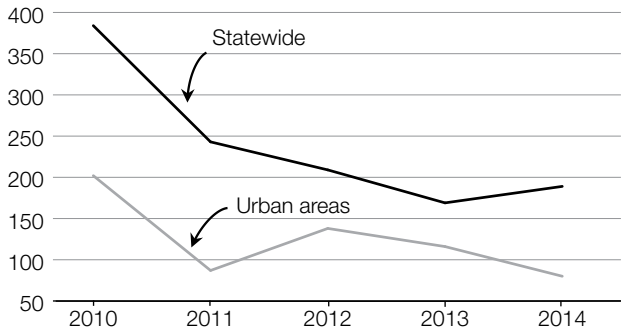
With outfall mapping complete, WSDOT has shifted efforts to map its entire stormwater system, including the catch basins, ditches, and pipes leading to the outfalls.

New stormwater management facilities protect water quality

From July 2013 through June 2014, WSDOT built 189 stormwater treatment and flow control facilities statewide to help mitigate any adverse effects its stormwater runoff might be causing. Of the 189 facilities, 80 were built in urban areas of the state that are covered by the municipal stormwater permit. WSDOT constructed these stormwater management facilities as a part of transportation projects.

For example, when a project adds new lanes to a highway it might also add a detention pond to prevent flooding and downstream erosion. The number of new WSDOT stormwater management facilities is directly affected by the number of WSDOT transportation construction projects.

WSDOT's five-year trend for stormwater treatment facilities constructed continues to decline
Fiscal years (July through June) 2010-2014; Statewide and urban areas covered by stormwater permits



Data source: WSDOT Environmental Services Office.

WSDOT also builds stand-alone stormwater retrofit projects to manage stormwater runoff from existing highways and facilities. WSDOT works with state and federal agencies to develop stormwater retrofit prioritization processes that target specific sections of highways where retrofits can provide the greatest water quality benefit relative to its cost. WSDOT has completed the prioritization process for the Puget Sound Basin, which includes all of Whatcom, Skagit, Snohomish, King, Island, and Kitsap counties and parts of Pierce, Thurston, Lewis, Mason, Jefferson, and Clallam counties. WSDOT estimated the cost of 15 stand-alone stormwater retrofit projects totalling $29 million for this area.

WSDOT is expecting to estimate another 11 more stand-alone stormwater retrofit projects in the Puget Sound Basin and is prioritizing additional projects statewide as staff and funding become available.

WSDOT meets stormwater facilities inspection goal

WSDOT completed inspections on 98 percent of its 1,804 stormwater management facilities in fiscal year (FY) 2014 (July 2013 through June 2014).

WSDOT working hard to protect water quality

Inspection process results in identifying needed corrections

These inspections help WSDOT identify deficiencies that might limit the facilities' effectiveness. The municipal stormwater permit requires WSDOT to inspect 95 percent of stormwater management facilities annually. WSDOT is required to correct typical deficiencies, which may include weed control and debris removal, within one year.

WSDOT must correct non-typical deficiencies costing less than $25,000 within two years. Non-typical deficiencies can be corrected by major vegetation removal (photos left), liner replacement, and structural repairs.

Before and after maintenance work is performed by crews to remove debris and vegetation on State Route 161 and 200th Street in Puyallup.

Repairs costing more than $25,000 must be prioritized and corrected as funding becomes available. Non-typical repairs costing more than $25,000 represent a small portion of WSDOT's maintenance needs. Of WSDOT's 1,804 stormwater management facilities, only 14 need major structural repairs while eight others need access roads built in order to properly maintain the stormwater facilities.

Between July 2013 and June 2014, WSDOT performed maintenance on 470 stormwater management facilities to correct typical (clogged drains) and non-typical (photos left) deficiencies costing less than $25,000. WSDOT is currently identifying the unique design specifications and maintenance standards for 367 Best Management Practices (BMPs) features. Once they have this information, crews will perform the required maintenance and repairs. Maintenance of these stormwater management facilities must be completed by December 31, 2016, to keep WSDOT in compliance with the permit.

Construction stormwater samples improve in FY2014

From July 2013 through June 2014, 90 percent of construction site stormwater discharge samples met the turbidity benchmark, (a measure of water clarity) compared to 86 percent during the same time period in FY2013.

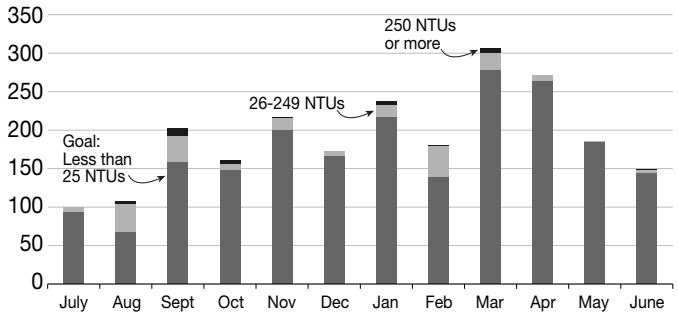
The benchmark for turbidity is 25 Nephelometric Turbidity Units (NTUs are units used to measure turbidity). If stormwater discharges are 25 NTUs or less, the on-site BMPs are considered to be functioning well. If stormwater discharge samples have a turbidity value higher than the benchmark of 25 NTUs, the on-site BMPs must be adapted, enhanced, or replaced (a process called BMP adaptive management) to lower the turbidity level. Stormwater discharges 250 NTUs or higher are considered high turbidity discharge events and have the potential to violate water quality standards. When a discharge of 250 NTUs or higher occurs, the Department of Ecology must be notified within 24 hours. These high turbidity discharge events require immediate corrective action to lower turbidity or stop the discharge.

Stormwater quality improves on construction sites

According to construction site stormwater discharge data collected from July 2013 through June 2014, only 1 percent (30) of the 2,289 discharge samples exceeded 250 NTUs. About 9 percent (194) of discharge samples were from 25.1 through 249.9 NTUs. The majority of the samples, 90 percent (2,065), were below the 25 NTUs turbidity benchmark value. These turbidity values show a steady improvement relative to past years, with 78 percent meeting the benchmark values during the same time period in FY2012 and 86 percent in FY2013.

WSDOT's monthly compliance with construction permit turbidity benchmarks improves

Fiscal year 2014 (July 2013 through June 2014); Number of samples taken per month; Measurements in Nephelometric Turbidity Units (NTUs)

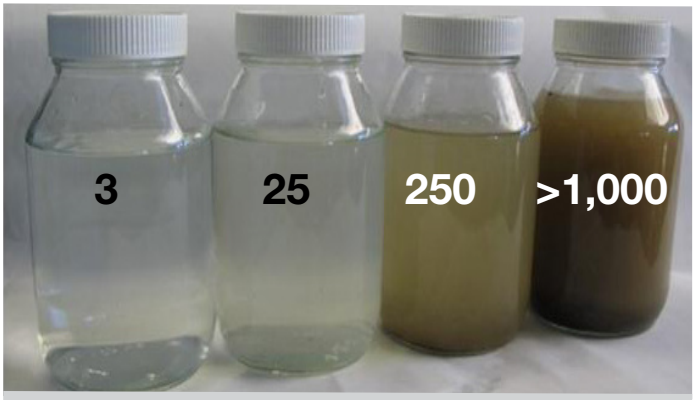


Data source: WSDOT Environmental Services Office.

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

There are numerous factors that may have contributed to the improved numbers this year, including different precipitation patterns throughout the year, fewer construction projects underway, different soil types and ground cover for each project, and WSDOT staff managing erosion and sediment control proactively.

Contributors include: Dick Gersib, Mark Maurer, Gregor Myhr, Sheena Pietzold, Elsa Pond, Cory Simon and Joanne Wearley



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

What water quality elements are measured under the municipal stormwater permit?

WSDOT's Construction Stormwater General Permit (CSWGP) requires WSDOT to monitor the quality of stormwater discharges from construction sites with more than an acre of disturbed soil. Under this permit, construction site stormwater discharge samples must be tested for turbidity. The CSWGP defines discharge water quality benchmark values to indicate whether on-site Best Management Practices are effectively protecting surface waters. WSDOT tests construction site stormwater discharges weekly to ensure construction sites do not negatively impact surface water quality.

As part of a pilot project, WSDOT transferred the CSWGP to contractors for several projects. The contractors tested the construction site stormwater discharges to ensure they adequately protected lakes, streams, and other bodies of water.

Findings from the pilot effort suggest transferring the CSWGP to contractors provides multiple benefits including reduced compliance costs, increased responsiveness and accountability of the contractors, and the use of more sustainable practices, like preserving vegetation, which directly benefit water quality.

55 Endangered Species Act Documentation Annual Report

Notable results

- ***WSDOT reviewed 131 upcoming projects for compliance with the Endangered Species Act in 2013; 49 required federal consultation***
- ***WSDOT completed 24 consultations using streamlined processes, saving the agency an estimated 3,170 hours of staff time***

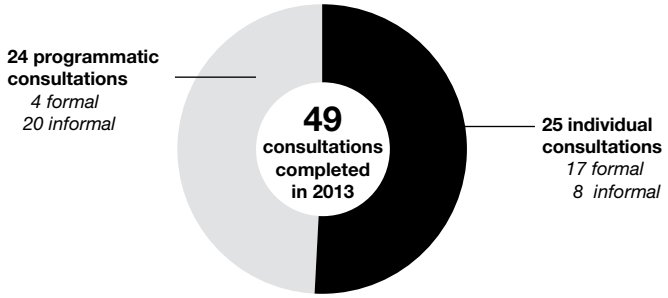
Streamlined project reviews save time and money

WSDOT reviewed 131 upcoming projects for compliance with the Endangered Species Act (ESA) in 2013. Of these, 49 of the projects required consultation with one or more federal agencies due to potential impacts to ESA-listed species. WSDOT was able to complete 24 of these consultations using a streamlined process called programmatic consultation, twice as many as in 2012.

Programmatic processes allow WSDOT to complete ESA consultations for projects that meet criteria agreed upon by WSDOT and the reviewing federal agency with a standardized form. Each project reviewed using a programmatic consultation allows WSDOT to avoid an estimated 132 hours of staff time. In 2013, WSDOT saved an estimated 3,170 staff hours which is roughly equivalent to 1.5 full-time equivalent positions for the year.

WSDOT is required to review its projects for potential impacts to ESA-listed species. Projects which may affect ESA-listed species or habitat designated critical to their recovery go on for a formal or informal consultation with one or more federal agencies. Formal consultations are reviews conducted for projects likely to have adverse impacts on listed species. Informal consultations are held for projects that are not likely to have an adverse impact.

Out of 49 projects, 24 met criteria to use streamlined process for Endangered Species Act consultations
2013; Consultations by programmatic versus individual process



Data source: WSDOT Environmental Services Office.

Consultations help federal agencies ensure WSDOT complies with ESA requirements to prevent impacts to listed species. Either consultation type can be completed using a programmatic process if the project meets criteria agreed upon by WSDOT and the reviewing agency.

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

Update to programmatic process yields results for 2013 reviews

In 2013, WSDOT updated its programmatic consultation agreement with the National Oceanic and Atmospheric Administration's Marine Fisheries Service (NOAA Fisheries) to cover more of the agency's routine activities, such as fixing fish passage barriers (see *Gray Notebook* 51, p. 23, for more information).

WSDOT completed 10 of its consultations with NOAA Fisheries — about 45 percent — using the updated programmatic process. WSDOT completed 14 of its consultations with the U.S. Fish and Wildlife Service— roughly 56 percent — using its existing programmatic process with that agency.

Programmatic consultations take as few as five days to complete

In 2013, WSDOT completed formal and informal programmatic consultations in an average of 21 and 28 days, respectively. The agency completed its programmatic consultations with the U.S. Fish and Wildlife Service in an average of 45 days and five days with NOAA Fisheries.

New consultation requirements for Marbled Murrelets and Spotted Owls are not covered under the existing agreement with U.S. Fish and Wildlife. This resulted in longer programmatic consultation timelines for these species. However, WSDOT is working with U.S. Fish and Wildlife to update their programmatic consultation agreement.

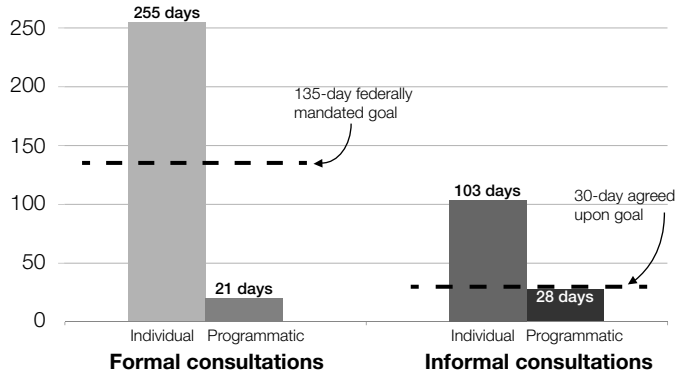
WSDOT expects updated agreement to cut review time

Individual consultation timeline averages are longer than goals

WSDOT and its federal partners completed individual formal consultations in an average of 255 days and individual informal consultations in an average of 103 days in 2013. This is a 13 percent increase for formal consultations and a 50 percent increase for informal consultations from 2012, respectively.

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.

Programmatic consultations cut Endangered Species Act review times by up to 92 percent
2013; Average consultation duration in days for individual and programmatic[1] formal and informal consultations



Data source: WSDOT Environmental Services Office.
Notes: WSDOT completed four formal consultations using a programmatic process and 17 individually. The agency completed 20 informal consultations using a programmatic process and eight individually. 1 Programmatic consultations use a standardized process to review projects meeting criteria agreed to by federal agencies and WSDOT.

The average timeline for completing individual consultations has increased at both U.S. Fish and Wildlife and NOAA Fisheries. This is partially because WSDOT has been able to conduct consultations for a greater number of less complex projects using programmatic processes. More complex projects still need to complete individual consultations. For example, the Belfair Bypass project on State Route 3 in Kitsap County required a 160-day consultation to analyze the potential for new development induced by the project to effect ESA-listed species.

The U.S. Fish and Wildlife Service recently listed the Oregon Spotted Frog under the Endangered Species Act. This aquatic frog is found in several western Washington counties such as Thurston County. WSDOT is working with the services to incorporate new rules to protect the frog into its programmatic consultation process.

Other factors such as the availability of federal staff and their workload also influence the number of days needed to complete a consultation.

WSDOT updating federal wildlife service streamlining agreement

WSDOT's current programmatic consultation process with U.S. Fish and Wildlife is nearing the end of its five-year cycle. Due to the age of the current agreement, newer rules are not covered in its language. WSDOT has been working with the federal services to update their programmatic consultation processes to cover the newly-listed Oregon Spotted Frog as well as new Marbled Murrelet and Northern Spotted Owl thresholds. WSDOT is currently two-thirds of the way through the consultation process and is waiting for U.S. Fish and Wildlife to finish its review. The agency anticipates receiving approval in January 2015, and implementing the new programmatic consultation process by March 2015.

WSDOT will no longer be reporting on ESA documentation in a stand-alone article. The agency is shifting its priorities with ESA to focus on using programmatic processes and enabling delivery of fish passage barrier corrections. Information from this article will be incorporated into other environmental stewardship articles where relevant.

Contributors include Marion Carey and Bradley Bobbitt

55 Construction Contracts Annual Report

Notable results

- ***WSDOT completed 149 contracts valued at $542.4 million in FY2014, 8.9% less than the WSDOT engineer's estimate***
- ***WSDOT awarded 70 of 112 construction contracts below the engineer's estimate in FY2014***

WSDOT completes 149 construction contracts

WSDOT completed 149 construction contracts valued at $542.4 million during fiscal year (FY) 2014 (July 2013 through June 2014). Final costs for these contracts were 8.9 percent ($52.8 million) less than the WSDOT engineer's estimate of $595.2 million. When contract costs come in lower than WSDOT's estimate, excess funds may be re-allocated to support other projects on a prioritized list.

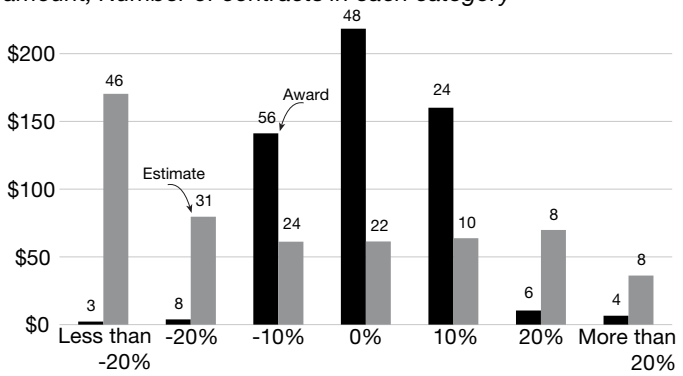
The 149 competitively bid projects, which do not include design-build (refer to p. 23 for definition), were completed for 5.2 percent ($26.9 million) more than the total award amount of $515.5 million for FY2014.

WSDOT completes $542.4 million in contracts
Fiscal years 2013 and 2014; Dollars in millions

	FY2013	FY2014
Number of contracts completed	120	149
Total award amount	$565.2	$515.5
Total final contract cost	$577.9	$542.4
Percent final contract cost exceeded award amount	2.2%	5.2%
Total engineer's estimate	$644.5	$595.2
Percent final cost below engineer's estimate	-10.3%	-8.9%

Data source: WSDOT Construction Office.

WSDOT completes construction contracts for 8.9 percent less than original engineer's estimates
Fiscal year 2014; Dollars in millions; Total final cost of contract by percent above or below WSDOT's estimate and award amount; Number of contracts in each category



Data source: WSDOT Construction Office.
Note: 0% indicates that the final cost was within 10% of estimate.

How WSDOT tracks cost estimation accuracy

Engineering estimate

WSDOT engineers calculate contract cost estimates during the design phase. This estimate is based on current and forecasted material prices and takes into account the rate of inflation and recent bids on similar contracts. The engineer's estimate is WSDOT's forecasted cost for the work to be done by the contractor at the time it is advertised. WSDOT compares this estimate to the bids it receives to ensure they are reasonable. For more information on how WSDOT engineers estimate construction costs, scan the QR code above to see *Gray Notebook* 48, p. 65.

Award amount

The award amount is equal to the lowest responsive bid. WSDOT compares the engineering estimate to the award amount as an indicator of the agency's estimating accuracy as well as market conditions. For each contract awarded, WSDOT tracks the difference between the original cost estimate made by the engineers and the amount of the contractor bid. WSDOT's goal is to have the lowest bid received on each contract be no greater than the engineer's estimate.

Final contract cost

For every completed contract, WSDOT tracks the final cost – the amount paid to the contractor at the end of construction – compared to the engineer's estimate and the award amount. WSDOT's goal is for the final cost to be no more than 10 percent above the award amount, a common benchmark in the construction industry today.

Although WSDOT prepares detailed plans by which to estimate costs, changes may occur during construction. Final contract costs can be affected by unforeseen conditions, such as adding new items to the contract or changing the quantities of materials used. These changes increase the cost of completing a construction contract as planned.

Construction contracts $32.9 million less than estimates

Of the 149 contracts completed, 115 (77.2 percent) met WSDOT's contract goal of being less than 10 percent above the award amount. The remaining 34 contracts came in higher than the goal due to factors such as change orders, construction materials needs and the bid amount. For more information on why contracts may come in higher than the goal, see *Gray Notebook* 50, p. 29.

Almost two-thirds of WSDOT contracts below estimates

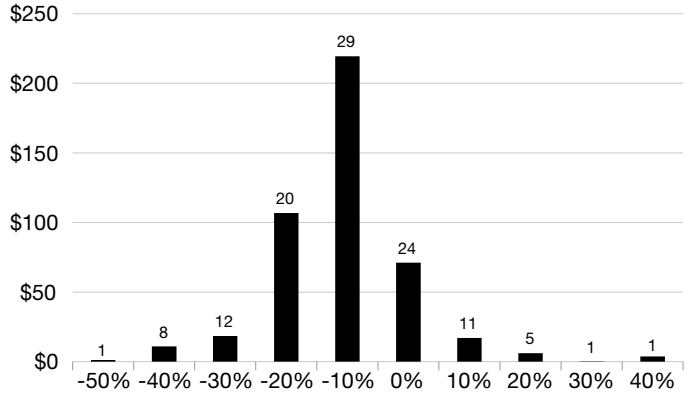
Of the 112 WSDOT-awarded highway construction contracts in fiscal year 2014, bids for 70 (62.5 percent) of them were less than the WSDOT engineer's estimate. Overall, these construction contracts were awarded for $455.1 million, approximately $32.9 million (or 6.8 percent) less than the original engineer's estimate of $488 million. This reduction in contract costs may indicate that the construction market is becoming more competitive.

WSDOT awards $455.1 million in contracts
Fiscal years 2012 to 2014; Dollars in millions

	FY2012	FY2013	FY2014
Number of contracts awarded	125	131	112
Total engineer's estimate amount	$674.1	$347.2	$488.0
Total award amount	$594.8	$309.9	$455.1
Amount total is below estimate	-$79.4	-$37.2	-$32.9
Percent total is below estimate	-11.8%	-10.7%	-6.8%
Number of contracts awarded below estimate	78	95	70
Percent of contracts awarded below estimate	62.4%	72.5%	62.5%

Data source: WSDOT Construction Office.

The majority of bids are less than WSDOT's estimates
Fiscal year 2014; Dollars in millions; Total awarded contract amounts by percent above or below engineer's estimate; Number of contracts in each category



Data source: WSDOT Construction Office.
Note: 0% indicates that the awarded cost was within 10% of the estimate.

The FY2014 awards also show a 3.9 percent reduction from FY2013, when 10.7 percent of WSDOT's awards were below the engineer's estimate (see chart below left). This is an indication that WSDOT engineer's estimates were closer to actual contract awards. The total value of contracts awarded in FY2014 increased 47 percent from $309.9 million in FY2013 to $455.1 million in FY2014.

WSDOT awards four design-build contracts for $58 million in FY2014

WSDOT completed the Interstate 405 (I-405), I-5 to State Route (SR) 169 Stage 2 Widening and SR 515 Phase 1 Design-Build project in FY2014. WSDOT completed the contract for $84.6 million, about 25 percent less than the engineer's estimate of $110 million. The project reduced congestion by constructing a new interchange and on- and off-ramps at SR 515, reconstructing the Benson Road Bridge over I-405 and adding lanes on I-405.

WSDOT also awarded contracts for four design-build projects with a combined value of $58.4 million. In total, the four contracts came in 11 percent below the engineer's estimate of $65.6 million.

Contributors include Dacia Stricklett, Joe Irwin and Zoe Zadworny

Design-build process explained

Design-build is a method of project delivery in which WSDOT hires a contractor that provides both design and construction services to complete a project. These projects are not included in the measures presented earlier because they follow a different planning, estimating and delivery process. Design-build projects may also incorporate incentives to encourage contractors to surpass technical and administrative requirements. Incentives can be awarded for construction components such as environmental compliance, pavement smoothness and closure reduction.

Using this method of contracting, WSDOT and the design-builder agree on a fixed contract price. As a result, cost increases during construction are more easily managed. However, the initial fixed price includes payment to the contractor for performing services provided by WSDOT in traditional contracting. Law requires WSDOT to analyze projects before determining whether to deliver a project traditionally or use the design-build method. This method is typically used for larger, more complex schedule-driven projects that need the ability to provide for innovation.

55 Lean Process Improvement Quarterly Update

Notable results

- ***WSDOT's Ferries Division saves 284 hours of staff time and 30 boxes of paper annually by no longer printing specific accounting reports***
- ***Transportation data requests for local program grant applications are now delivered 80% quicker***

Lean projects continue

WSDOT has completed 13 of the 36 Lean projects initiated since August 2012 (see *Gray Notebook* 54, pp. 33-34) to improve the effectiveness of processes and better meet customer needs. WSDOT is using Lean thinking and tools to improve the way the agency does business.

In September 2014, WSDOT launched the Lean Process Improvement Office to provide training, support and materials to offices across the agency. The goal is to train a number of practitioners so they can facilitate improvements throughout the agency.

Lean projects improve WSDOT's effectiveness and help meet customer needs
July through September 2014; Progress reported on select projects

Project title, program	Changes to process	Measuring success	As a result
Supply crash data customers with complete, accurate and timely data *Transportation Data and GIS Office (Multimodal Planning Division)*	■ Created a grant specific data request template and data report layout in coordination with WSDOT's Local Programs Office and the Transportation Improvement Board.	■ 120 requests for grant data completed in five months (this is a new form so there is no "before" data to show improvement). ■ 50% less time to extract the data and format the report. ■ Time elapsed from data request to delivery was cut from two weeks to two days (80% reduction).	Local government grant applicants (customers) will receive crash data more quickly and with fewer errors, resulting in more satisfied customers, while reducing the staff effort needed to generate data reports.
Improve Ferries Division purchasing and accounting *Ferries Division*	■ Reduced duplicative document scanning. ■ Stopped daily printing of various accounting system reports.	■ Saved one hour per week by reducing duplicative scanning ■ Saved 284 hours and 30 boxes of paper per year from printed reports.	Accounting staff do not have to print, collate and store these reports, which remain available electronically. This also eliminates the need for physical storage space.
COMPLETED: Improve claims recovery process *Risk Management Office*	■ Eliminated batch processing of claims. ■ Eliminated internal approvals for setting up payment plans and sending bills to collections by creating checklists with criteria and steps to complete when considering these actions.	■ On average, made recoveries in six fewer days, 13% faster.[1] ■ Created a work standard to improve a workflow process.	Each customer will be treated consistently throughout the process of reimbursing WSDOT for damages to WSDOT property or vehicles. WSDOT will recover as much of the damage costs as possible in a timely manner.
NEW: Improve Toll Division referral/ escalation process *Toll Division*	■ Standardized the process for tracking and responding to escalated correspondence. ■ Developed a customer response guideline document to streamline and aid in responses.	■ Days to respond to an escalated customer inquiry decreased 16%, from 13.8 to 11.6 days.	Customers receive more consistent and timely correspondence, with the goal of a single response resolution.

Data source: WSDOT Toll, Ferries, Multimodal Planning, and Enterprise Risk Management divisions; Lean Process Improvement Office.
Notes: Results of the 20 Lean projects not reported here will be reported when they are available. 1 There were 7 percent more claims per month between March and September 2014 compared to the prior 14 months.

Contributors include Jean Baker, Jean Denslow, Mark Finch, Theresa Greco, Nadine Jobe, Streator Johnson, Catherine Larson, John Milton and Anna St. Martin

Notable results

- *The cost to complete nine Pre-existing Funds projects advertised this quarter is $8.5 million*
- *WSDOT has completed 16 Nickel and TPA projects worth $345.1 million this biennium*

Six Nickel, TPA projects operationally complete

WSDOT listed five Nickel and Transportation Partnership Account (TPA) projects as operationally complete in the fifth quarter of the 2013-2015 biennium (July through September 2014). WSDOT is also reporting on another project that was operationally complete in an earlier quarter but was not reported then (see p. 35 for details). Operationally complete projects are open to motorists, but not all work (landscaping, lane striping, etc.) is finished.

Sixteen projects are operationally complete so far in the 2013-2015 biennium (July 2013 through September 2014; the biennium goes through June 2015). Of these projects, 69 percent were on time and 81 percent were on budget. Combined, the projects' current cost at completion is about $345.1 million, which is about 7 percent less than the baseline estimate of $371.8 million.

Goal is 90%

361 projects complete **87** % on time **91** % on budget

Data source: WSDOT Capital Program Development and Management.
Notes: Projects complete are cumulative since July 2003. A project is "on time" if it is operationally complete within the quarter planned in the last approved schedule, and "on budget" if the costs are within 5 percent of the last approved budget. The goal for both measures is 90 percent or higher.

WSDOT completes 361 Nickel and TPA projects
July 2003 through September 2014; Dollars in millions

Project status	Number of projects	Baseline cost at completion
Projects completed in earlier biennia that are *not* included in the current transportation budget	131	$732.9
Projects completed in earlier biennia that *are* included in the current transportation budget	230	$5,250.1
Completed projects subtotal:	**361**	**$5,983.0**
Projects included in the current transportation budget that are not yet complete	60	$10,309.3
Total:	**421**	**$16,292.4**

Data source: WSDOT Capital Program Development and Management.
Note: Numbers may not add exactly due to rounding.

A total of 361 of 421 Nickel and TPA projects have been completed since July 2003, with 87 percent on time and 91 percent on budget. The 361 projects' current cost at completion is $5.8 billion, about $100 million (1.7 percent) less than the $5.9 billion baseline cost at completion originally projected by WSDOT.

Nickel, TPA funding still falling short of original projections

Fuel tax collections show that the revenue forecasts from 2003 and 2005, which were used to determine the project lists, did not anticipate the economic recession in projecting future growth in fuel tax revenues. The 2003 Nickel and 2005 TPA gas taxes that fund projects are based on a fixed tax rate per gallon and do not change with the price of fuel. As a result, reduced gasoline and diesel consumption leads to reduced tax revenue.

The 2003 Nickel transportation package was originally as a 10-year plan, with revenues forecasted to total $1.9 billion from 2003 through 2013. Fuel tax revenues collected during this period came in short of the original March 2003 projections. Four Nickel projects have been deferred indefinitely while other projects will continue past the original 10-year period. Funding from the 2005 TPA package has also come in short of original March 2005 projections. The original projection for the TPA account was $4.9 billion over a 16-year period from 2005-2021. The current projections through 2021 are estimated to be $3.9 billion, a $1 billion reduction (20.6 percent) from the original 2005 projection. This revenue shortfall has caused nine TPA projects to be deferred indefinitely.

Nickel and TPA gas tax revenues are used to pay the debt on the bonds sold to finance the planned projects. Once all the bonds are sold, all revenues collected will be used to pay the debt. In the legislatively enacted 2014 supplemental budget, Nickel bonds are projected to be sold through the 2015-2017 biennium and TPA bonds are expected to be sold through 2023.

Contributors include Mike Ellis, Mitzi Frick, Penny Haeger, Heather Jones, Claudia Lindahl, Charles Rosalin, Theresa Scott, Dean Walker and Joe Irwin

Agency Workforce

WSDOT construction workforce numbers decrease

As of September 30, 2014 compared to September 30, 2013

Highway construction program workforce

7 % **less** than the 2,258 employed one year ago

Data sources: WSDOT Capital Program Development and Management.
Notes: Highway construction full-time equivalent (FTE) counts are not just permanent full-time positions, but also include temporary hires and part-time workers. The FTE count is based on the number of hours worked. The declining number of FTEs shown above follows the Legislature's direction for WSDOT to reduce the size of its highway construction workforce to a level of 2,000 FTEs by June 30, 2015.

Current Legislative Evaluation and Accountability Program (LEAP)

WSDOT's Nickel and TPA to-do list down to 60 projects

Highway construction performance summary shows about $5.8 billion in projects completed
As of September 30, 2014; Dollars in millions

Combined Nickel and TPA programs			**Number of projects**	**Value of program**
Subtotal of completed projects			**361**	**$5,983.0**
Projects completed in earlier bienniums that are not included in the current transportation budget			*131*	*$732.9*
Projects completed that are included in the current transportation budget			*230*	*$5,250.1*
Projects included in the current transportation budget but not yet complete			60	$10,309.3
Total number of projects[1] in improvement and preservation budget			**421**	**$16,292.4**
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	16	230		361
Percent completed early or on time	69%	85%		87%
Percent completed under or on budget	81%	93%		91%
Baseline cost at completion	$371.8	$5,250.1		$5,983.0
Current cost at completion	$345.1	$5,149.4		$5,880.0
Percent of total program over or under budget	7.2% under	1.9% under		1.7% under
Advertisement record: Results of projects entering into the construction phase or under construction are detailed on pp. 29-30.				**Combined Nickel & TPA**
Total current number of projects in construction phase as of September 30, 2014				19
Percent advertised early or on time				79%
Total number of projects advertised for construction in 2013-2015 biennium to date (July 1, 2013 through September 30, 2014)				8
Percent advertised early or on time				50%
Projects to be advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on p. 30.				**Combined Nickel & TPA**
Total projects being advertised for construction bids October 1, 2014 through March 31, 2015				3
Percent on-target for advertisement on schedule or early				67%
Budget status for the 2013-2015 biennium:				**WSDOT biennial budget**
Budget amount for 2013-2015 biennium				$2,922.6
Actual expenditures in 2013-2015 biennium to date (July 1, 2013 through September 30, 2014)				$1,366.2
Total 2003 Transportation Funding Package (Nickel) expenditure				*$139.8*
Total 2005 Transportation Partnership Account (TPA) expenditure				*$577.5*
Total Pre-existing Funds (PEF) expenditures[3]				*$648.9*

Data source: WSDOT Capital Program Development and Management.
Notes: Numbers have been rounded. 1 The project total has been updated to show "unbundled" projects which may have been previously reported in programmatic construction groupings (such as Roadside Safety Improvements or Bridges Seismic Retrofit). See *Gray Notebook* 38, p. 55, for more details. 2 Cumulative projects completed from July 1, 2003 to September 30, 2014. 3 For full details of the Pre-existing Funds program, see pp. 36-37.

Ferries projects move into construction phase

WSDOT has completed 18 rail projects and 21 WSDOT Ferries Division projects since 2003. Nickel and Transportation Partnership Account (TPA) funding supported approximately $103.3 million in rail projects and another $403.4 million in ferries projects to date. Four Nickel- and TPA-funded rail projects, with awards amounting to $158 million, are under construction or entering the construction phase. Two Nickel Ferries projects, with awards amounting to $232.4 million, are also currently under construction or entering the construction phase.

WSDOT finishes 18 rail construction projects since 2003
As of September 30, 2014; Dollars in millions

	Nickel (2003)	TPA (2005)	Combined Nickel & TPA
Schedule, scope, and budget summary: Completed projects			
Cumulative to date (July 1, 2003 through September 30, 2014)	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%
Baseline cost at completion	$62.4	$41.0	$103.3
Current cost at completion	$62.4	$41.0	$103.3
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, 2014)			
Total advertised	2	2	4
Percent advertised early or on time	100%	100%	100%
Total award amounts to date	$130.9	$27.1	$158.0

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). Numbers may not total 100 due to rounding.

WSDOT finishes 21 Ferries' construction projects since 2003
As of September 30, 2014; Dollars in millions

	Nickel (2003)	TPA (2005)	Combined Nickel & TPA
Schedule, scope, and budget summary: Completed projects[1]			
Cumulative to date (July 1, 2003 through September 30, 2014)	11	10	21
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%
Baseline cost at completion	$59.9	$343.5	$403.4
Current cost at completion	$59.9	$343.5	$403.4
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, 2014)	2	0	2
Percent advertised early or on time[2]	100%	100%	100%
Total award amounts to date	$232.4	$0	$232.4

Data source: WSDOT Capital Program Development and Management.
Notes: 1 Ferries completed projects record includes one 144-car vessel, the Motor/Vessel (M/V) *Tokitae*, which started service in June 2014, and three 64-car vessels, the 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 Budget Identification Number 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). Numbers may not total 100 due to rounding.

WSDOT finishes 16 projects in current biennium

Biennial summary: WSDOT using more Transportation Partnership Account funds for capital projects

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

Cumulative to date	Fund type	On time advertised	On time completed	Within scope	Baseline estimated cost	Current estimated cost	On-budget completed
Current quarter reporting on capital project delivery							
2013-2015 biennium summary[1] This information is updated quarterly throughout the biennium.	3 Nickel 13 TPA	11 on time 5 late	11 on time 5 late	16	$371.8	$345.1	13 on budget 3 over budget
Earlier reporting on capital project delivery							
2011-2013 biennium summary See *Gray Notebook* 50, p. 31.	5 Nickel 36[1] TPA	31[1] on time 10 late	32[1] on time 9 late	41[1]	$1,485.5[1]	$1,459.6[1]	37[1] on budget 4 over budget
2009-2011 biennium summary[2] See *Gray Notebook* 42, p. 45.	16 Nickel 74 TPA	73 on time 17 late	80 on time 10 late	90	$1,641.6	$1,597.0	85 on budget 5 over budget
2007-2009 biennium summary See *Gray Notebook* 34, p. 58.	42 Nickel 69 TPA	91 on time 20 late	96 on time 15 late	111	$1,685.7	$1,685.2	102 on budget 9 over budget
2005-2007 biennium summary See *Gray Notebook* 26, p. 5.	52 Nickel 24 TPA	71 on time 5 late	68 on time 8 late	76	$673.9	$668.8	67 on budget 9 over budget
2003-2005 biennium summary See *Gray Notebook* 19, p. 5.	27 Nickel	25 on time 2 late	27 on time 0 late	27	$124.6	$124.4	25 on budget 2 over budget

Data source: WSDOT Capital Program Development and Management.

Notes: 1 The number of projects has been updated since *Gray Notebook* 51 to reflect the addition of a completed project that was reported after the biennium. 2 In *Gray Notebooks* published before the 2009-2011 biennium, 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. Dollars amounts are rounded up. Prior *Gray Notebooks* may be accessed at http://www.wsdot.wa.gov/Accountability/GrayNotebook/gnb_archives.htm.

Completed projects

Five projects completed during the fifth quarter of the 2013-2015 biennium

July through September 2014, Nickel and Transportation Partnership Account (TPA) projects planned to be advertised; Dollars in millions

Project description	Fund type	Advertised on time	Completed on time[1]	Baseline estimated cost	Current estimated cost at completion	On budget[1]
SR 161/24th Street East to Jovita – Add Lanes	Nickel			$46.7	$47.8	√
I-5/NE 134th Street Interchange (I-5/I-205) – Rebuild Interchange	Nickel	√	√	$93.0	$89.6	√
SR 6/Willapa River Bridge – Replace Bridge	TPA	√	√	$9.3	$7.1	√
SR 105/Smith Creek Bridge – Replace Bridge	TPA	√	√	$9.9	$9.9	√
SR 105/North River Bridge – Replace Bridge	TPA	√	√	$13.1	$13.1	√
One additional project completed during the fourth quarter of the 2013-2015 biennium (April through June 2014)						
U.S. 101/Middle Nemah River Bridge – Replace Bridge[2]	TPA	√	√	$4.9	$5.1	√

Data source: WSDOT Capital Program Development and Management.

Note: 1 A project is "on time" if it is operationally complete within the quarter planned in the last approved schedule, and "on budget" if the costs are within 5 percent of the last approved budget. 2 This project was completed during the fourth quarter of the 2013-2015 biennium (April through June 2014) and was not in *Gray Notebook* 54 due to a reporting error.

WSDOT makes headway on Nickel, TPA projects

Nineteen WSDOT projects in construction phase as of September 30, 2014

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

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)	Nickel	√	Jul-2009	multiple contractors	May-2023	$9.8
Multiple contractors continue to work on this project.						
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	$17.0
This subproject has several contract components; the contract awarded to Skanska USA in May 2010 began removal of the southern portion of the viaduct. Work was delayed from October 2013 because nearby bridge construction and a busy sports season reduced the number of available days for road closures.						
• SR 99/Battery Street Tunnel – Safety Improvements	TPA	√	Nov-2009	Signal Electric	Nov-2010	$2.4
Additional sign-bridges have some elements that were not initially planned. Additional environmental right of way work and review was needed.						
• SR 99/South King Street Vicinity to Roy Street – Viaduct Replacement	Nickel/ TPA	√	May-2010	Seattle Tunnel Partners	Dec-2015	$1,089.7
• SR 99/South Holgate Street to South King Street – Viaduct Replacement	TPA	√	Oct-2009 May-2010	Signal Electric Skanska USA Civil West	Jan-2014 Jan-2014	$4.9 $114.6
This subproject has several contract components; the contract awarded to Skanska USA in May 2010 began removal of the southern portion of the viaduct. Work was delayed from October 2013 because nearby bridge construction and a busy sports season reduced the number of available days for road closures.						
U.S. 395/North Spokane Corridor (NSC) – Design and Right of Way – New Alignment (Spokane)	Nickel/ TPA					
The U.S. 395/North Spokane Corridor project is ongoing and several phases still require funding.						
• U.S. 395/NSC – Francis Avenue Improvements	Nickel	√	Apr-2012	Graham Construction	Nov-2013	$14.4
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	$19.7
• I-5/Mellen Street to Blakeslee Junction – Add Lanes, Interchange Improvements	TPA	√	Mar-2012	Cascade Bridge	Dec-2015	$21.6
The operationally complete date was delayed due to schedule adjustments needed for complex traffic revisions, demolitions, repairs and painting of nearby bridges.						
• I-5/Mellen Street Interchange – Interchange Improvements	TPA	√	Combined with project above for construction efficiencies.			
I-5/Chehalis River – Flood Control (Lewis)	Nickel	√	Mar-2012	Cascade Bridge	Dec-2014	
Combined with the I-5/Mellen Street to Blakeslee Junction – Add Lanes, Interchange Improvements project for construction, also the operationally complete date was tied to the completion of the first stage of the I-5/Mellen Street to Blakeslee Junction project.						
SR 502/I-5 to Battle Ground – Add Lanes – Stage 2 (Clark)	TPA	√	Jan-2014	Rotschy	Oct-2016	$27.5
U.S. 101/Hoh River (Site No. 2) – Stabilize Slopes	TPA	√	Apr-2014	Strider Construction	Oct-2014	$2.2
SR 522/Snohomish River Bridge to U.S. 2 – Add Lanes (Snohomish)	Nickel	√	Apr-2010	Scarsella Bros.	Nov-2014	$88.7
SR 9/84th St. Northeast (Gethchell Road) Improve Intersection (Snohomish)	TPA	√	Nov-2013	Rodarte Construction	Nov-2014	$3.7
SR 6/Rock Creek Bridge East – Replace Bridge (Lewis)	TPA	Late	Dec-2013	Scarsella Bros.	Sep-2015	$6.9
Advertisement was delayed to address permitting issues with several agencies.						
SR 6/Rock Creek Bridge West – Replace Bridge (Lewis)	TPA	Late	Dec-2013	Scarsella Bros.	Sep-2015	$4.7
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	$10.7
• I-405/Northeast 195th Street to SR 527 – Northbound Widening	TPA	Early	May-2009	Kiewit Pacific	Jun-2010	$19.3
Advertisement was delayed to address permitting issues with several agencies.						

Table continued on p. 30

WSDOT makes headway on Nickel, TPA projects, *continued*

Table continued from p. 29

Project description Cumulative to date (County)	Fund type	On time advertised	Ad date	Contractor	Operationally complete date	Award amount
SR 520/Bridge Replacement and HOV (King)	TPA					
• SR 520/Pontoon Construction (Grays Harbor, Pierce)	TPA	√	Aug-2009	Kiewit-General, A Joint Venture	May-2015	$367.3
Portions of this project are now in construction, but were not previously captured in *Gray Notebook* "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	$586.6
• SR 520/Medina to SR 202 Vicinity – Eastside Transit and HOV	TPA	√	May-2010	Eastside Corridor Constructors	Dec-2014	$306.3
Contractor delays due to pontoon construction repairs continue, and delayed the operationally complete date from March to July 2014.						
I-205/Mill Plain Interchange to Northeast 18th Street – Build Interchange – Stage 2	TPA		Aug-2014	Cascade Bridge	Dec-2016	$24.3
SR 167/8th Street East Vicinity to S 277th Street Vicinity – Southbound Managed Lane	TPA	√	Aug-2014	Pending	Jun-2017	Pending
SR 167/SR 18 Interchange West-North Ramp North-East Ramp Overcrossing – Seismic Retrofit	TPA	√		Combined with project above for efficiencies.		
I-5/Tacoma HOV Improvements (Pierce)	Nickel/ TPA					
• I-5/M Street to Portland Avenue – Add HOV Lanes	Nickel	√	Mar-2014	Pending	Feb-2017	Pending
• I-5/Port of Tacoma Road to King County Line – Add HOV Lanes	Nickel	Late	Jun-2009	Tri-State Construction	May-2011	$31.0
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	$119.9
• I-5/SR 16/Eastbound Nalley Valley – HOV	Nickel/ TPA	√	Jun-2011	Mowat Construction Company	Jul-2014	$74.7
Adverse weather reduced the number of workable days in the schedule and delayed the operationally complete date from March to July 2014.						
SR 302/Key Peninsula Highway to Purdy Vicinity Safety and Congestion	TPA	Late	May-2014	Tucci and Sons	Feb-2015	$1.3
The advertisement date was delayed to complete right of way acquisition and utility work.						
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	$3.3
• I-90/Snoqualmie Pass East, Phase 1B Hyak to Snowshed Vicinity – Add Lanes and Bridges	TPA	√	Nov-2009	Max J. Kuney Company	Oct-2013	$76.7
• I-90/Snowshed to Keechelus Dam Phase 1C – Replace Snowshed and Add Lanes	TPA	Late	Apr-2011	Guy F. Atkinson Construction	Oct-2017	$177.1
Advertisement was delayed to address fire and safety issues with the original snowshed design, resulting in long-term savings.						

Data source: WSDOT Capital Program Development and Management.

Projects to be advertised

Three projects in the six-month delivery pipeline for October 2014 through March 2015

Nickel and Transportation Partnership Account (TPA) projects planned to be advertised; Dollars in millions

Project description	Fund type	Baseline planned ad date	Current planned ad date	On schedule	Baseline estimated cost at completion	Current estimated cost at completion
SR 3/Belfair Area – Widening and Safety Improvements	TPA	Feb-2015	Mar-2015	√	$19.3	$20.4
SR 162/Puyallup River Bridge – Replace Bridge	TPA	Dec-2013	Nov-2014		$15.6	$11.6
I-90/Concrete Rehabilitation	Nickel	Jan-2015	Mar-2015	√	$52.3	$52.3

Data source: WSDOT Capital Program Development and Management.

WSDOT completes 127 Nickel-funded projects

The performance summaries below and those on p. 32 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 two funding packages were created. As a result, the data listed below and on the next page show the original funding package (LEAP), which differs from the current legislative budgets on pp. 26-27.

The 2003 and 2005 tables feature 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, or affected by a legislatively-approved change of project scope. They also give 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 and budget update: Original 2003 Transportation Funding Package (Nickel)
As of September 30, 2014; Dollars in millions

	Total program		Highways		Ferries		Rail	
Project delivery update	**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	127	81%	111	87%	2	40%	14	58%
Total projects underway	16	10%	13	10%	2	40%	1	4%
In pre-construction phase	*4*		*3*		*1*		*0*	
In construction phase	*12*		*10*		*1*		*1*	
Projects starting in the future	1	1%	0	0%	0	0%	1	4%
Projects deferred or deleted from program	12	8%	3	2%	1	20%	8	33%
Number of legislatively-approved scope changes	*20*		*18*		*0*		*2*	
Pre-construction starts within six months	*0*		*0*		*0*		*0*	
Construction starts within six months	*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.

	Total program		Highways		Ferries		Rail	
Project budget update	**Budget**	**Percent of total**	**Budget**	**Percent of program**	**Budget**	**Percent of program**	**Budget**	**Percent of program**
Total original legislative planned budget	**$3,887.5**		**$3,380.1**		**$297.9**		**$209.5**	
Original plan, 2003 through 2011-2013 biennium	$3,887.5	100%	$3,380.1	100%	$297.9	100%	$209.5	100%
Actual expenditures, 2003 through 2011-2013 biennium	$3,700.8	95%	$3,297.7	98%	$271.6	91%	$131.5	63%
Original plan through 2013-2015 biennium	$3,887.5	100%	$3,380.1	100%	$297.9	100%	$209.5	100%
Current plan through 2013-2015 biennium	$4,222.7	109%[1]	$3,626.2	107%[1]	$461.6	155%[1]	$134.9	64%
Actual expenditures, 2003 through September 30, 2014	$3,933.4	101%[1]	$3,437.5	102%[1]	$363.9	122%[1]	$132.0	63%

Data source: WSDOT Capital Program Development and Management.
Notes: 1 The state Legislature added $130 million for construction of a second 144-vehicle ferry for the WSDOT Ferries Division and for highway construction during the first quarter (July through September) of the 2013-2015 biennium. These funds put the program above its original funding level and will result in continued over-performance by this program. Expenditures are Nickel funds only. Totals do not include local programs projects.

Original Legislative Evaluation and Accountability Program (LEAP)

WSDOT completes 189 TPA-funded projects

WSDOT project delivery and budget update: Original 2005 Transportation Partnership Account (TPA)
As of September 30, 2014; Dollars in millions

Project delivery update	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	189	76%	182	79%	0		7	47%
Total projects underway	38	15%	33	14%	1	25%	4	27%
In pre-construction phase	*12*		*11*		*0*		*1*	
In construction phase	*26*		*22*		*1*		*3*	
Projects starting in the future	6	2%	2	1%	1	25%	3	20%
Projects deferred or deleted from program	15	6%	12	5%	2	50%	1	7%
Number of legislatively-approved scope changes	*23*		*23*		*0*		*0*	
Pre-construction starts within six months	*2*		*2*		*0*		*0*	
Construction starts within six months	*4*		*4*		*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 Transportation Partnership Account (TPA) program was passed in 2005, the Legislature has approved changes to WSDOT Ferries Division's 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. For definitions about terminology used in Original LEAP, see *Gray Notebook 53, p. 40*.

Project budget update	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	**$6,982.1**		**$6,678.5**		**$185.4**		**$118.3**	
Original plan, 2005 through 2011-2013 biennium	$4,084.8	59%	$3,886.3	58%	$87.7	47%	$110.9	94%
Actual expenditures, 2005 through 2011-2013 biennium	$3,804.3	54%	$3,656.2	55%	$77.0	42%	$71.1	60%
Original plan through 2013-2015 biennium	$5,641.4	81%	$5,386.8	81%	$136.3	74%	$118.3	100%
Current plan through 2013-2015 biennium	$5,165.5	74%	$5,004.7	75%	$79.8	43%	$81.0	69%
Actual expenditures, 2005 through September 30, 2014	$4,382.3	63%	$4,234.3	63%	$77.0	42%	$71.0	60%

Data source: WSDOT Capital Program Development and Management.
Notes: Expenditures are TPA funds only. Totals do not include local programs projects.

WSDOT completes five new Nickel and TPA projects

WSDOT completed five Nickel and Transportation Partnership Account (TPA) projects in the fifth quarter of the 2013-2015 biennium (July through September 2014). These projects included building new bridges and ramps to improve connections between State Route (SR) 16 and Interstate (I-5) in Tacoma, reconstructing an interchange between I-5 and I-205 near Salmon Creek, and replacing two bridges on SR 105 near Tokeland and one on SR 6 near Menlo.

Another project that replaced an aging bridge on U.S. 101 in May 2014 was not reported as a completed project last quarter. It has been added to the 2013-2015 biennium schedule and budget summaries on p. 28.

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 2014 transportation budget.

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

I-5/SR 16/Eastbound Nalley Valley – HOV – *Nickel/TPA (Pierce County)*

This project reconstructed the entire eastbound interchange at I-5 and SR 16 in Tacoma, replacing the bridges over the Nalley Valley, constructing freeway connections and realigning all of the ramp roadways and structures. The work sets the stage for the third phase of this mega-project, which will direct high occupancy vehicle (HOV) connections between I-5 and SR 16.

Project benefits: The project widened shoulders, improved ramp alignments, curves and lighting. It added capacity to improve traffic flow and reduced areas that required drivers to weave into highway traffic from on-ramps. The project restored wetlands at the Tacoma Nature Center and improved communication systems to better alert drivers of traffic conditions.

Drivers head toward Interstate 5 on new eastbound ramps and bridges constructed on State Route 16 in Tacoma's Nalley Valley.

Budget performance: The project was completed for $110.5 million, about $4.4 million less than the last legislatively approved budget, and approximately $3.7 million more than the original 2009 budget of $106.8 million.

Schedule performance: The project was completed in August 2014, one month later than the last legislatively approved schedule and about 10 months later than the original schedule of November 2013.

Highlights/challenges: The accepted construction bid was 19 percent below the engineer's estimate. Some of the bid items and work that added to costs during construction included the installation of a fire suppression system and increased material quantities. Weather delayed work on the project slightly.

I-5 – Reconstruct Interchange at Northeast 134th – *Nickel (Clark County)*

WSDOT partnered with Clark County on this Nickel project to reconstruct the Northeast 134th Street interchange at the junction of I-5 and I-205 to maintain safety on I-5 and I-205 and keep traffic moving through the interchange area. This is the final phase of the four-phase Salmon Creek Interchange project.

Project benefits: The project potentially reduces traffic congestion and improves safety in the fast-growing Salmon Creek area by constructing a new

Bridge project on SR 6 completed ahead of schedule

Crews work to move a large concrete girder into position on the Salmon Creek project in Clark County.

I-5 interchange at Northeast 139th Street, improving the I-205 northbound off-ramp to Northeast 134th Street, and constructing other local road improvements.

Budget performance: The project was completed for approximately $89.6 million, on target with the last legislatively approved budget of $89.6 million, and approximately $49.6 million more than the original 2003 budget of $40 million.

Schedule performance: The project was completed in August 2014, one month later than the last legislatively approved schedule and more than one year later than the original schedule of June 2013.

Highlights/challenges: The project faced several delays and cost increases due to right of way needs, an appeal, construction materials escalation, and soil stabilization resulting from ground water and wetland mitigation. The Legislature increased WSDOT's contribution by $15 million in the construction phase in 2005. Costs increased by $24 million in 2007 due to cost escalations in construction materials and inflation.

SR 6/Willapa River Bridge Replacement *(TPA) Pacific County*

This TPA project replaced the aging SR 6 Willapa River bridge with a new, wider structure that meets current design standards. The new bridge features 12-foot lanes and six-foot shoulders.

Project benefits: The wider, safer, concrete girder bridge accommodates current traffic needs and meets current federal seismic, flood, and structural standards. It also improves traffic flow and visibility.

Budget performance: The project was completed for approximately $7.1 million, on target with the last legislatively approved budget of $7.1 million, and approximately $1.1 million less than the original 2007 budget of $8.2 million.

Schedule performance: The project was completed in July 2014, four months earlier than the last legislatively approved schedule and almost one year earlier than the original schedule of June 2015.

Highlights/challenges: The project's schedule and budget were originally programmed based on estimates done in 1992. The budget was increased in January 2008 after a detailed scoping estimate was completed, reflecting changes in bridge specifications including seismic criteria, inflation, and an increase in construction material costs. The accepted construction bid was 11.8 percent below the engineer's estimate, decreasing the overall project cost by $1.1 million.

Crews use a crane to remove the superstructure of the old SR 6 Willapa River Bridge.

SR 105/Smith Creek Bridge Replacement and SR 105/North River Bridge Replacement *(TPA) Pacific County*

This TPA project replaced two timber bridges that could not carry the weight of larger, heavier trucks due to deterioration of the bridge support pilings.

Project benefits: The new bridges improve safety with a wider roadway, concrete road barriers and new bridge railings. They also provide wider structures for motorists

SR 161 project in Edgewood reduces congestion

and improve traffic flow. The project removed approximately 300 creosote treated timber pilings from the creek and restored natural channel migration in the streambed.

Budget performance: The combined project was completed for $23 million on target with the last legislatively approved budget, and approximately $12 million less than the original 2006 budget of $35 million.

Schedule performance: The project was completed in July 2014, two months earlier than the last legislatively approved schedule and nine months later than the original schedule of November 2013.

Highlights/challenges: Project was combined with SR 105/North River Bridge Replacement project for efficiency in April 2012. This, along with competitive bids, resulted in cost savings. The schedule was delayed to consolidate bridge plans. The accepted construction bid was 7.4 percent less than the engineer's estimate.

SR 161/24th Street East to Jovita – Add Lanes *(Nickel) Pierce County*

This Nickel/TPA project addressed traffic volumes along the SR 161 corridor in Edgewood, which have steadily increased in recent years, resulting in congestion, delays and collisions. This project added lanes and a new traffic signal, and improves access to the highway.

Project benefits: Additional lanes ease traffic congestion while new turn lanes improved signals and managed access points to reduce the potential for collisions.

Budget performance: The project was completed for $47.8 million, about $900,000 more than the last legislatively approved budget, and approximately $26.2 million more than the original 2003 budget of $21.6 million.

Schedule performance: The project was completed in August 2014, one month later than the last legislatively approved schedule and nearly four years later than the original schedule of October 2010.

Highlights/challenges: The project faced several delays and cost increases due to changes in scope to include pedestrian amenities and enhancements within the city of Edgewood. Multiple utilities relocations, materials cost escalations, right of way purchases and building condemnations that were not included in the original 2003 schedule and budget also affected the overall project.

Due to an oversight, WSDOT is reporting on a project this quarter that was operationally complete last quarter.

U.S. 101/Middle Nemah River Bridge Replacement (TPA) Pacific County

This TPA project replaced a 1935 timber bridge supported by deteriorating timber pilings with a new bridge designed to current standards.

Project benefits: The wider, safer, concrete girder bridge accommodates current traffic needs and meets current federal seismic, flood, and structural standards. The project removed approximately 44 creosote-treated timber pilings from the Middle Nemah River and restored natural channel migration in the streambed. The project also improves the river channel under U.S. 101.

Budget performance: The project was completed for $4.9 million on target with the last legislatively approved budget, and approximately $900,000 more than the original 2006 budget of $4 million.

Schedule performance: The project was completed in May 2014, three months earlier than the last legislatively approved schedule and three months earlier than the original schedule of August 2014.

Highlights/challenges: The project's schedule and budget were originally programmed based on an estimate performed by WSDOT that did not include site specific survey information back in 2005. The budget was increased in January 2008 after a detailed scoping estimate was completed, reflecting the need for a larger bridge, and an increase in construction material costs. The accepted construction bid was 3.4 percent below the engineer's estimate for the project.

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

WSDOT advertises nine Pre-existing Funds projects

WSDOT advertised nine Pre-existing Funds (PEF) projects in the fifth quarter of the 2013-2015 biennium (July through September 2014).

Of these advertised projects, one was early, three were on time, and three resulted from unexpected events, like stabilizing a slide near Interstate 5. Another was late, and one was advanced from a future quarter. There were five other projects that were scheduled for the quarter that were delayed to future quarters and one that was deferred to a future biennium (see pp. 29-30 for this quarter's advertisements, and *Gray Notebook* 51, p. 38 for definitions of PEF terms).

The current cost to complete the nine PEF projects advertised this quarter is approximately $8.5 million, about $1.9 million (18.1 percent) less than the original value of $10.5 million. Since the beginning of the 2013-2015 biennium there have been 166 project advertisements.

Cost to complete WSDOT's project advertisements indicates continued savings
2013-2015 biennium (July 2013 through June 2015); Quarter ending September 30, 2014; Dollars in millions

	Number of projects	Original value	Current cost to complete
Total PEF advertisements planned 2013-2015 biennium	258	$574.5	$431.7
Planned advertisements through September 30, 2014	189	$382.6	$242.2
Actual advertisements through September 30, 2014	166	$350.0	$290.2

Data source: WSDOT Capital Program Development and Management.

WSDOT completes 79 percent of Pre-existing Funds project advertisements on time for biennium
2013-2015 biennium (July 2013 through June 2015)

Project status	Quarter[1]	Cumulative[2]
Projects advertised early or advanced[3]	2	8
Projects advertised on time	3	131
Emergent projects advertised	3	16
Late projects advertised	1	11
Total projects advertised	**9**	**166**
Projects delayed within the biennium	5	36
Projects deferred out of the biennium	1	5
Projects deleted	0	5

Data source: WSDOT Capital Program Development and Management.
Notes: 1 The quarter refers to July through September 2014.
2 Cumulative refers to July 2013 through September 2014. July 1, 2013 marked the beginning of the 2013-2015 biennium. 3 Advanced includes projects that were moved up from future quarters.

The current cost to complete them is approximately $290.2 million, about $59.8 million (17 percent) less than the original value of $350 million. The cost reduction is due to competitive bids resulting in savings to these projects. In total, WSDOT has 258 PEF advertisements planned during the 2013-2015 biennium. The current estimated cost to complete them is $431.7 million, about $142.8 million (25 percent) less than the original value of $574.5 million.

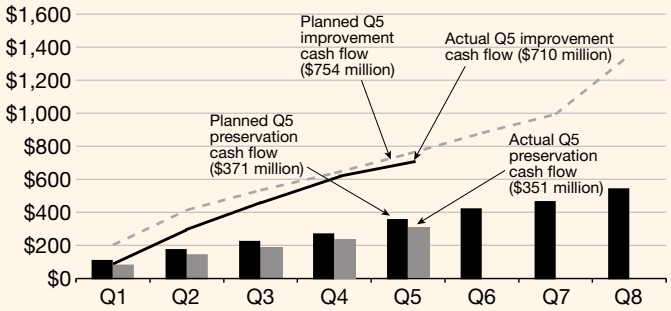
Unlike Nickel and Transportation Partnership Account projects, which come from a fixed list of projects set by the Legislature and funded with line item budgets, PEF projects are primarily funded at the program level through federal, state and local sources. This gives WSDOT flexibility to tackle a variety of projects, such as paving work, bridge repairs and fish passage improvements on an as-needed basis.

Improvement and preservation projects cost less than planned

WSDOT planned to spend $116 million on improvement projects, but spent $20 million less ($96 million) during the fifth quarter of the 2013-2015 biennium. This 17 percent reduction was due to many contracts being awarded below the estimate, along with continued project savings.

The improvement program funds projects that optimize highway capacity, enhance safety, and reduce the environmental impact of construction projects. Cumulatively, WSDOT planned to spend $754 million in the 2013-2015 biennium, but has spent $710 million on improvement projects, a 6 percent difference.

WSDOT Pre-existing Funds preservation and improvement cash flows edge toward planned levels
2013-2015 biennium; Quarter ending September 30, 2014; Planned vs. actual expenditures; Dollars in millions



Data source: WSDOT Capital Program Development and Management.
Note: Q5 refers to the fifth quarter (July through September) of the 2013-2015 biennium (July 2013 through June 2015).

Preservation spending more than planned for quarter

WSDOT planned to spend $88 million on preservation projects during the fifth quarter of the 2013-2015 biennium (July 2013 through June 2015), but spent $100 million, a 14 percent increase. The preservation program includes pavement, bridges and other projects that maintain the structural integrity of the existing highway system. Cumulatively, WSDOT planned to spend $371 million in the 2013-2015 biennium, but has spent $351 million on improvement projects (5 percent less) due to favorable bids, and by using project prioritization to restrict funding to the most needed projects, while delaying less pressing projects.

Contributors include Dean Walker and Joe Irwin

WSDOT advertises nine Pre-existing Funds projects this quarter
July through September 2014

Early (1)

I-5/93rd Avenue Southbound Off-Ramp – Signal

On time (3)

I-90/Lacey V. Murrow Bridge – Replace Anchor Cables

I-90/Homer M. Hadley Bridge – Replace Anchor Cables

Olympic Region – Region Wide Basic Safety – Signing

Emergent (3)

U.S. 12/0.80 Miles East Clear Creek Falls Viewpoint – Rockfall Mesh Repair

I-5/Klickitat Drive Slide

SR 531/43rd Avenue Northeast to 67th Avenue Northeast – Widening

Advanced (1)

SR 9/George Road Vicinity – Railroad Crossing Improvements

Late (1)

Olympic Region Wide Basic Safety – Guardrail
Project delayed for engineering a design change.

Delayed (5)

SR 509/Tacoma Rail – Railroad Crossing 0.3 Miles East of Port of Tacoma Road – Safety
Project deferred to allow time to complete agreements.

SR 507/Tower Street and Fifth Street Vicinity – Railroad Crossing Improvements
Project deferred to allow time to complete agreements.

SR 507/Pearl Street and Fifth Street Vicinity – Railroad Crossing Improvements
Project deferred to coordinate schedule with rail consultant.

Northwest Region Basic Safety – Guardrail
Project deferred to allow time for additional preliminary engineering.

SR 104/Hood Canal Bridge – Special Repair
Project deferred due to delayed advertisement and additional design work involving anchor cable replacement.

Deferred (1)

SR 224/SR 225 – Benton City – Construct Intersection Improvements
Project deferred to allow funding of higher priority projects.

Data source: WSDOT Capital Program Development and Management

WSDOT reporting change orders costing $500,000 or more online

During the quarter ending September 30, 2014, WSDOT approved one change order costing $500,000 or more. The change order totaled approximately $696,000 and was used to add conduit duct banks on the State Route 99 Bored Tunnel project to prepare for the future addition of cables by Seattle City Light.

After an extensive review, which can involve subject matter experts, contract specialists, and permit agencies or other outside stakeholders, WSDOT must sometimes 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://1.usa.gov/Sb96L8.

WSDOT adds four projects to Watch List

WSDOT added four projects to its Watch List and removed seven this quarter (July through September 2014). As of September 30, there were 23 projects remaining on the Watch List.

WSDOT maintains the Watch List to deliver on the agency's commitment to "No Surprises" reporting and continuously monitors its projects' performance to ensure issues affecting schedule or budget are 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 the schedules and budgets of WSDOT projects. The Watch List helps WSDOT track these projects, providing status reports, explaining the factors affecting delivery and what WSDOT is doing to address them. Projects are removed from the Watch List when these issues are resolved.

WSDOT's Watch List projects that have been reprioritized, deferred or delayed due to funding constraints are listed separately on p. 39.

See *Gray Notebook* 51, p. 40 for a list of common issues that might move a project to the Watch List. To read more about the Watch List items, visit http://www.wsdot.wa.gov/Projects/Reports/.

WSDOT's Watch List projects with schedule or budget concerns
Quarter ending September 30, 2014

Project (County)	Date added	Date removed	Watch List issue
U.S. 12/East of Clear Creek Falls Viewpoint - Road Washout Repair (Yakima)[1] Related project: U.S. 12/East of Clear Creek Falls Viewpoint - Emergency Road Washout Repair[1]	Sep-2014	Sep-2014	An emergency contract to address drainage issues had costs increase due to labor, equipment and materials. An engineering analysis determined that more reinforcements are needed for new culverts, adding to the cost.
SR 161/24th St. East to Jovita - Add Lanes (Pierce)[1]	Sep-2014		The project was completed in August and is facing a potential cost increase pending a claim from the contractor.
SR 16/Tacoma Narrows Bridge - Replace Maintenance Traveler (Pierce)[1]	Aug-2014	Sep-2014	The advertisement date for the project delayed and as a result the operationally complete date was also delayed. Both delays were realized and this project was removed from the Watch List.
I-205/Mill Plain Interchange to North 18th St. – Build Interchange – Stage 2 (Clark)	Jun-2014	Aug-2014	The advertisement date was delayed until July 2014 to incorporate practical design changes. The project went to advertisement and has been removed from the Watch List.
I-5/Klickitat Drive Slide (King)	May-2014	Jul-2014	Emergency work is required to repair a slope and elevated walkway after heavy rains in March 2014 caused landslide damage in the city of Tukwila. This project went to advertisement and has been removed from the Watch List.
U.S. 101/North of Salmon Creek Bridge – Stabilize Slope (Grays Harbor)	May-2014		Ongoing landslide movement on the side slope threatens to close U.S. 101. The scope and schedule are at risk and continued drainage efforts are necessary.
U.S. 12/0.8 Miles West of Chapman Rd. – Erosion Protection (Lewis)	Apr-2014		The project advertisement was pulled in June 2014 due to right of way issues and will be re-advertised in spring 2015. Costs might increase depending the extent of additional erosion that may occur before construction begins.
I-90/Easton Hill Vicinity to Kachess River Bridge Eastbound – Replace/Rehabilitate Concrete (Kittitas)	Apr-2014		Design element changes increased the scope of work from one lane to two, delaying the project advertisement four months and increasing the project estimate.
U.S. 101/Hoquiam River-Simpson Ave. Bridge – Bridge Painting (Grays Harbor)	Apr-2014		The project schedule has been delayed nine months due to a required bridge load rating analysis, increasing the project estimate.
SR 241/SR 22 Mabton Vicinity/Railroad Crossing – Install Beacons and Stop Refuge (Yakima)	Apr-2014		The project is facing a schedule delay due to coordination required with Burlington Northern Santa Fe Railroad (BNSF) for their portion of the design and construction work. This may change the project estimate.
North Spokane Corridor (Spokane)	Mar-2014	Aug-2014	Changes to the locations of noise walls as well as public input continue to postpone this portion of the project and has resulted in a delay. Delays on the project have been realized and it has been removed from the Watch List.
SR 530 Slide (Snohomish)	Mar-2014	Jul-2014	Emergency repair work on SR 530 is required to restore use of the highway after a catastrophic landslide occurred in March 2014. The road was reopened in July and the project was removed from the Watch List.

Table continued on p. 39.

WSDOT has 23 projects remaining on the Watch List

Project (County)	Date added	Date removed	Watch List issue
I-90 Columbia River Vantage Bridge – Painting (Grant, Kittitas)	Mar-2014		Additional analysis to determine wind load and its potential impacts on painting equipment and platforms has delayed the project advertisement date.
U.S. 2 Junction/SR 25 – Analysis of Alternatives (Spokane)	Jan-2014		There is a potential project scope change after reviewing alternatives to the planned roundabout and the schedule is delayed as a result.
SR 104/Hood Canal Bridge – Special Repair (Jefferson, Kitsap)	Jan-2014		Additional work was added to this anchor cable replacement project, which increased the cost and delayed the advertisement date and start of the project.
SR 202/Little Bear Creek – Fish Barrier Removal (King)	Jan-2014		Design changes to this project increase the depth of a retaining wall on a culvert replacement project and increase the cost of the project.
SR 99/South King St. Vicinity to Roy St. – Viaduct Replacement (King)	Dec-2013		The tunnel boring machine's progress has been halted since December 2013 due to mechanical issues. Work is scheduled to resume in March 2015.
SR 162/Puyallup River Bridge – Replace Bridge (Pierce)	Dec-2013		The schedule was delayed due to permitting issues that delayed the project's advertisement.
SR 20/Race Rd. to Jacobs Rd. – Safety Improvements – Phase 2 (Island)	Dec-2013		The project has design element changes stemming from stakeholder meetings and discussions, a cost increase, and a schedule delay.
SR 99/George Washington Bridge – Painting (King)	Dec-2013		The schedule is delayed to provide WSDOT time to examine the bridge to determine whether additional repairs are required.
U.S. 101/Siebert Creek – Remove Fish Barrier (Clallam)	Dec-2013		The cost has increased and the schedule was delayed due to redesigning this project to eliminate restrictions to fish passage.
SR 520/Medina to SR 202 Vicinity – Eastside Transit and HOV (King)	Dec-2013		Contractor delays due to pontoon construction repairs continue to delay the HOV project.
I-5/Portland Ave. to Port of Tacoma Rd. – Southbound HOV (Pierce)	Oct-2013		The advertisement was delayed due to the cancellation of the bid opening for the related I-5/Portland Ave. to Port of Tacoma Rd. – Northbound HOV project.
I-5/Portland Ave. to Port of Tacoma Rd. – Northbound HOV (Pierce)	Feb-2013	Sep-2014	The schedule is at risk due to ongoing negotiations on project impacts with the Puyallup Tribe of Indians. These issues have delayed the schedule and the bid opening has been canceled. Project was delayed until negotiations with the Puyallup Tribe of Indians are completed. This project has been removed from the Watch List.
SR 3/Belfair Area – Widening and Safety Improvements (Mason)	Feb-2013		The schedule is at risk due to a complex right of way acquisition.

WSDOT Watch List projects reprioritized, deferred or delayed due to funding constraints
Quarter ending September 30, 2014

U.S. 195/Spring Flat Creek – Bridge Replacement (Whitman)[1]	Jul-2014		This project is in the design phase has been deferred due to WSDOT's reevaluation of the highway preservation program to meet reduced levels of available funding for bridge replacement.
SR 507/Lacamas Creek Tributary to Muck Creek – Fish Barrier Removal (Pierce)	Oct-2013		This project has been delayed until additional funding is acquired. Construction was deferred to accelerate scoping and design on other projects. The project is being deferred for approximately three years.
SR 542/Hedrick Creek – Fish Barrier Removal (Whatcom)	Oct-2013		This project has been delayed until additional funding is acquired. Construction was deferred to accelerate scoping and design on other projects.
SR 16/Anderson Creek Tributary to Sinclair Inlet – Fish Barrier Removal (Kitsap)	Oct-2013		Cultural resource work and additional work zone traffic control are resulting in schedule and cost increases. The project is being deferred for approximately two years to accelerate scoping and design on other projects.
SR 307/Dogfish Creek – Fish Barrier Removal (Kitsap)	Oct-2013		This project has been delayed until additional funding is acquired, and is being deferred for two years to accelerate scoping and design on other projects.

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

Note: 1 Projects have been added to the Watch List during the current quarter.

55 Navigating the *Gray Notebook*

New strategic plan helping to set WSDOT's direction

This 55th edition of the *Gray Notebook* continues to follow Results WSDOT, the agency's strategic plan (p. vi), as it moves Washington forward. This plan represents a shift in the way WSDOT does business as it works to get the most capacity out of the entire multimodal transportation system, leveraging limited funding and engaging with communities and partners.

Results WSDOT aligns with Gov. Jay Inslee's Results Washington (see p. v) while supporting reforms proposed to the Legislature in 2013 by Transportation Secretary Lynn Peterson (see *Gray Notebook* 53, p. ix-x) WSDOT's progress toward reaching the agency's goals will be reported in the *Gray Notebook*.

Gray Notebook reporting focuses on transparency, accountability

This issue features annual articles on aviation, capital facilities, corridor capacity, water quality, Environmental Species Act documentation and construction contracts. Other features in this issue include semi-annual articles on travel time trends, and quarterly reports ranging from incident response and Lean to ferries and passenger rail.

The "beige pages" address the delivery of projects funded in the 2003 Nickel Transportation Funding Package, 2005 Transportation Partnership Account, and Pre-existing Funds.

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 at http://wsdot.wa.gov/publications/fulltext/graynotebook/Sep14.pdf; the publication, with hyperlinks, can be downloaded and printed as needed. Readers can scan Quick Response (QR) codes that provide instant links to background information for those who want to know more of the story. Read more about QR codes on p. 42.

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

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.

State and federal measures reported

WSDOT is an active participant in Results Washington, Gov. Inslee's plan to build a working Washington. At the same time, WSDOT is preparing for future federal transportation reporting requirements (read about Moving Ahead for Progress in the 21st Century in *Gray Notebook* 49, p. vii, and in this issue on p. iv.

Results WSDOT, Results Washington and MAP-21 all play a critical role in guiding WSDOT's future performance reporting.

The transportation progress report

The Washington State Office of Financial Management (OFM) sets objectives and establishes performance measures for the state's transportation policy goals. OFM reports on the attainment of the goals and objectives. 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 Jinger Hendricks, Diana Lessard, Fauziya Mohamedali, Erica Mulherin and Steve Riddle, create the majority of the graphics, while WSDOT communicators typically take the photographs. The *Gray Notebook* is printed in-house by a team including Deb Webb, Trudi Phillips and Larry Shibler. Linda Pasta coordinates distribution.

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55 Quick Response Codes and A Guide to Understanding Reporting Periods

Codes offer convenience

Quick Response codes, also known as QR codes, accompany some *Gray Notebook* articles. Many mobile devices have the ability to "read" QR codes and link the reader to Web pages. Readers with mobile devices can scan the codes to access other information related to articles found in this issue of the *Gray Notebook* (search for "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 sampling of Quick Response codes

Scan to access additional information

Subject and hyperlink[1]	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.

To improve readability, many of the numbers in the *Gray Notebook* tables have been rounded from their exact values and may not equal 100.

A guide to understanding reporting periods

Some performance measures addressed in the *Gray Notebook* (GNB) 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 55 reports quarterly performance data for July through September 2014, which is the third quarter of the calendar year (Q3 2014). This time period is also considered the first quarter of the state's current fiscal year (Q1 FY2015) as well as the fourth quarter of the federal fiscal year (Q4 FFY2014).

Calendar, fiscal and federal fiscal quarters

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
GNB 53			GNB 54			GNB 55			GNB 56		
Q1 2014			Q2 2014			Q3 2014			Q4 2014		
Q3 FY2014			Q4 FY2014			Q1 FY2015			Q2 FY2015		
Q2 FFY2014			Q3 FFY2014			Q4 FFY2014			Q1 FFY2015		

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 also the matter of biennial quarters. The Washington State Legislature sets a biennial budget. This issue highlights the fifth 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

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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)
2014	53 / Mar 31, 2014 (Q3 FY2014)	54 / Jun 30, 2014 (Q4 FY2014)	55 / Sep 30, 2014 (Q1 FY2015)	56 / Dec 31, 2014 (Q2 FY2015)

Gray Notebook subject index and acronym list are online

The *Gray Notebook* subject index is online at http://wsdot.wa.gov/Accountability/*GrayNotebook*/SubjectIndex. All editions of the *Gray Notebook* are available online at http://wsdot.wa.gov/Accountability/*GrayNotebook*/gnb_archives. WSDOT's transportation acronym guide is also available online at http://www.wsdot.wa.gov/reference/acronym.

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Scan the image on the left to download WSDOT's Android application. Scan the image on the right to download the iPhone application.

Android **iPhone**

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The *Gray Notebook* is prepared by the
Office of Strategic Assessment and Performance Analysis
Washington State Department of Transportation
310 Maple Park Ave SE, Olympia, WA 98504
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