Washington State
Department of Transportation

53

The Gray Notebook

WSDOT's quarterly performance report on transportation systems, programs, and department management
Quarter ending March 31, 2014 • Published May 2014
Lynn Peterson, Secretary of Transportation

Hushing the highways

WSDOT reduces noise with projects that improve life for residents

p. 17

Give me a break

WSDOT safety rest areas reduce fatigue by providing motorists a reprieve from the open road

p. 2

On the air

How WSDOT is working to reduce its impacts on the environment and improve air quality in Washington

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PERFORMANCE HIGHLIGHTS reported for the quarter ending March 31, 2014

20.8 M
number of visitors to WSDOT **safety rest areas** in 2013

$24.4 M
WSDOT's safety rest areas preservation **backlog**

8
the number of **Results Washington** measures for which WSDOT is the lead

2.3 M
the number of monthly visitors to **WSDOT's traffic website**

15 M
number of calls to **511 travel information** since 2003

59,431
number of followers of WSDOT's ***Twitter*** account

4.7 M
ferry **riders** and

$ 32.6 M
ferry **farebox** revenues this quarter

163,000
Amtrak Cascades riders this quarter

11
Federally funded **rail projects** complete or under construction

25
number of **air quality studies** WSDOT prepared, reviewed and approved in 2013

52
number of **noise traffic reports** WSDOT prepared, reviewed and approved Jan. 2013 - March 2014

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

ONE NEW PROJECT COMPLETED THIS QUARTER

38
scheduled Pre-existing Funds projects advertised **on time** this quarter

10
projects added to ***Watch List***

$5.78 B
Nickel and TPA projects **completed** since 2003

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

WSDOT HAS 30 LEAN PROJECTS

16.41% awarded/committed

percent and category of **WSDOT contracts** with FHWA Disadvantaged Business Enterprise goals in federal fiscal year 2013; the goal was 15.17 %

completed/paid 12.44%

$ 17.4 M
economic **benefit** provided by WSDOT Incident Response

12.4
average number of minutes WSDOT teams took to **clear** roadway incidents

11,333 INCIDENTS **CLEARED** BY WSDOT

15
number of new **wetland stream mitigation sites** WSDOT constructed in **2013**

122
number of WSDOT supervisors completing **leadership training** since June 2013

1.3 M
number of times trucks with CVISN **transponders** bypassed open weigh stations in FFY 2013

On the cover: *Crews prepare to hoist a precast panel into place as part of a series of corridor walls that will help abate highway noise for neighboring residents. Photo taken February 8, 2014 during a full weekend closure of State Route 520.*

Navigating the *Gray Notebook* 53

Setting WSDOT's Direction

This 53rd edition of the *Gray Notebook* introduces Results WSDOT, the agency's new strategic plan on p. viii. The plan is Setting WSDOT's Direction in a whole new way. Instead of pages and pages of information that sit on a shelf gathering dust, this plan calls on the agency's employees to continue to be innovative, efficient and effective in serving the needs of customers.

Results WSDOT aligns with Gov. Jay Inslee's Results Washington (see p. vii) and supports reforms proposed to the Legislature in 2013 by Transportation Secretary Lynn Peterson (see pp. ix-x). Progress toward reaching the agency's goals will be reported in the *Gray Notebook*.

Accountability drives *Gray Notebook* reporting

This issue features annual articles on safety rest areas, travel information, noise quality, wetland protection and the Commercial Vehicle Information Systems Network. Other features in this issue include a biennial report of air quality, a summary of the Ferries Division annual report and special reports on workforce training and Disadvantaged Business Enterprise along with a variety of quarterly reports.

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://1.usa.gov/12ptklM; the publication, with hyperlinks, can be downloaded as a Portable Document Format 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. 46.

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 for building 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 pp. v-vi.

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

The transportation progress report

The Washington State Office of Financial Management (OFM) 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://1.usa.gov/16QkfDT.

Gray Notebook credits

The work of many people goes into the production of the *Gray Notebook*. Produced by WSDOT's Office of Strategic Assessment and Performance Analysis, each article features bylines indicating contributors. WSDOT's graphics team, including Steve Riddle, Jinger Hendricks, Diana Lessard and Fauziya Mohamedali 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.

53 WSDOT's Goals, Performance and Trends

Policy goal/Performance measure	Previous period	Current period	Goal	Goal met	Five-year trend *(unless noted)*	Desired trend
Safety						
Rate of **traffic fatalities** per 100 million vehicle miles traveled (VMT) statewide (Annual measure: calendar years 2011 & 2012)	0.80	0.77	1.00	✓		↓
Rate of **recordable incidents** for every 100 WSDOT workers[1] (Annual measure: calendar years 2012 & 2013)	5.5	5.7	5.0	—	(Two-year trend)	↓
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 2012 & 2013)	91.1%	91.7%	95.0%	—		↑
Mobility (Congestion Relief)						
Highways: Annual (weekday) vehicle **hours of delay** statewide at **maximum throughput speeds**[2] (Annual measure: calendar years 2010 & 2012)	31.6 million	30.9 million	N/A	N/A		↓
Highways: Average **incident clearance times** for all Incident Response program responses (Calendar quarterly measure: Q4 2013 & Q1 2014)	12.8 minutes	12.8 minutes	N/A	N/A		↓
Ferries: Percentage of trips departing on time[3] (Fiscal quarterly measure: year to year Q3 FY2013 & Q3 FY2014)	97.8%	96.9%	95%	✓		↑
Rail: Amtrak Cascades ridership[4] (Calendar quarterly measure: year to year Q1 2013 & Q1 2014)	169,000	163,000	N/A	N/A		↑
Environment						
Number of WSDOT **stormwater management facilities** constructed (Annual measure: fiscal years 2012 & 2013)	146	169	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**[5] (Calendar quarterly measure: Q4 2013 & Q1 2014 – trend shows last 5 quarters)	352/ 88%	353/ 88%	90% on time	—		↑
Cumulative number of Nickel and TPA **projects completed** and **percentage on budget**[5] (Calendar quarterly measure: Q4 2013 & Q1 2014 – trend shows last 5 quarters)	352/ 91%	353/ 91%	90% on budget	✓		↑
Variance of total project costs compared to **budget expectations**[5] (Calendar quarterly measure: Q4 2013 & Q1 2014 – trend shows last 5 quarters)	under budget by 1.6%	under budget by 1.6%	on budget	✓		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 WSDOT began reporting the recordable incident rate in January 2012; trend shows two years. 2 Compares actual travel time to travel time associated with "maximum throughput" (defined as 70 to 85 percent of the posted speeds), where the greatest number of vehicles occupy the highway at the same time. 3 WSDOT Ferries Division's "on-time" departures include any trip recorded by automated tracking as leaving the terminal within 10 minutes of scheduled time. 4 On-time performance is not reported due to data availability and construction work on the rail line. 5 Budget and schedule expectations are defined in the last approved State Transportation Budget. See p. 36 for more information.

Performance-based management mandated

President Barack Obama signed the Moving Ahead for Progress in the 21st Century Act (MAP-21), in July 2012. The cornerstone of this law, which is specific to transportation, is the transition to a performance- and outcome-based federal aid program. The *Gray Notebook* (GNB) is an example of how WSDOT conducts performance management and reporting.

The primary goals of MAP-21 are to increase the transparency and accountability of states as they invest taxpayer dollars in transportation infrastructure and services nationwide, and to ensure these investments are made in transportation projects that collectively make progress toward achieving these national goals.

USDOT releases draft federal safety performance rules for comment

In March 2014, the U.S. Department of Transportation Federal Highway Administration (FHWA) published two Notices of Proposed Rule Making (NPRMs) in the Federal Register as required by MAP-21. Both draft rules relate to highway safety with the primary goal of significantly reducing collisions resulting in fatalities and serious injuries on all public roads.

Washington's Target Zero program helps reduce injury collisions

Washington state has a long history of reducing traffic collisions that cause serious injuries and fatalities. Washington through its *Target Zero* program, adopted in 2000, is making good progress toward the statewide goal of no traffic fatalities or serious injuries by 2030. This plan includes specific strategies for further reducing serious injuries and traffic fatalities. The majority of these strategies focus on the four E's — education, enforcement, engineering and emergency medical services.

Fatal injuries in Washington dropped 34 percent, from 658 in 2002, to 437 in 2012. There has also been a corresponding drop in serious injuries: 980 fewer serious injuries from 2002 to 2012.

New rules expected to be released this year

FHWA expects to release additional draft performance-related NPRMs later in 2014. The next NPRM focus is on measures to assess the condition of pavements and bridges. The one following will be on measures for system performance for the interstate system, non-interstate national highway system, freight movement on the interstate system and the congestion mitigation and air quality program.

As each set of draft rules is released, the public and stakeholders have 60 to 90 days to comment. After FHWA reviews all the comments on each set of draft rules, it will release one final set of rules. These rules, for all topics in MAP-21, will have one effective date currently anticipated in the spring of 2015.

Following the release of the final rules, state departments of transportation (DOTs), in partnership with their metropolitan planning organizations (MPOs) will have 12 months to develop performance targets for each of the new nationally-established performance measures. MPOs operate in urban areas with populations of 50,000 or more. MPOs will have an additional six months to establish performance targets following state DOTs. WSDOT is partnering with Washington state MPOs to establish a collaborative process well before the final rules are released. The partnerships help foster consistency in setting performance targets.

Those interested in reviewing and commenting on the proposed rules as they become available, can go to http://www.fhwa.dot.gov/tpm/rule.cfm.

Annual reporting follows target setting

Once states have set their targets, they will report annually on the number and rate of fatalities and serious injuries from collisions on all public roads. FHWA will be involved in assessing the progress each state is making toward its respective targets. Both data and reports will be made available online through FHWA. WSDOT currently reports traffic fatalities on Washington state public roads in the *Gray Notebook*. The most recent annual report is available in *Gray Notebook* 50, p.2.

MAP-21 federal performance reporting requirements

MAP-21 goals by program area	Federal threshold/ benchmark[1]	MAP-21 target[2]	Penalty[3] Y/N	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* 50, p. 2
Rate of **serious traffic injuries** per million vehicle miles traveled (VMT) on all public roads	No	TBD	Yes	3/11/14	Serious injury rates using the NHTSA[5] methodology
Number of **traffic fatalities** on all public roads	No	TBD	Yes	3/11/14	Traffic fatalities using the NHTSA[5] methodology see *Gray Notebook* 50, p. 2
Number of **serious traffic injuries** on all public roads	No	TBD	Yes	3/11/14	Serious injuries using the NHTSA[5] methodology
Rate of per capita **traffic fatalities** for drivers and pedestrians 65 years of age or older	No	TBD	No	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* 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* 48, p. 16, for an update on MAP-21 implications for pavement
Condition of bridges on the National Highway System	<10% of deck area on SD[6] bridges	TBD	Yes		Several measures of bridge condition including good/fair/ poor condition rating and structural deficiency (SD) rating, see *Gray Notebook* 50, p. 4
Measures to be determined through federal rule-making	No	TBD	No		The *2013 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 (CMAQ) Program					
Measures to be determined through federal rule-making	No	TBD	No		The *2013 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[7] documentation preparation	No	TBD	No		Percent of projects completed early or on time, percent completed on or under budget, and duration of NEPA[7] document preparation

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

Notes: 1 Minimum threshold or benchmark to be established by the 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 the DOT or 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 SD = structurally deficient. 7 NEPA= National Environmental Policy Act.

Results Washington 53

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. This table outlines measures in Goal 2: Prosperous Economy, for which WSDOT is the lead agency, and measures in other goal areas where WSDOT is not the lead but has an interest. WSDOT is revising four previously reported measures as noted below. For more information, see http://1.usa.gov/1nZOt1g.

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					
Improve percentage of state and local bridges in fair or better condition measured by square feet of deck area to 95% or higher	*Measure is under revision. Expected to report in June 2014*				
Improve percentage of state and local pavement in fair or better condition to 92% or higher	*Measure is under revision. Expected to report in June 2014*				
Improve percentage of ferry terminal systems in fair or better condition to XX%[2]; improve percentage of ferry vessel systems that are not overdue for replacement to 95%	*Measure is under revision. Expected to report in June 2014*				
Maintain percentage of transit fleet that exceeds Federal Transit Administration minimum useful life scheduled at 2012 baseline levels of X% [2]	*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 2011 & 2012)	26.7%	27.8%	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 June 2014*				
Maximize existing capacity of strategic corridors by increasing people and/or goods moved per corridor mile from X% [2] in 2012 to X% [2] 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[3]					
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 June 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	*Measure is under development. Expected to report in June 2014*				
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	*Measure is under development. Expected to report in June 2014*				
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	*Measure is under development. Expected to report in June 2014*				
Increase the number of plug-in electric vehicles registered in Washington from approximately 8,000 in 2013 to 50,000 by 2020	*Measure is under development. Expected to report in June 2014*				
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	No	↑	↑
Goal 4: Healthy and Safe Communities					
Decrease number of traffic-related fatalities on all roads from 454 in 2011 to zero in 2030	*Measure is under development. Expected to report in June 2014*				

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

Notes: 1 "On target" is defined as on track to meet the target. 2 These target and baseline levels are to be determined. 3 In addition to the measures listed in the table above, WSDOT will contribute performance information that will be combined and reported with data from all state agencies in Goal 5: Efficient, Effective and Accountable Government.

53 Results WSDOT – Setting WSDOT's Direction

WSDOT has a new strategic plan, Results WSDOT. This plan 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 within limited resources. For a copy of WSDOT strategic plan go to http://1.usa.gov/1jEBG1C.

RESULTS WSDOT
MOVING WASHINGTON FORWARD

Next steps

WSDOT will develop implementation plans with specific, measurable actions and deliverables. Progress will continue to be reported in the *Gray Notebook* on a quarterly or annual basis depending on the topic. WSDOT will work with communities and partners to integrate and collaborate. WSDOT will further improve performance and accountability by implementing a set of reforms. See p. ix for information.

Results WSDOT Sets Agency Direction *2014 through 2017 Strategic Plan*	**Sample current performance indicators**	**Related *Gray Notebook* articles**
Goal 1: STRATEGIC INVESTMENTS Effectively manage system assets and multimodal investments on strategic corridors to enhance economic vitality	-Pavement: amount of rehabilitation needed to keep WSDOT's pavement in steady state condition -Bridges: Average age of fracture critical bridges -Capital facilities: Preventative maintenance work completed by criticality rating	-Pavement: *Gray Notebook* (GNB) 52, pp. 6-11. -Bridges: GNB 50, pp. 4-13. -Capital facilities: GNB 51, pp. 3-6.
Goal 2: MODAL INTEGRATION Optimize existing system capacity through better interconnectivity of all transportation modes	-Aviation: pavement condition index -Ferries: operating cost per revenue service mile -Rail: Amtrak Cascades: ridership	-Aviation: GNB 51, pp. 7-9. -Ferries: GNB 53, pp. 8-9. -Rail: Amtrak Cascades: GNB 53, pp. 10-11.
Goal 3: ENVIRONMENTAL STEWARDSHIP Promote sustainable practices to reduce greenhouse gas emissions and protect natural habitat and water quality	-Air quality: Amount of biodiesel used by Washington state ferries -Wetlands preservation: number of reviewed mitigation sites deemed satisfactory -Fish passage barriers: miles of improved access to fish habitat	-Air quality: GNB 53, pp. 15-16. -Wetlands Preservation: GNB 53, pp. 19-21. -Fish passage barriers: GNB 52, p.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: Days away, restricted or transferred (DART) rate -Worker training: Mandatory training compliance rate -Lean: Number of Lean projects initiated	-Worker safety: GNB 52, p. 1. -Worker training: GNB 53, pp. 28-29. -Lean: GNB 53, pp. 30-32.
Goal 5: COMMUNITY ENGAGEMENT Strengthen partnerships to increase credibility, drive priorities and inform decision making	-Highway system safety: Before and After results for selected safety projects -Pedestrian & Bicyclist Safety: Change in serious injury and fatal collision rate	-Highway system safety: GNB 47, pp. 5-6. -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 (CVISN): Amount of money saved through use of CVISN -Tolling: Cost to collect tolls by facility and method	-CVISN: GNB 53, pp. 22-23. -Tolling: GNB 52, pp. 31-33.

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

WSDOT's Reforms At-a-Glance

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WSDOT has initiated 10 Reforms to implement common-sense changes that foster efficient, effective and accountable government. The Reforms support both Results Washington, Gov. Jay Inslee's mission for the state (see p. vii), as well as Results WSDOT, the agency's new strategic plan (see p. viii). Some of the Reforms can only be implemented with action from the Legislature. Expectations and performance measures for the Reforms will be incorporated into Results WSDOT and reported in future issues of the *Gray Notebook*.

WSDOT proposes 10 Reforms for efficient, effective, accountable government
Proposed to Washington State Legislature in November 2013

Reform	How WSDOT will achieve it	Progress
Develop a team committed to expedited project delivery		
Reform I: Ensure efficiency and accuracy through strong management direction See *Results WSDOT: Setting WSDOT's Direction* on p. viii	Developing a strategic plan that will serve as a roadmap for WSDOT. It will identify specific outcome measures and leading indicators to support each of the agency's goals.	Finalized vision, mission, values and goals providing the framework for the agency's new strategic plan. Currently identifying outcome measures and leading indicators to support each of the agency's goals that will be incorporated into implementation plans to ensure focus and alignment throughout the organization.
Reform II: Reward innovation in cost-effective design and construction management	Evaluating options for rewarding innovation in design and construction incentives; developing a contractual approach to allow alternate technical concepts during bidding; and, evaluating concepts to allow contactor-led value engineering and constructability reviews.	Actively evaluating options for rewarding innovation in design and construction incentives by allowing reinvestment of savings on other high-priority regional needs such as safety projects. In addition, WSDOT is developing a contractual approach to allow alternate technical concepts during bidding for design-bid-build projects and evaluating options to allow contractor-led value engineering and constructability reviews after a contract is executed and before work is started.
Reform III: Develop workforce See *Workforce Training Report* on p. 28	Making a development plan and exploring cost-effective ways to work on: Workforce Development – staff training in best industry practices; Leadership Development and Succession Planning – preparing the right employees for future executive level positions; retraining talent within the agency; and, Internship Programs – actively recruit interns for entry-level engineering positions.	The Develop Workforce reform team identified and agreed upon important components of organizational and individual development. They include, but are not limited to: management training options from entry to executive-level and the development of individual training plans taking into consideration core competencies and providing guidance for expectations to improve decision making agency wide. The team is currently developing the strategies necessary to bring these items to fruition.
Reform IV: Increase opportunities for disadvantaged business enterprise (DBE) See *FHWA Disadvantaged Business Enterprise Special Report* on p. 24	Taking actions to maximize disadvantaged business enterprise participation in WSDOT projects, identifying areas and processes where reform is necessary.	DBE Executive Committee formed. Thirty-eight tasks to increase and broaden DBE participation on WSDOT and local agency contracts are underway. Most of this work will be substantially completed by July 1, 2014.

Continued on p. x

WSDOT proposes 10 reforms for efficient, effective, accountable government

continued from p. ix

Reform	How WSDOT will achieve it	Progress
Implement programs that save money and mitigate risk		
Reform V: Implement Practical Design	Implementing a new approach to developing projects that targets transportation solutions for the lowest cost; assesses all components of project design at its earliest stages; and, engages local stakeholders in defining scope to ensure their input is given at the right stage of project design.	An executive order is being drafted and outreach is being conducted to regional design and construction offices to discuss Practical Design implementation.
Reform VI: Strengthen quality assurance protocols for increased accountability	Creating an independent audit verification program; streamlining quality assurance guidance utilizing Lean principles; and, creating a position for a quality assurance manager to assure WSDOT's quality assurance program is being effectively implemented.	WSDOT's supplemental budget request includes a new Quality Assurance management position who will report to the Secretary. This position will ensure a high level of quality across the agency. WSDOT is working with Senate staff to explain the position intent.
Reform VII: Expand and strengthen construction contracting methods and protocols	Implementing a thorough risk analysis protocol for choosing the appropriate contracting method for WSDOT projects; obtain authority for WSDOT to utilize additional contracting methods — in particular, general contractor/construction management (GCCM) method.	Working with the Legislature to draft a bill that authorizes a pilot program to implement GCCM. Draft bill language is being reviewed by staff.
Reform VIII: Implement vessel construction and maintenance improvements suggested by State Auditor's Office (SAO) and develop cost-effective protocols to staff every scheduled ferry sailing See *Ferries Quarterly Report* on p. 8.	Strengthening five leading practices identified in a State Auditor's Office audit and actively preparing to recruit for 81 positions to staff up to the appropriate level.	Olympic class vessel construction is progressing well with change orders totaling less than 1 percent of total shipyard contract cost. SAO recommendations will be more fully addressed during future vessel construction contracts. The following highlights some of Ferries Division's actions to address staffing challenges: directly hired able bodied seaman (A/B); working with the union to start a program to assist entry level ordinary seaman (OS) to advance to A/B — first class in late January and March; accelerated the annual summer hiring process for OS; continued 2nd mate Orientation & Training with a maritime training contractor to qualify mates for this summer; and, initiated discussions with the union to train and qualify terminal staff to serve on ferries when an unexpected vacancy occurs (subject to negotiations).
Establish cost-effective and efficiency measures to improve performance		
Reform IX: Lean, more cost-effective operations See *Lean Quarterly Report* on p. 30.	Removing duplicative tasks or unnecessary steps; training appropriate management staff in Lean management with a goal of identifying areas where cost savings can be gained and work can be done more efficiently.	WSDOT has initiated nearly 20 Lean projects since 2012 to improve the effectiveness of processes and better meet customers' needs. WSDOT has been actively learning more about Lean processes and how they will help address identified issues and improve the way the agency does business. WSDOT has seven current projects being measured and five additional Lean projects underway. WSDOT is developing the structure to support continuous improvement and create a Lean culture. More focused outreach and training and the use of an employee engagement will be part of the strategy.
Reform X: Streamline tolling operations, costs and efficiencies	Reducing overhead and eliminating duplicative tasks to make tolling operations more efficient and cost effective; implementing Lean practices, reviewing contracting methods, improving toll collection efficiency and evaluating toll-facility planning.	WSDOT Toll Division is in negotiations with two vendors for efficiencies and cost reductions. Two further Lean initiatives are underway.

Data source: WSDOT Proposed Reforms and their Status, February 2014.

Notable results

- *WSDOT requested membership in Washington Wellness' Team WorkWell, further committing to employee health and wellness*
- *More than 100 employees participated in pre-diabetes screening to date; those eligible may enroll in a diabetes prevention program*

WSDOT endorses focus on employee health, wellness

WSDOT leadership is embracing the opportunity to focus on employee health and wellness activities. In January 2014, the agency formally requested membership in Washington Wellness' Team WorkWell and pledged to develop a comprehensive and sustainable plan for WSDOT employees across the state.

Team WorkWell expects organizations to support and promote policies and activities that include

- increasing physical activity,
- improving healthy eating and food selection,
- living tobacco-free, and
- utilizing preventive services effectively.

"WSDOT is committed to improving the health and wellness of its employees through programs, health assessments, classes, workshops and lectures directed at addressing health concerns and providing participants with the skills, knowledge and opportunity to sustain a healthy lifestyle," said Assistant Secretary Katy Taylor.

The effort follows Gov. Jay Inslee's October 2013 signing of Executive Order 13-06 "Improving the Health and Productivity of State Employees and Access to Healthy Foods in State Facilities." Gov. Inslee has demonstrated his commitment to improve the health of state employees as well as to reduce health care costs through a variety of measures. These include the implementation of practices and policies related to healthy food, activity and behaviors, as well as new employee benefits that focus on chronic disease prevention and smoking cessation.

Wellness is not new to WSDOT. The agency provides annual opportunities for employees to be inoculated against the flu and whooping cough, in addition to preventative services such as mobile mammography. Also, community supported agriculture gives employees the opportunity to receive healthy produce at many of the agency's worksites.

A spring health fair held at WSDOT headquarters in Olympia supports the agency's Team WorkWell efforts.

Leadership support standard achieved

In order to be part of Team WorkWell, WSDOT must accomplish eight standards; the agency's goal is to meet these by the end of 2014. Progress is expected to be reported in future editions of the *Gray Notebook*.

The first standard was achieved when WSDOT formally requested Team WorkWell membership. The second standard, forming a wellness team that includes WSDOT employees across the state, is in process. The third standard requires WSDOT to gather data regarding its employee population and use the information to plan relevant activities and educational opportunities. Other standards involve goal setting, implementation of activities, establishing policy and structural support, program promotion and feedback.

WSDOT is developing a food and beverage policy that ensures healthy options are available in worksite cafeterias and in vending machines, and at meetings or events (when applicable).

Contributors include Kathy Dawley, A'Lana Neal, Kathy Radcliff, Bruce Ikenberry and Yvette Wixson

Agency takes aim at diabetes through "Not Me"

Based on national numbers, WSDOT estimates that almost 700 employees have diabetes while another 2,300 are considered pre-diabetic, about 33 percent of the workforce. Recent screenings helped employees identify if they are at risk for the condition. WSDOT is partnerning with the Public Employees Benefits Board to offer those who qualify a worksite-based 16-week prevention program called "Not Me."

53 Safety Rest Areas Annual Report

Notable results

- *Visits to safety rest areas dropped 6.7% between 2012 and 2013, to 20.8 million*
- *WSDOT met its safety rest areas maintenance goals in 2013*
- *Serious, fatigue-related collisions near the Elbe Safety Rest Area in Pierce County have declined by 66% since 2012*
- *Safety rest area condition assessments show no rest areas are in poor condition*

Rest area use estimates down in 2013 to 20.8 million

An estimated 20.8 million visitors used WSDOT's safety rest areas in 2013, which is about 1.5 million or 6.7 percent less than the 22.3 million visitors estimated in 2012, and more in line with the 20.5 million visitors estimated in 2011. WSDOT's 48 rest areas contribute to improved safety on Washington's highways by providing the traveling public with opportunities to take a break from driving. Visitor estimates are generally based on water use.

Benefits to the traveling public include restrooms, travel information and picnic areas

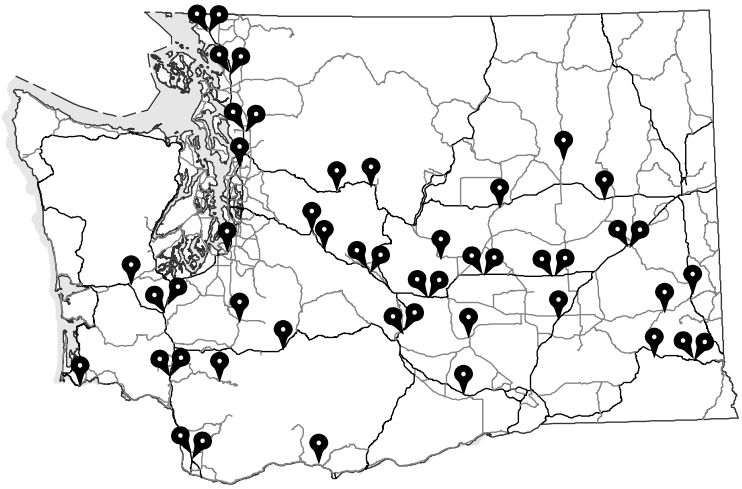
Preservation needs grow as facilities age

Many of WSDOT's safety rest areas are approaching 30 years old. Some updates are needed to comply with current sewer and water standards. Others need replacement because of maintenance and repair costs due to age and use. The highest priority is to maintain, operate and preserve building and system assets to extend their useful life. Maintenance activities are conducted to maximize the lifespan of rest area facilities. The age of rest areas is a major contributing factor to the growing maintenance preservation backlog.

Maintenance scores a "B"

While use was down slightly, safety rest areas again met their maintenance goals and scored a "B" rating through the calendar year 2013 Maintenance Accountability Process (MAP). Maintenance activities at safety rest areas are measured on an A+ through F- grading scale. The MAP scores are based on service delivery results that are rated against established benchmarks. These benchmarks tie into the maintenance program goals. See *Gray Notebook 52, pp. 12-13* for more information about MAP in 2013.

WSDOT grades safety rest areas' maintenance on items like cleanliness of buildings, non-operable building/utility systems (examples include hand dryers, soap dispensers and recreational vehicle [RV] dump stations) and appearance of landscaped areas, sidewalks and pavement. *Gray Notebook 32, p. 19* has a detailed overview of the rating scale.



*Rest area locations are approximate

This map is interactive. Click the map to find the most up-to-date information about WSDOT's safety rest areas.

WSDOT operates 48 safety rest areas in Washington state, 20 with recreational vehicle dump stations. Twenty-eight rest areas are located on the interstate highway system, each approximately 30 to 45 miles apart. This is consistent with the Federal Highway Administration's recommended spacing guidelines for highways and major arterials. Another 20 rest areas are located on state routes and are particularly vital due to their more remote locations in areas with limited public services. The annual visitor use is much greater at the interstate sites, which are heavily used by commercial truck drivers.

Preservation backlog increases with limited funds

Backlog up 69 percent to $24.4 million

WSDOT's safety rest area backlog for preservation climbed to $24.4 million in 2014, a 69 percent increase from the $14.4 million reported in 2012. There are several factors for the increased preservation backlog. Inflation and aging facilities are contributors, but a significant increase is due to the identification of large sewer and water projects. There are several newly identified sewer lagoons, drain fields, and water lines that require replacement and/or repair. Because these systems are generally old, below the ground and difficult to inspect, the need is typically identified when failure occurs.

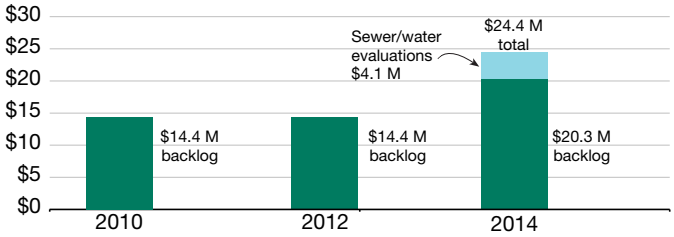
Newly identified sewer lagoons, drain fields and water lines require replacement or repair

Included in the backlog is $4.1 million in additional sewer and water work needed primarily at three sites; more critical systems are expected to be identified as failure occurs and systems age.

Among the sewer and water backlog, the drain field at the Ryegrass westbound safety rest area located on Interstate 90 (I-90) is expected to cost $1.7 million and the Custer southbound sewer line replacement cost is expected to be just under $1 million. Two projects at Sprague Lake, on the eastbound side a sewage lagoon, and on the westbound side a water reservoir installation, together are expected to cost just under $1 million. Three smaller projects comprise the rest of the backlog, including the Smokey Point north- and southbound water line replacement, Selah Creek eastbound water reservoir installation, and Winchester water line.

Other preservation deficiencies include building systems such as heating, ventilation, air conditioning and lighting systems, roofs, plumbing fixtures and partitions, flooring, and site elements such as paving, sidewalks and lighting. See *Gray Notebook* 49, p. 10 for more information on how safety rest area preservation backlog is defined.

WSDOT rest area preservation backlog grows
2014 compared to 2010 and 2012; Dollars in millions



Data source: WSDOT Capital Facilities.

Preservation backlog strategy: replace, rehabilitate or refurbish

As funding for safety rest areas continues to decrease and the preservation backlog grows, there is an increased risk that some rest areas may become inoperable.

Strategies to address the preservation backlog within current fund limits include replacing, refurbishing or rehabilitating within three primary systems: utility, building and site.

For utility systems including sewer, water and electrical, the goal is to meet regulatory requirements and/or reduce maintenance costs. For example, it can be less expensive to maintain utility systems in good working order than to have to pay an added expense for portable toilets because the plumbing has failed.

For building systems, the work is to assure that components like roofs, doors, surfaces and fixtures meet regulatory requirements and/or their service life is extended as much as possible. For site systems components like parking, lighting and landscaping the goal is to meet regulatory requirements, meet demand, improve security and safety, and/or minimize maintenance costs.

Projects are delivered within three budget categories: major projects, recreational vehicle dump projects and minor projects. Multiple deficiencies at one safety rest area or projects with combined costs greater than $100,000 are categorized as major projects. These projects

WSDOT safety rest area preservation funding projected to decline in the next three bienniums
2013-2015 through 2019-2021 bienniums; Current and projected safety rest area preservation funding by biennium

	2013-2015	2015-2017	2017-2019	2019-2021
Funding (current or projected)	$4 million	$2.9 million	$2.5 million	$1.7 million

Data source: WSDOT Capital Facilities.

Projects prioritized based on condition assessment

often involve building renovations and replacements, and include most water and sewer rehabilitations. Major projects are prioritized separately from minor projects to address multiple deficiencies at one site.

No rest areas in poor condition

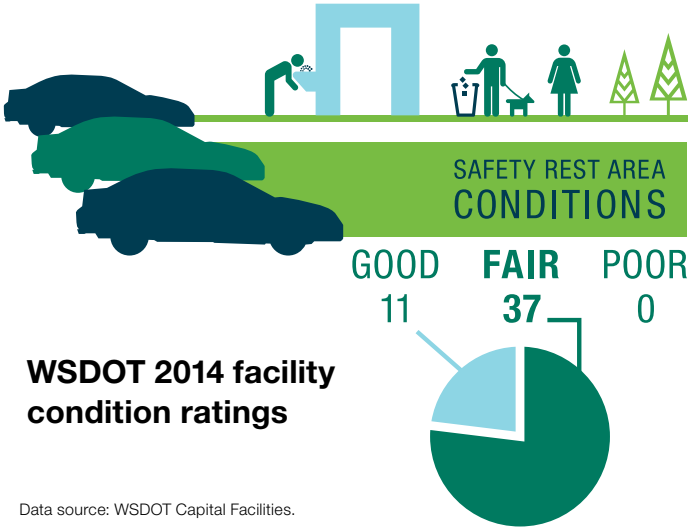
Facility condition ratings at safety rest areas were steady from 2012 to 2014, with 11 rest areas in good condition, 37 in fair condition and none in poor condition. Most of these rest areas were built between 1967 and 1978, and in 2014 the majority have at least one system (building, water or sewer) beyond their expected service life, which adds to the preservation backlog.

A primary goal for WSDOT is to ensure no safety rest area is rated in poor condition. In 2010, the Vernita rest area, which opened in 1967, was rated in "poor" condition. The rest area had multiple building and site deficiencies. A $1.4 million project was completed in 2012 to replace the building, repair pavement and install site lighting. Vernita is now rated in good condition. See *Gray Notebook* 45, p. 12 for more information on how safety rest area condition is assessed.

Projects address multiple deficiencies

Two heavily used safety rest areas, SeaTac and Gee Creek had multiple deficiencies identified by site users, maintenance staff, and were documented in condition assessments following Federal Highway Administration design guidelines. A $1.3 million project at the SeaTac Safety Rest Area along northbound I-5 renovated the existing restroom building, added a second restroom building, replaced the recreational vehicle (RV) dump stations, expanded the RV staging area to improve site circulation and address drainage issues. It began in summer 2013 and was completed in fall 2013.

Renovations to SeaTac Safety Rest Area were completed in fall 2013 and added a restroom building, replaced RV dump stations, expanded the RV staging area and improved site circulation.



Data source: WSDOT Capital Facilities.

Gee Creek project goes to bid again

WSDOT has a $1.3 million project planned at the southbound Gee Creek Safety Rest Area on I-5 north of Vancouver, Washington to construct two new buildings, demolish the old structure and address other site deficiencies. The project was advertised in summer 2013 but all bids exceeded the budgeted amount and were rejected. The project will be re-advertised in spring 2014, with construction expected in fall 2014, and completion by spring 2015.

Recreational vehicle dump station preservation projects total $1.6 million

Recreational vehicle dump stations at safety rest areas are maintained and preserved with funds from a dedicated RV account of $1.6 million for the 2013-2015 biennium. Major rest area RV dump station rehabilitation projects addressed this biennium include those at Gee Creek northbound located on I-5, Silver Lake southbound on I-5, Sprague Lake eastbound on I-90 and Selah Creek both east- and westbound on I-82. Other rest area projects include a dump station replacement project at Gee Creek southbound on I-5, a sewer renovation project at Smokey Point northbound/southbound on I-5 and a dump station lighting renovation project at Prosser located on I-82.

Minor projects include storage, plumbing and preservation

In the 2013-2015 biennium, WSDOT plans to deliver $60,000 in safety rest area projects that address building storage and plumbing issues, and $207,000 in preservation projects that address needs such as sidewalk repair, interior surface repair or replacement, roofing replacement and building renovation projects.

Projects like sidewalk repair emphasize safety

These projects are considered minor as they involve building or site renovations that each cost less than $100,000. WSDOT prioritizes minor rest area preservation projects within three categories.

Occupant projects are those that feature hazardous site or building components that jeopardize the health and safety of staff, the public, the environment, and/or are immediate violations of local, state or federal codes and regulations. Preservation projects involve replacement or repair of frequently failing systems or systems with high risk of failure requiring consistent corrective maintenance. Operational projects are those where there is Insufficient building space or requiring site improvements that impact critical operations.

Sponsorship programs considered

WSDOT is looking at opportunities to leverage new federal rules that increase a state's ability to expand services at safety rest areas when the current Traveler Information contract expires next year. Moving Ahead for Progress in the 21st Century was introduced in 2012; it authorizes limited commercial activities and permits the flexibility to pursue innovative sources of financing, sponsorships, and partnerships to pay for the operation, maintenance or construction of rest areas.

WSDOT is pursuing innovative sources to help pay the costs of operating, maintaining and constructing rest areas

In addition to pursuing a National Adopt-A-Watt Program sponsorship of site lighting at Scatter Creek Safety Rest Area (see *Gray Notebook* 49, p. 8), WSDOT expects to have a statewide Safety Rest Area Sponsorship agreement in place by mid-2015. This agreement has the potential to provide travelers with improved access to local and state road conditions, general travel information and local attractions by allowing acknowledgement signing within the rest area and along the highway.

Electric vehicle charging stations show low demand

In early 2012, electric vehicle service equipment charging stations were installed as demonstration projects for the West Coast Green Highway Project at two border-entry I-5 rest areas: northbound Gee Creek near Vancouver, Washington and southbound Custer near the Canadian border. Data shows there isn't too much demand yet, with a total of 286 charging sessions and 1,675 kilowatts of power used in 2013.

An information kiosk at the Gee Creek Safety Rest Area off Interstate 5 near Vancouver, Washington promotes the West Coast Green Highway.

Each rest area provides two stalls and an information kiosk to promote the West Coast Green Highway Project. The stalls use single phase 240 volt power (similar to a clothes dryer), which takes two to eight hours to recharge an electric vehicle battery depending on its level of depletion.

No fees are assessed to users. To monitor use, electrical service meters were installed at each site. A sponsorship agreement with Adopt-A-Charger and the Seattle Electric Vehicle Association covers utility expenses for the duration of the demonstration project, which lasts through October 2014, and may be extended into 2015.

Serious, fatigue-related collisions decline near WSDOT's newest safety rest area in Elbe

There has been only one serious, fatigue-related collision near the Elbe Safety Rest Area in the two years since it opened. There were three serious, fatigue-related collisions in the two years prior to the facility opening in January 2012, a 66 percent reduction in serious fatigue-related collisions.

Fatigue-related collisions are defined as collisions in which the driver being "apparently asleep" or "apparently fatigued" are contributing circumstances reported by the responding law enforcement officer. Serious collisions for the purpose of this report are defined as collisions that result in a fatal, serious or evident injuries reported by the responding officer.

WSDOT analyzes collision data near new safety rest areas three years before and three years after they are built to determine their impact on serious fatigue-related collisions. Other contributing factors that improve safety on Washington's highways, such as shoulder and centerline rumble strips can be found in *Gray Notebook* 42, p. 6.

Truck parking study evaluates capacity of rest areas

The shortage of truck parking can contribute to truckers driving while fatigued and parking illegally, creating a safety hazard on highways. The WSDOT Truck Parking Study (published in 2005) evaluated the adequacy of truck parking along three long haul truck corridors in the state: I-5, I-90, and I-82.

Looking at existing conditions in 2005 and projections for 2030, the study concluded that without added truck parking capacity, all study corridor segments and the majority of public rest areas are forecasted to substantially exceed capacity by 2030 – meaning that the demand for parking spaces is expected to be much higher than the number of available spaces.

The south segment of northbound I-5, Vancouver, Washington to Olympia, and the west segment of westbound I-90, Seattle to Vantage, do not have enough truck parking capacity during the peak period, which is nighttime. The central segment of northbound and southbound I-5, Olympia to Marysville, does not have any legal truck parking at public facilities.

Demand for truck parking at rest areas is expected to exceed capacity by 2030

Five public rest area facilities had average truck parking demands that were consistently greater than available capacity. These are Scatter Creek, Maytown, Gee Creek and Smokey Point – all on I-5; and Sprague Lake on I-90.

A 2008 survey of truck drivers and trucking companies found that the highest priority locations for new or expanded truck parking are along the I-5 corridor within the Seattle, Tacoma, and Federal Way areas, in that order. The need for improved and expanded truck parking facilities at the chain-up locations on both sides of Snoqualmie Pass is the fourth priority. Both the 2005 and 2008 studies are still relevant, as no new public truck parking has been added to the high-demand Truck Freight Economic Corridors.

Lack of truck parking capacity not only has the potential to cause safety problems, it has a negative impact on communities in high-demand areas. For example, the city of North Bend is inundated with trucks parking on local roads when Snoqualmie Pass is closed in the winter.

Although public rest areas on the national highway system play a role in supporting truck parking demands, they were never intended and will never be sufficient to meet the demand for truck parking. According to the 2002 Federal Highway Administration "Study of Adequacy of Commercial Truck Parking Facilities" the major responsibility for providing parking for commercial vehicles should remain in the private sector.

Because driver fatigue is a major safety concern, the Federal Hours of Service rule changed in July 2013; this exacerbates the state's truck parking problem as it shortened the number of hours truck drivers may work. This rule change means that drivers must stop for rest more frequently and need increased access to safe, secure, and legal truck parking facilities.

New accounting method captures maintenance, operations costs

In July 2013, WSDOT changed the way safety rest area expenditures were recorded to ensure they could be associated with a specific facility. Previous accounting used a stretch of highway as the location where funds were expended, rather than the rest area itself, which resulted in a majority of rest area expenditures being combined with other facilities.

Identifying rest area expenditures by facility gives WSDOT a better perspective on what it takes to operate and maintain them. Under the previous system, in eastern Washington, for example, expenditures of four rest areas were grouped together. This made it difficult to understand what it cost to maintain each of those facilities (building repairs, janitorial efforts, landscaping, etc.). The change allows WSDOT to identify and analyze expenditures for each rest area independently. The 2013 data sets a baseline by which facilities can be measured in the future.

Contributors include Steve Holloway, Rachel Knutson, Yvonne Medina, Thanh Nguyen, Zak Swannack, Dennis Tate, Tony Trask, Anna Zaharris and Yvette Wixson

$ WSDOT's safety rest area maintenance budget for calendar year 2013 was just under $6.4 million, with expenditures $14,465, or 0.23 percent more than those planned. Achieving safety rest area maintenance goals depends on having adequate funds to support the resources needed. Funding in 2013 allowed WSDOT to meet service delivery goals. Maintenance work performed by the crews includes maintaining a clean rest areas for travelers by conducting janitorial and grounds-keeping activities, along with keeping plumbing and electrical items operating to ensure the rest area functions for the traveling public.

WSDOT Ferries Division: Annual Report Summary

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	Policy goal/Performance measure	Prior (FY2012)	Current (FY2013)	Goal	Goal met	Comments
Maintenance and Capital Program Effectiveness						
1	Percent of **terminal projects** completed **on time**	91%[1]	86%	90%	—	Does not meet on time goal for terminal projects in FY2013; decreases from FY2012
2	Percent of **terminal projects** completed **on budget**	91%	93%	90%	✓	Exceeds on-budget goal for terminal projects in FY2013; increases from FY2012
3	Percent of **vessel preservation and improvement** projects completed **on time**[2]	88%[1]	100%	75%	✓	Exceeds on time goals for vessel preservation and improvement projects; increases from FY2012
4	Percent of **major vessel preservation and improvement** projects completed **on budget**[2]	100%[1]	92%	75%	✓	Exceeds on-budget goals for vessel construction, preservation and improvement projects; decreases from FY2012
14	**Preliminary engineering costs**[2] • As a percent of **terminal capital** project costs • As a percent of **existing vessel capital** project costs	25% 17%[3]	18% 9%[3]	15%[4] 17%[4]	— ✓	Terminal capital projects misses its goal and existing vessel projects makes its goal; both trend in a positive direction from FY2012
15	Average **vessel out of service** time	7.8 weeks	7.5 weeks	8 weeks	✓	Better than the out of service time goal; shows improvement from FY2012
Safety Performance						
5	**Passenger injuries** per million passenger miles below three-year moving average	0.092	0.115	Less than 0.080	—	Does not meet the goal. The number of passenger injuries increases from FY2012; slightly above the three-year moving average
6	**OSHA**[5] **recordable crew injuries** per 10,000 revenue service hours	5.9	6.2	8.9[4, 6]	✓	Is below the target and meets the goal level; number of OSHA recordable crew injuries increases from FY2012
Service Effectiveness						
7	Passenger satisfaction with Ferries' staff **customer service**	95%	95%[7]	90%	✓	Exceeds passenger satisfaction for customer service goal; unchanged from FY2012
8	Passenger satisfaction with **cleanliness and comfort** of Ferries terminals, facilities and vessels	90%	90%[7]	90%	✓	Meets customer satisfaction for cleanliness and comfort goal; unchanged from FY2012
9	Passenger satisfaction with **service requests** made via telephone or Ferries website	89%	74%[7]	90%	—	Is below goal for passenger satisfaction with service requests; sharp decline from FY2012
16	**On time**[8] **performance level** (percent of trips departing at scheduled time)	96.1%	95.7%	95%	✓	Exceeds on time performance level goal; slight decline from FY2012
17	**Service reliability level** (percent of scheduled trips completed)	99.6%	99.4%	99%	✓	Meets service reliability level goal; slight decline from FY2012
Cost Containment Measures						
10	**Annual operating cost estimate per passenger mile** compared to budgeted cost	-1.86%	-3.44%	Within 5% of budget	✓	Exceeds goal for annual operating cost per passenger mile; increase from FY2012
11	**Annual operating cost estimate per revenue service mile** compared to budgeted cost	-1.6%[9]	-2.5%	Within 5% of budget	✓	Surpasses goal for annual operating cost per revenue service mile; increase from FY2012
12	**Overtime hours** as a percentage of straight time hours compared to budgeted overtime hours	+0.38%	+0.56%	Within 1% of budget	✓	Exceeds goal for annual overtime as a percentage of straight time; slight increase from FY2012
13	**Gallons of fuel consumed per revenue service mile** compared to budgeted fuel consumption	-0.7%	-1.69%	Within 5% of budget	✓	Exceeds goal for fuel consumption per revenue service mile; slight increase from FY2012

Data source: WSDOT Ferries Division

Notes: Goals above are grouped and the numbers are out of sequence to match those used in the State of Washington Office of Financial Management (OFM) reporting. All reporting periods are based on fiscal years (FY). Prior reporting period is FY2012 (July 2011 through June 2012) and current reporting year is FY2013 (July 2012 through June 2013) unless otherwise noted. 1 FY2012 percentage adjusted from *Gray Notebook* 47 and the FY2012 Ferries Division Performance Report to match standard WSDOT Legislative baseline. 2 No new vessels were constructed in FY2013 so the comparison to FY2012 was removed for these measures. 3 Preservation and improvement projects on existing vessels. Measure No. 14 goal varies annually depending on project type as defined in the Cost Estimating Manual for WSDOT Projects. 4 FY2012 data changed due to an earlier reporting errors. 5 OSHA = Occupational Safety and Health Administration. 6 As a part of a five-year plan through 2016, the goal decreases annually toward the industry standard of 7.6 or fewer injuries per 10,000 revenue service hours. 7 Percentages include neutral responses from customers. 8 On time percentage includes any vessels leaving the dock within 10 minutes of the scheduled departure time. 9 The FY2012 percentage was adjusted from -2.02% in *Gray Notebook* 47 and 2.0% in the FY2012 Ferries Division Performance Report to capture all year-end operating costs.

53 WSDOT Ferries Division Quarterly Update

Notable results

- ***WSDOT Ferries Division exceeded the reliability goal of 99% and remained above its 95% on time performance goal***
- ***Ferries farebox revenues were up 3.1% ($970,000) compared to the same quarter in fiscal year 2013***

Farebox revenues reach highest level for quarter

WSDOT Ferries Division's (Ferries) farebox revenues continue their upward trend, coming in at $32.6 million for the third quarter of fiscal year (FY) 2014, the highest yet for the winter quarter (January through March). Farebox revenues were $970,000 (3.1 percent) higher than the third quarter of FY2013 — and $172,000 (0.5 percent) more than projected in September 2013 — in line with the state's economic and population growth forecasts.

Ridership increases continuing

Ridership is also trending upward. Riders took more than 4.7 million trips on ferries during the third quarter of FY2014 (approximately enough people to fill every seat at Seattle's CenturyLink and Safeco fields 41 times). This is about 23,000 (0.5 percent) less than projected in September 2013. At the same time, ridership was 17,600 more (0.4 percent) than the same quarter in FY2013.

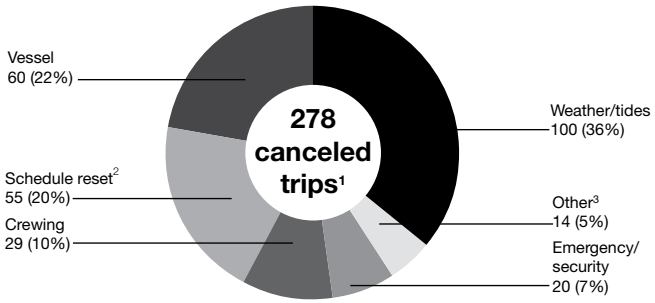
There were more than 2.1 million vehicle trips on ferries this quarter. Ferries give drivers and riders the option of direct cross-water routes between communities and reduce the number of vehicles on already busy state highways. If 2.1 million vehicles lined up, they would stretch from Seattle to Miami, Florida and back. Removing those vehicles from sections of Interstate 5 and numerous state routes improves traffic flows in portions of western Washington.

WSDOT's new strategic plan emphasizes modal integration and environmental stewardship through reduced greenhouse gas emissions (see p. viii).

Ferries tops annual reliability goal despite tides and weather issues

Ferries missed seven more trips in the third quarter of FY2014 than during the same period in FY2013, 177 compared to 170. Ferries canceled 278 trips and was able to replace 101 of them, which resulted in the 177 net missed trips for the quarter.

Weather, tides top reasons for canceled ferries trips
Third quarter (January through March), fiscal year 2014



Data source: WSDOT Ferries Division.
Notes: 1 Of the 278 canceled trips, Ferries replaced 101. 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 or non-Ferries related incidents that can impact operations.

There were 38,726 regularly scheduled trips during the third quarter of FY2014. Ferries made 99.5 percent (38,549) of them, exceeding its reliability performance goal of 99 percent (see table on p. 9).

Tides and weather accounted for 100 cancellations with all of those occurring on the Port Townsend – Coupeville route. Eight vessels experienced mechanical issues accounting for 60 cancellations in the quarter. Mechanical difficulties with the Motor/Vessel (M/V) *Sealth* resulted in 29 trip cancellations in six days, which affected domestic service in the San Juan Islands.

Crewing issues accounted for 29 cancellations in the quarter, 25 more than the same quarter last year. This is a result of the U.S. Coast Guard requiring more staff with higher training requirements on multiple vessel classes. Filling these new positions and those opened through the retirements of more experienced senior staff decreased the pool of available qualified replacements.

On time performance was 0.9 percentage points lower than the same quarter in FY2013, decreasing from 97.8 percent to 96.9 percent for the third quarter of FY2014. Ferries remained above its annual on time performance goal of

On time performance improves on five of nine routes

95 percent. On average, 13 out of 428 daily trips did not leave the terminal within 10 minutes of the scheduled departure time in the third quarter of FY2014. While this is a 31 percent increase from the nine daily trips that were late during this period last year, compared to the same quarter last year, on time performance varied less than 1 percent on five of nine routes.

The San Juan domestic route had a drop of 6.1 percentage points to 90 percent for the quarter due to mechanical problems on the M/V *Sealth*, M/V *Evergreen State*, and M/V *Hiyu*. WSDOT assigned other vessels to the route, while addressing the mechanical issues. Due to the smaller size and slower speeds of replacement vessels, they were unable to maintain the schedule and ran late on this route.

On time performance improved by 3.5 percentage points to 96.5 percent on the Port Townsend – Coupeville route due to the completion of construction work at Port Townsend terminal last year. The on time performance increased 31.3 percent points to 100 percent on the Anacortes/Friday Harbor – Sidney, B.C. route (see the chart below for additional route information).

Rider complaints increase due to service disruptions in San Juans

Out of the 4.7 million riders served during the third quarter of FY2014, Ferries received 315 complaints and 32 compliments. This is a slight increase from the 291 complaints and 33 compliments from the same quarter in FY2013. The largest increase in complaints as compared to the same quarter FY2013 was in the "General Service" category, which increased from nine to 41. This increase was fueled by dissatisfaction with employee interactions at the terminals, and service disruptions on the San Juan domestic run. The next largest increase was crewing complaints, which increased from three to 23, and reflected service impacts from absent or late crew members.

There were five categories that saw a drop of between nine and 13 complaints this quarter compared to the same quarter last year. Those categories were Ticketing Issues (-13), Signage (-12), Miscellaneous Issues (-10), Schedule (-9), and Downsizing (-9).

Contributors include Matt Hanbey, Kynan Patterson and Joe Irwin

Crew rescue effort was impressive

I wanted to compliment the crew on the morning ... the crew assisted a small vessel and a man overboard... The crew was professional, knowledgeable, and efficient in their efforts as they worked with the Coast Guard to save the man. I especially appreciated that the announcement was made that "this is not a drill".... Then we witnessed the event from the windows. Thanks to your training and the crew for helping this sailor get out of the water and to safety!

Ferries' on time performance and trip reliability exceed goals for the third quarter of fiscal year 2014

Third quarter (January through March), FY2013 and FY2014; Annual on time goal = 95 percent; Annual reliability goal = 99 percent

	On time performance				Trip reliability			
Route	**FY2013**	**FY2014**	**Status**	**Trend**	**FY2013**	**FY2014**	**Status**	**Trend**
San Juan Domestic	96.1%	90.0%	-6.1%	↓	99.8%	99.5%	-0.3%	↓
Anacortes/Friday Harbor – Sidney, B.C.	68.8%	100%	+31.3%	↑	100.0%	100.0%	0.0%	↔
Edmonds – Kingston	99.5%	99.8%	+0.3%	↑	100.0%	99.9%	-0.1%	↓
Fauntleroy – Vashon – Southworth	97.2%	96.4%	-0.8%	↓	99.7%	99.7%	0.0%	↔
Port Townsend – Coupeville	93.0%	96.5%	+3.5%	↑	94.5%	94.4%	-0.1%	↓
Mukilteo – Clinton	99.6%	99.5%	-0.1%	↓	99.9%	100%	+0.1%	↑
Point Defiance – Tahlequah	99.5%	99.7%	+0.2%	↑	99.9%	100%	+0.1%	↑
Seattle – Bainbridge Island	98.3%	97.8%	-0.4%	↓	100.0%	99.8%	-0.2%	↓
Seattle – Bremerton	97.8%	98.6%	+0.8%	↑	99.4%	100%	+0.6%	↑
Total	**97.8%**	**96.9%**	**-0.9%**	↓	**99.6%**	**99.5%**	**-0.1%**	↓

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.

53 Rail: Amtrak Cascades Quarterly Update

Notable results

- *Between January and March 2014, 91,400 riders traveled between Seattle and Portland on Amtrak Cascades*
- *Of the 20 federally funded rail projects, eight are in construction and three are complete as of March 2014*

WSDOT finalizes rail plan

The Washington State Rail Plan was approved by the Federal Railroad Administration in February 2014, and the final plan was signed by Secretary Peterson in March. The plan serves as a strategic blueprint for future public investment in the state's rail system. It provides an integrated plan for freight and passenger rail, including 5- and 20-year funding strategies, which meet federal and state requirements. It contains analysis of rail volumes using 2010 as a base year with forecasts to 2035. Amtrak Cascades also supports Results WSDOT, the agency's strategic plan, by helping optimize multimodal system capacity (see p. viii).

> In order to address rail system challenges and identify opportunities for improvement, the Washington State Rail Plan describes the rail system and state's interest in it, identifies potential public actions to improve the rail system and recommends policies for state action consistent with Washington's transportation policy goals of economic vitality, preservation, safety, mobility, environment and stewardship.
>
> *-Lynn Peterson, WSDOT Secretary of Transportation*

Funding and implementation of this plan will rely on a mix of private and public actions, including public-private partnerships. The plan identifies fully funded projects in the near term, and highlights policy and planning efforts needed to focus investments in the long term.

The plan focuses on actions that can be completed with existing resources, or with minimal near-term investment. It provides a flexible framework to consider solutions in a multimodal context, and recommends prioritization based on performance measures. The plan is available at http://www.wsdot.wa.gov/Rail/staterailplan.htm.

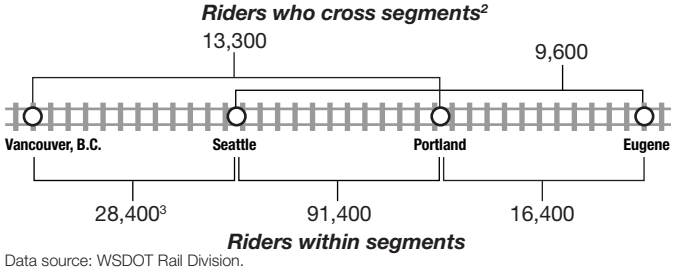
Ridership drops slightly in 2014

Approximately 163,000 riders traveled on Amtrak Cascades between Vancouver, B.C., and Eugene, Oregon, from January through March 2014, or about 1,811 riders per day. This was a decline of about 3.6 percent from 169,000 riders during the same period in 2013. WSDOT tracks ridership within and between major destinations and along the entire route to help guide decision making for capital investment and service expansion.

Due to the federal Passenger Rail Investment and Improvement Act (PRIIA), which took effect in October 2013, the states of Washington and Oregon became solely responsible for funding the operations of Amtrak Cascades. Before PRIIA, Amtrak funded one of the four daily round trips between Seattle, Washington, and Portland, Oregon. Due to this change, comparing ridership by funding entity in the first quarter of this year with previous years is not possible. Therefore, a comparison of the ridership by segment, rather than funding entity, is being reported.

WSDOT divides the Amtrak Cascades service into three segments: Vancouver, B.C., to Seattle; Seattle to Portland; and Portland to Eugene, Oregon. There are two cross-segments, one between Vancouver, B.C., and Portland, and the other between Seattle and Eugene. A cross-segment rider travels from one segment into another segment. For example, a traveler who boards the train in Bellingham and gets off in Olympia crosses from the Vancouver, B.C./Seattle segment to the Seattle/Portland segment.

Amtrak Cascades ridership by segment
January through March 2014; Total ridership = 163,000[1]



Data source: WSDOT Rail Division.

Notes: Ridership numbers are rounded. 1 There were about 3,900 riders who were either unidentified by Amtrak or deferred their trip to another date. 2 Riders who cross segments are riders who use a through-train (when a rider boards the train in one segment, then gets off the train in another segment, i.e., boards in Bellingham and gets off in Olympia). 3 Sound Transit RailPlus riders are counted in the Vancouver, B.C. to Seattle segment.

Rail projects still on schedule for 2017 completion

Eleven of 20 federally funded rail projects are under construction or complete

WSDOT had eight passenger rail projects in the construction phase and nine projects in the design phase during the first quarter of 2014. Work includes purchasing new locomotives, adding tracks to handle increased train traffic, and upgrading tracks, signals and stations. More than 96 percent of the $795 million in federal funding for these projects comes from the American Recovery and Reinvestment Act (ARRA) of 2009. For more information on the federally funded rail projects, see *Gray Notebook 52, p. 22*.

Vancouver New Middle Lead project moves into construction in March

WSDOT started construction of the new middle lead track in March 2014. It is scheduled to be completed by the end of the year. The additional lead track will connect to BNSF's north-south (Seattle to Fallbridge) and east-west (Fallbridge to Pasco) mainlines. Work includes removing and rebuilding tracks, turnouts and at-grade crossings, and is funded through a $12.6 million ARRA award.

The new middle lead is one of the three federally funded rail improvement projects in Vancouver, Washington, that will help reduce freight train interference with Amtrak Cascades passenger trains. The new track will meet two of the program goals for Amtrak Cascades: it will increase capacity on the north-south mainline and, it will improve on-time performance between Portland and Seattle.

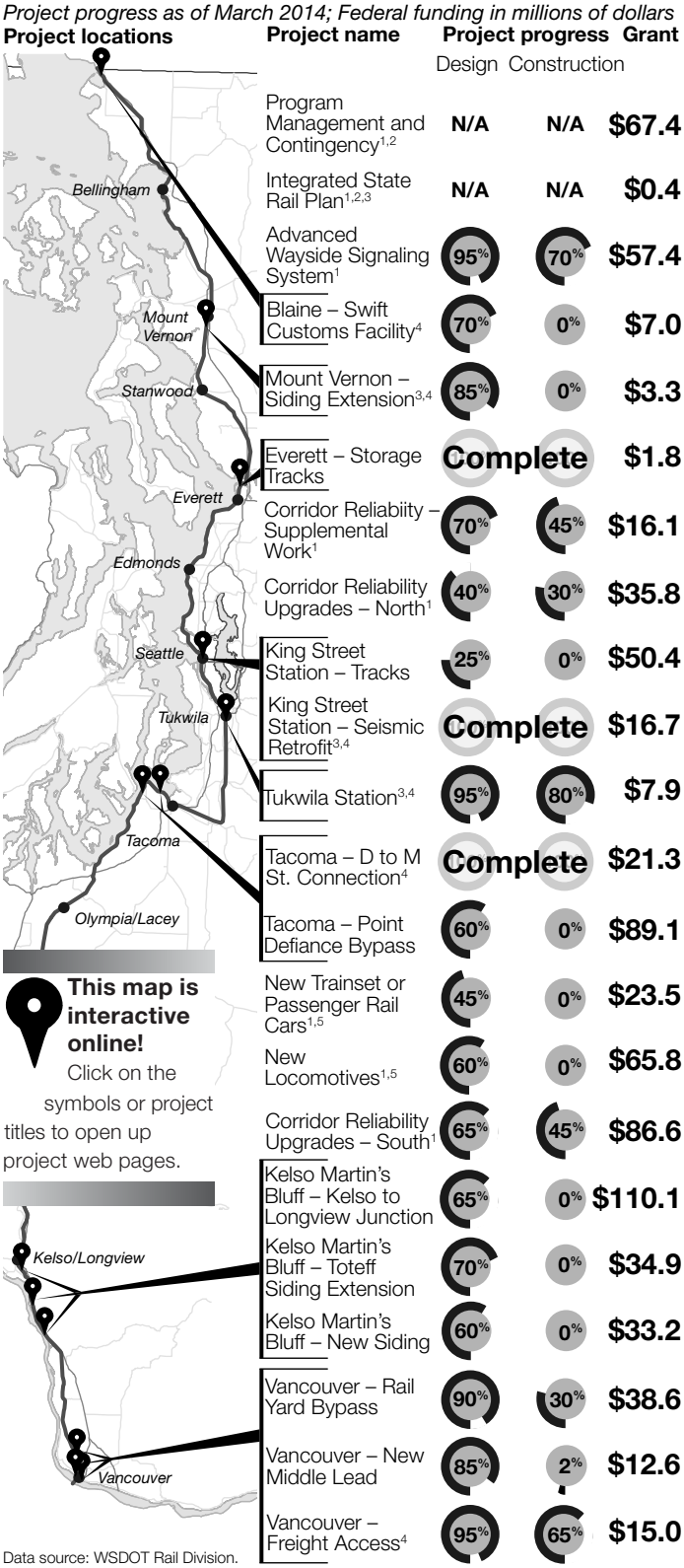
WSDOT completes Hoquiam Horn Spur railroad improvements

A ribbon-cutting event in March 2014 celebrated the completion of the Hoquiam Horn Spur freight railroad project. WSDOT managed the $350,000 Federal Railroad Administration grant used toward the construction cost for the project, which was funded by the Rail Line Relocation and Improvement Program. The new structure helps prevent boats from hitting the Hoquiam River Railroad Bridge, which is essential to transporting goods to the nearby port and businesses. Composed of 16 steel pilings driven into the riverbed and extending above the water level, the dolphin barrier is encased on the sides and top with a diamond-shaped metal frame, and protected with plastic materials to cushion minor boat impacts. The new structure replaces a wood pile barrier damaged by storm debris during a 2007 flood.

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

WSDOT makes progress on $795 million in rail projects

Project progress as of March 2014; Federal funding in millions of dollars



Data source: WSDOT Rail Division.

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

53 Incident Response Quarterly Update

Notable results

- *WSDOT teams helped clear 11,333 incidents this quarter, providing an estimated $17.4 million in economic benefit*
- *Statewide incident responses went up 20.6% while clearance times improved 4.6% this quarter compared to the same quarter in 2013*

Incident Response teams help at 11,333 incidents

WSDOT's Incident Response (IR) teams responded to 11,333 incidents in the first quarter of 2014 (January through March). This averages to a WSDOT IR team assisting at an incident every 11.4 minutes during the quarter. Incident Response teams cleared incidents in an average of 12.4 minutes. Teams responded to 1,937 — about 20.6 percent — more incidents during the first quarter of 2014 compared to the same quarter in 2013. At the same time, the average incident clearance time was about 36 seconds faster.

In general, 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 crashes that occur in traffic after another incident and may be caused by distracted driving, unexpected slowdowns in traffic, or debris in the roadway. Teams work to alert drivers and clear the roadway to reduce the probability of new incidents. A table summarizing the IR program's performance and benefits for the quarter is on p. 13.

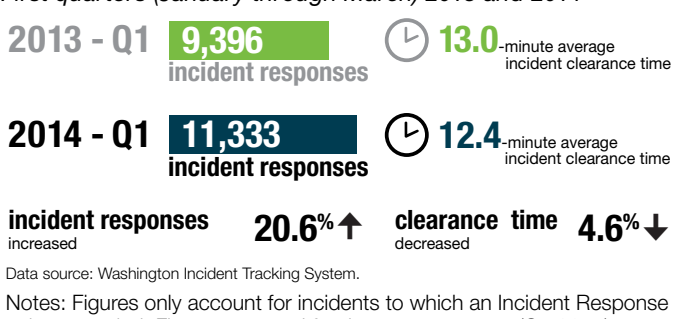
WSDOT's assistance at incident scenes provided an estimated $17.4 million in economic benefits. The benefits are provided in two ways. First, by clearing incidents quickly, WSDOT reduces the time motorists waste in incident-induced traffic delay. About $9.7 million of IR's estimated economic benefit for the quarter is from reduced traffic delay. Second, by proactively managing traffic at incident scenes, WSDOT helps prevent secondary collisions. About $7.7 million of IR's economic benefit is from preventing an estimated 2,170 secondary collisions. For every dollar spent on the IR program this quarter, WSDOT prevented more than $15 in incident-related costs.

$ 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.

Incident-induced delay costs $38.8 million in first quarter

Traffic delay that occurred due to incidents on state highways cost motorists $38.8 million in wasted time and fuel during the first quarter of 2014. This is about $5.1 million more than in the same quarter of 2013. Without WSDOT's assistance, this cost would have been $48.5 million ($9.7 million in prevented delay plus $38.8 million in actual delay). For more information on how WSDOT calculates these costs, see the Incident Response Phase 3 research from the Washington State Transportation Center (TRAC) at the University of Washington at http://1.usa.gov/16c9jQf.

WSDOT Incident Response clearance times faster while total number of responses increase
First quarters (January through March) 2013 and 2014



Data source: Washington Incident Tracking System.

Notes: Figures only account for incidents to which an Incident Response unit responded. Figures reported for the current quarter (Q1 2014) are considered preliminary. In *Gray Notebook* 49 WSDOT reported that IR teams responded to 9,396 incidents in the first quarter of 2013. In the fourth quarter of 2013, WSDOT responded to 9,906 incidents, clearing them in an average of 12.8 minutes. These figures have been confirmed and are now finalized.

Customer feedback speaks for program success

WSDOT's Incident Response prevents $17.4 million in delay and secondary collisions
January through March 2014; Incidents by duration; Time in minutes; Costs and benefits in dollars

Incident duration	Number of incidents[1]	Percent blocking[2]	Average *incident* clearance time[3]	Average *roadway* clearance time[4]	Cost of incident-induced delay	Economic benefits from IR program[5]
Less than 15 minutes	8,822	14.2%	5.2	4.8	$11.5 million	$5.4 million
Between 15 and 90 minutes	2,390	44.0%	30.2	25.8	$20.2 million	$9.0 million
Over 90 minutes	121	79.3%	182.6	170.1	$7.1 million	$3.0 million
Total	**11,333**	**20.4%**	**12.4**	**21.2**	**$38.8 million**	**$17.4 million**
Percent change from first quarter 2013	↑ **20.6%**	↓ **4.6%**	↓ **4.6%**	↓ **6.4%**	↑ **15.1%**	↑ **15.1%**

Data source: Washington Incident Tracking System.
Notes: 1 Teams were unable to locate 482 of the 11,333 incidents. These incidents are included in the total count but are not factored into other measures. 2 An incident is considered blocking when it shuts down one or more lanes of travel. 3 Incident clearance time is the time between the IR team's first awareness of an incident and when the last responder has left the scene. 4 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 *Gray Notebook 43*, p. 21, and the *2012 Congestion Report*, p. 72, for WSDOT's benefits calculation methods from reduced delay and prevented secondary incidents, respectively.

Statewide extraordinary incidents on the rise in 2014 compared to 2013

Statewide WSDOT IR units were deployed to 121 over-90-minute incidents during the first quarter of 2014. Incidents lasting more than six hours are called "extraordinary incidents." Out of these over-90-minute incidents, six extraordinary incidents occurred this quarter compared to two during the same quarter in 2013. The six incidents in 2014 took an average of 397 minutes to clear, or close to seven hours. Three of the incidents involved fatalities, and there was one incident each involving injuries, non-injury fixed object collision (communication pole), and fire. WSDOT IR teams provided traffic management in order to keep drivers moving and emergency responders safe.

If these extraordinary incidents are excluded, WSDOT's average clearance time for over-90-minute incidents statewide would have been 172.8 minutes or 9.8 minutes faster than the 182.6 minutes experienced statewide. Together, the six incidents accounted for 11.5 percent of delay costs caused by over-90-minute incidents.

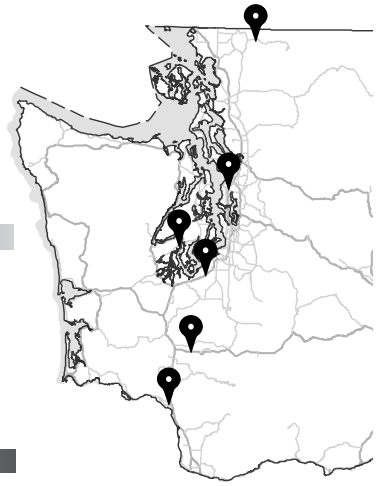
Figures reported here are from WSDOT's Washington Incident Tracking System, which tracks incidents to which a WSDOT IR team responded.

Contributors include Paula Connelley, Vince Fairhurst, Ida van Schalkwyk and Sreenath Gangula

6 Extraordinary incidents

6.6 Hours average incident clearance time

This map is interactive in the online version. Click the map point to access extraordinary incident details.



Extraordinary incident location and details for first quarter of 2014.

Customer feedback: Incident Response keeps highways safe and moving in 2014

WSDOT IR teams hand out comment cards to drivers who receive assistance. Below are sample comments from people who received help during the first quarter of 2014:

- I was so relieved to see WSDOT behind me! It was rush hour, I was on the shoulder of I-5 on a curve. Focus was safety 1st, then help. Thank you so much. Great use of tax dollars! Makes me feel better about all Government!
- Ken's service could have not been improved upon. He was fast, efficient, warm and friendly. What an awesome experience.
- The response was awesome! Superfast. He was my angel in orange. Thank you.
- I was not stopped even for one minute and he helped me with my tire change. Please tell him "thank you" for me. I could have not gotten better service anywhere.
- No improvements needed. Richard was there after I had broken down, took care of issue. Fantastic. Best use of DOT funds.

53 Travel Information Annual Report

Notable results

- *The use of WSDOT's social media channels increased more than 50% in the past year, with nearly 60,000 Twitter followers*
- *Revenue from advertising on WSDOT's traffic website increased 36% this year*
- *WSDOT's 511 system received its 15 millionth call, providing information to travelers since 2003*

WSDOT's social media popularity continues

WSDOT's social media channels showed significant increases in usage from April 2013 through March 2014, with the Twitter following increasing 78 percent from 33,308 to 59,431, and Facebook "likes" increasing 52 percent from 7,328 to 11,153. Information that WSDOT shares through social media such as Twitter and Facebook helps travelers make informed travel choices.

Use of WSDOT's mobile application is on the rise.

Technology changes the way people receive information

With the increasing prevalence of mobile devices that have Internet connectivity, their portion of website traffic continues to grow significantly. In the past year, 37.5 percent of WSDOT's website use was from mobile devices, up from 30.1 percent a year ago (corrected from 54 percent reported in *Gray Notebook* 49, p. 32).

In addition to website use originating from mobile devices, many users access a wide range of travel information through WSDOT's smart phone applications or "apps." WSDOT provides free apps for Android phones and iPhones. From April 2013 through March 2014, the Android app was downloaded 41,060 times and the iPhone app was downloaded 50,114 times, each exceeding 192,000 installations to date.

Calls to the 511 system decline 44 percent in five years
April 2009 through March 2014; Percentage[1] of total calls

Information requested	2009-10	2010-11	2011-12	2012-13	2013-14
Mountain pass	61%	67%	72%	68%	68%
Traffic	23%	21%	18%	19%	21%
Ferry	11%	6%	6%	7%	7%
Weather	3%	4%	3%	4%	3%
Other	2%	2%	2%	2%	2%
Annual calls	1,623,781	1,568,547	1,442,142	994,302	906,772
Total calls	10,163,963	11,732,510	13,174,652	14,168,954	15,075,726

Data source: Vector directory numbers, WSDOT Traffic Office.
Notes: 1 Percentages may not add to 100 due to rounding. 2 Fiscal year data reported in prior *Gray Notebook* articles.

About 2.3 million users visit WSDOT's traffic website monthly

An average of 2.3 million "unique users" accessed WSDOT's traffic and travel information website each month from April 2013 to March 2014, a 15 percent increase from the previous 12 months. At the same time, the number of page views per month rose 17 percent, from an average of 16.3 million to 19 million per month. The monthly trends are available online at http://1.usa.gov/1kG9CbG. A "unique user" may visit the website once or multiple times a month, but is counted as a single identity.

Revenue from WSDOT's website advertising increases 36 percent

The average monthly net revenue from advertising on WSDOT's traffic website increased 36 percent from $3,450 per month from April 2012 through March 2013, to $4,690 per month in the past 12 months (the $75,000 start-up investment was recouped). A pilot project allowing advertising on WSDOT's traffic website was approved by the Legislature in 2011 as a new revenue source for the agency. Guidance for WSDOT website advertising is available online at http://www.wsdot.wa.gov/Policy/advertising.htm.

WSDOT receives 15 millionth phone call for travel information

In March 2014, the 511 travel information phone system received its 15 millionth call since the program launched in 2003. In the past five years, call volumes have decreased 44 percent, likely as a result of the increased access to online travel information with smart phones. Calls regarding mountain pass conditions during the fall and winter months accounted for more than half of all calls received in the year.

Contributors include Jeremy Bertrand, Bill Legg, Ida van Schalkwyk and Anna St. Martin

Notable results

- *WSDOT completed air quality studies for 25 upcoming projects to demonstrate compliance with federal and state standards*
- *WSDOT expects its ferry vessel emissions reduction projects to lower emissions by approximately 28,000 tons annually*

WSDOT projects comply with air quality standards

WSDOT prepared, reviewed and approved 25 air quality studies in 2013 for upcoming transportation projects. Air quality studies estimate carbon monoxide emissions from project construction and operation to ensure compliance with the federal and state regulations. In response to federal and state guidance, WSDOT also analyzed mobile source air toxins and greenhouse gas emissions for several large transportation projects like the Multimodal Terminal at Colman Dock project.

The Environmental Protection Agency (EPA) determines if states are in compliance with the National Ambient Air Quality Standards for six pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide and lead. Regions in violation of air quality standards risk losing federal highway funding if transportation planning does not conform with the State Implementation Plan for controlling these six EPA-monitored pollutants. To date, WSDOT has not lost any federal funding due to air quality compliance issues.

WSDOT continues to pursue reduced emissions for ferries

WSDOT's ferries used 17.3 million gallons of fuel in 2013, down approximately 1 percent from 2012. At the same time, ridership increased by about 2 percent from 22.1 million in 2012 to 22.5 million in 2013.

Reducing fuel consumption and emissions from ferry vessels is a priority for WSDOT. The agency's new strategic plan includes an environmental stewardship goal to reduce greenhouse gas emissions (see p. viii). It also supports Gov. Inslee's goal in Results Washington to achieve sustainable energy and a clean environment (see p. vii). Ferry vessels are the largest source of greenhouse gas emissions for which the agency is directly responsible.

Emissions reductions from WSDOT ferries projects
Estimated emissions reductions in tons per year

Emissions reduction strategies	Estimated annual tons of emissions[1] reduced CO_2	PM_{10}	$PM_{2.5}$
Incorporate efficient technologies			
Convert six Issaquah class vessels to LNG[2]	6,160.8	23.5	25.9
Install hybrid propulsion in the M/V[3] *Hyak*	2,125.0	N/A[4]	7.5
Install five-bladed propellers	9,246.1	7.6	8.3
Install lube oil emissions reduction kits	2,106.5	1.7	1.9
Operational changes to reduce fuel use			
Reduce dock pushing power	4,374.9	3.6	3.9
Full feather operation on M/V *Salish* and M/V *Kennewick*	1,174.8	1.0	1.1
Avoid trim in lightly loaded vessels	1,610.2	1.3	1.4
Reduce acceleration leaving dock	729.2	0.6	0.7
Total estimated emissions avoided	**27,527.5**	**39.3**	**50.7**

Data source: WSDOT Environmental Services Office - Air Quality Program.
Notes: 1 CO_2 = carbon dioxide, PM_{10} = particulate matter 10 micrometers (.000039 inches) in diameter, $PM_{2.5}$ = fine particulate matter 2.5 micrometers in size. 2 LNG is liquefied natural gas. 3 M/V= Motor/Vessel 4 N/A = data not available.

According to the most recent Puget Sound Maritime Air Emissions Inventory, released August 2012 and updated May 2013, WSDOT's ferry vessels emitted an estimated 201,102 tons of carbon dioxide equivalents (CO_2e) in 2011. This accounts for roughly 53 percent of all CO_2e emissions from harbor vessels (ships that spend most of their time in or near ports) operating in Puget Sound.

WSDOT has undertaken various projects to further reduce emissions from its ferry vessels. The table above summarizes emissions reductions through these projects. Updates on selected projects are also provided.

Ferry vessels' biodiesel use grows

WSDOT ferry vessels used a total of 687,741 gallons of biodiesel in 2013, up roughly 42 percent from the 485,537 gallons used in 2012. Biodiesel has accounted for roughly 4 percent of WSDOT ferries' fuel use since March 2013, nearly achieving the

WSDOT tackles largest agency emissions sources

agency's goal of 5 percent. The agency will evaluate cost, environmental and technical matters this summer on two Issaquah class vessels to determine the feasibility of increasing biodiesel use.

WSDOT moves forward with ferry hybrid propulsion system

WSDOT released a request for proposals in March 2014 to convert the Motor/Vessel (M/V) *Hyak* to a diesel-electric hybrid propulsion system. The project will retrofit the *Hyak* with a computerized power management system that uses batteries as backup power sources to reduce the number of engines running at any one time. WSDOT expects the project to reduce fuel use by an estimated 237,677 gallons of fuel per year and reduce wear and tear on the vessel's engines.

The M/V Hyak's *new propulsion system will allow it to strategically use battery power to conserve fuel.*

WSDOT proposes converting six vessels to liquefied natural gas

WSDOT submitted a risk assessment to the U.S. Coast Guard in November 2013 for the agency's proposal to convert six ferry vessels to be powered by liquefied natural gas (LNG). The study found WSDOT's proposed designs for converting the vessels to LNG were "inherently safe." The Coast Guard will review the document and hold a 30-day public comment period, after which they will decide if WSDOT can proceed with the project. For more information visit http://1.usa.gov/1juPqeA.

WSDOT expects to reduce CO_2e emissions on the six vessels by 28 percent based on results from new software created by the agency to model maritime LNG emissions.

State's air quality nonattainment and maintenance areas steady

Washington state had no new violations of air quality standards in 2013 based on monitoring conducted by the state's 11 local clean air agencies and confirmed by the EPA. WSDOT supports the state's metropolitan planning organizations in demonstrating compliance with current air quality standards for areas in nonattainment or areas being monitored due to nonattainment in the past. Transportation projects planned in these areas cannot increase emissions beyond the levels set to achieve clean air standards.

WSDOT working to meet new air quality and monitoring standards

WSDOT started using the new federal emissions modeling software "Motor Vehicle Emissions Simulator" or MOVES in 2013 as required by the EPA to analyze carbon monoxide (CO) emissions from transportation projects. The new model requires more staff time than WSDOT's internal CO modeling software to complete analyses. So far this change has affected five projects. The agency plans to update its internal model to use MOVES this summer.

The EPA tightened the air quality standards in December 2012 for annual average fine particulate matter ($PM_{2.5}$) concentrations, lowering the previous standard by 20 percent. Particulate matter is a byproduct of combustion like smoke from burning wood or exhaust from vehicle engines and has a number of health impacts. Washington state currently has one area in nonattainment for $PM_{2.5}$ located in Pierce County. However, the region's compliance issues are mostly due to smoke from wood burned for heating in the winter (see *Gray Notebook* 47, p. 35). WSDOT does not expect the new standard to cause near-term compliance issues for transportation or impact federal funding for projects.

The EPA delayed release of tighter standards for eight-hour averaged ozone concentrations, scheduled for 2013. The new standard being considered could create compliance challenges for urban areas in Washington state including parts of or all of Clark, King, Pierce, Spokane and Thurston counties. WSDOT is monitoring developments in the standard setting process.

Contributors include Sheila Helgath, Timothy Sexton and Bradley Bobbitt

WSDOT supports a range of efforts to improve the state's environment

WSDOT's Air Quality program ensures the agency complies with clean air standards, develops and implements guidance on greenhouse gas emissions, and promotes clean transportation options. For example, the Air Quality program provides technical support for fuel and emissions reductions efforts by WSDOT's Ferries Division. To find out more visit the program's website at http://www.wsdot.wa.gov/Environment/Air/AirQuality.htm.

Notable results

- *WSDOT evaluated 52 upcoming projects for compliance with federal and state noise laws between January 2013 and March 2014*
- *WSDOT's rumble strip research found designs that make half the noise of standard plans while maintaining safety benefits*

WSDOT evaluates noise for 52 upcoming projects

WSDOT prepared, reviewed and approved 52 traffic noise reports for transportation projects between January 2013 and March 2014 to ensure compliance with noise standards as required by federal and state laws. WSDOT uses a noise model to determine if projects will have future traffic noise impacts. Where impacts are predicted, WSDOT evaluates how noise can cost-effectively be reduced. WSDOT also seeks input from nearby communities before constructing a noise wall.

WSDOT constructs noise walls — of concrete or other materials that absorb or reflect sound — to reduce traffic noise impacts and comply with federal noise regulations. WSDOT has constructed roughly 91 miles of noise walls since 1963 when the agency built its first noise berm. This includes completion of more than 25 miles of noise walls built since 2001.

WSDOT also worked with local jurisdictions on more than 70 noise variance permits in 2013, allowing construction work at night. Conducting work at night allows the agency to complete projects on time and with less impact during peak traffic periods.

No new noise walls completed in 2013; WSDOT plans to finish 18 in 2014

WSDOT did not construct any new noise walls during 2013. However, the agency expects to complete 18 noise walls in 2014 to address traffic noise resulting from two large transportation projects. The SR 520/Medina to SR 202 — Eastside Transit & High Occupancy Vehicle project includes nine noise walls. The I-405/Bellevue to Lynnwood Widening and Express Toll Lanes project will also include nine noise walls along with noise berms (large earthen hills that absorb sound) and upgrades to existing walls.

WSDOT develops noise wall screening tool for early project scoping

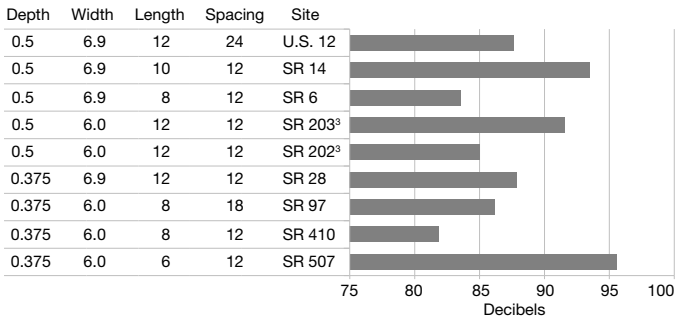
WSDOT completed preliminary work on developing a Geographic Information Systems (GIS)-based tool in 2013, which the agency will use to predict the need for noise walls during project development. WSDOT will test the tool on projects in 2014.

WSDOT develops tools and procedures to streamline noise analysis and demonstrate compliance with state and federal standards. The agency expects its GIS-based tool to improve the accuracy of initial project cost estimates, which will help the agency deliver projects on budget, as well as reduce the staff time needed to complete noise analyses. Type I noise walls on average cost more than $51 per square foot and Type II cost more than $75 per square foot (see the box on the p. 18 for noise wall types). Noise wall costs often exceed $1 million for a project.

WSDOT finishes rumble strip research

WSDOT completed a $60,000 research project in April 2014 that evaluates how well various centerline rumble strip designs promote driver safety and reduce noise for residents living near highways. The study was conducted for two years at nine test sites. The results showed that some alternative designs are quieter than the

WSDOT tests find less noisy rumble strip designs[1]
Average maximum noise in decibels by test site[2]



Data source: WSDOT Environmental Services Office - Noise Program.
Notes: 1 Rumble strip design specifications are in inches 2 Noise levels are for a vehicle approaching from 50 feet away in a highway's far lane 3 Rumble strip designs at SR 203 and SR 202 test sites are based on WSDOT's standard plans.

WSDOT develops multiple new noise reducing methods

current standard design by as much as 15 decibels (dB), which is less than half as loud or roughly the difference between a motorcycle and a vacuum. WSDOT staff is currently reviewing the study results, considering whether further research may be needed, and will look at options for policy revisions on rumble strip design.

Quieter asphalt pavement is not cost-effective for reducing traffic noise

WSDOT concluded testing performance of "quieter" asphalt pavements in 2013 and determined that any audible benefit (of at least three dB) was lost within one year of construction. Additionally, the test pavements deteriorated 7.5 times faster than conventional asphalt. WSDOT began measuring tire-pavement noise monthly on test sections of Interstate 5 (I-5), SR 520 and I-405 in 2006. The research cost a total of $923,000. More information is available at http://1.usa.gov/1hWUWXb.

The agency also tested sound levels from different concrete surface textures which are used to help prevent cars from skidding. WSDOT found that etching shallow grooves lengthwise along the road (called longitudinal tining) produced less noise compared to across the road (transverse tining) which was then the standard texture used. WSDOT changed its standard concrete surface texture to the quieter method.

WSDOT partners with university to decrease underwater noise impacts

The University of Washington (UW) completed a $30,000 WSDOT-funded project to develop an underwater sound level meter in 2013. The meter provides real-time results for monitoring noise from in-water work like pile driving. Prior tools required a week of processing time after field data was collected. Having instant data is expected to streamline compliance reporting and allow WSDOT to dedicate staff time to other aspects of noise monitoring and mitigation. WSDOT field tested the new meter at two ferry terminal projects and found it functioned as expected.

The University of Washington and WSDOT will also test the final prototype of a new double-wall pile design this year. WSDOT provided UW $135,000 in 2011 to develop methods for reducing underwater noise produced by pile driving. Current pile designs can generate noise levels as high as 220 dB during driving; which can pose a risk to fish, marine birds and mammals. The Endangered

Crews prepare to drive pilings at the Anacortes ferry terminal in early 2012. WSDOT expects UW's pile design to reduce impacts on wildlife.

Species Act and Marine Mammal Protection Act require WSDOT to monitor activities that can generate 120 dB of underwater noise. The agency demonstrates compliance by collecting underwater noise data and monitoring for wildlife. Currently, WSDOT needs multiple biologists to staff monitoring areas, which can extend up to 20 miles from the pile driving. The university tested an initial prototype in 2012 that reduced noise levels by 20 dB. The final prototype is expected to reduce underwater noise during in-water pile driving by 30 dB.

The agency expects the new tools for monitoring and quieter pile driving to reduce project costs by $10,000 to $20,000 depending on project size, by reducing the required monitoring area while also lessening impacts to wildlife.

Contributors include Timothy Sexton and Bradley Bobbitt

WSDOT uses sound information for decisions about noise management and mitigation

WSDOT evaluates the potential impacts of transportation projects and activities to ensure compliance with applicable federal, state and local laws. WSDOT evaluates the need for two types of noise wall projects. Type I projects are new construction that require noise studies because of the potential to increase traffic noise for nearby residents. WSDOT has built 60 Type I noise walls since 2001. Type II projects are noise wall retrofits for existing highways near residential areas that were constructed before traffic noise was first evaluated in 1976. Type II projects are funded by the state Legislature as stand-alone noise walls. WSDOT has constructed 20 Type II noise walls since 2001. For more information on WSDOT's Noise Program visit http://www.wsdot.wa.gov/Environment/Air/noise.htm.

Wetlands Protection Annual Report 53

Notable results

- *WSDOT added 15 new wetland and stream mitigations sites in 2013, bringing the total to 235*
- *Wetland mitigation workload remains high as the number of wetland and stream mitigation sites has doubled since 2006*

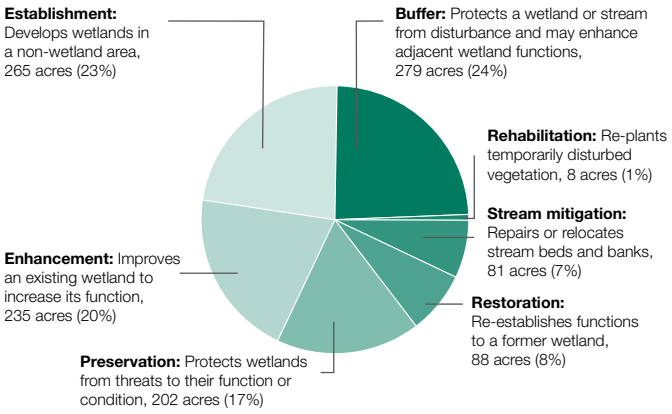
WSDOT wetland, stream mitigation inventory up

WSDOT has constructed and monitored 235 wetland and stream mitigation sites on 1,158 acres since 1988, including 15 new sites on 110 acres in 2013. WSDOT plans, designs and builds transportation projects to avoid and minimize disturbance to wetlands and streams. WSDOT designs and builds wetland mitigation sites as compensation when impacts to wetlands cannot be avoided and other options are either too far away to use or are not cost-effective.

WSDOT's inventory of wetland and stream mitigation sites includes:

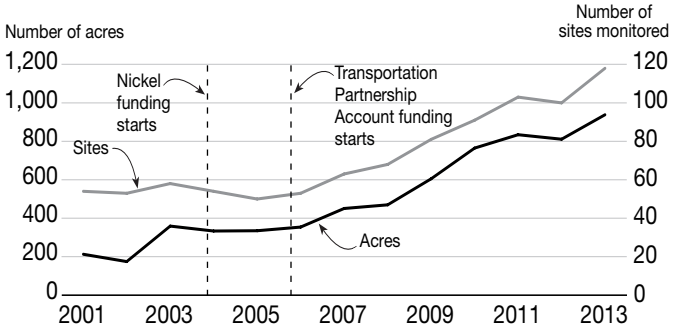
- Ninety-three sites in the initial 10-year monitoring period,
- Nineteen sites being evaluated by the U.S. Army Corps of Engineers (Corps) and Washington State Department of Ecology (Ecology) for completion of their permit requirements,
- Twelve sites beyond the initial monitoring period that have not yet met all their permit requirements, and
- One hundred and eleven sites in long-term stewardship that have met their permit requirements.

WSDOT replacement wetlands: 1988 through 2013
Total acreage (and percent) of replacement wetlands and stream mitigation sites by type (235 sites on 1,158 acres)



Data source: WSDOT Environmental Services Office.

WSDOT monitors 118 mitigation sites on 939 acres
2001 through 2013; Number of sites and acres compared to funding sources



Data source: WSDOT Environmental Services Office.

Mitigation workload remains high

In addition to the 15 new wetland and stream mitigation sites, WSDOT resumed monitoring five poorly performing sites and finished monitoring two sites where permit requirements were met in 2013. WSDOT expects the workload to remain high for several more years. The graph above shows more than double the number of wetland and stream mitigation sites since 2006 as a result of construction projects funded by the 2003 Nickel and the 2005 Transportation Partnership Account gas tax packages.

WSDOT's wetland policy supports goal

In 1993, WSDOT established a Wetland Protection and Preservation Policy. The policy was updated in 2011 to direct employees to protect and preserve wetlands, to ensure no net loss of wetlands, and to increase the quantity and quality of state wetlands in the long-term. This policy supports the Environmental Stewardship goal of WSDOT's strategic plan, p. viii.

Bonaparte Creek mitigation succeeds

The Bonaparte Creek mitigation site is one of two that WSDOT finished monitoring in 2013. The mitigation site was constructed in 2002 to replace wetlands disturbed by the State Route (SR) 20 Bannon Creek to Aeneas Valley Road project in Okanogan County. Cost to construct

WSDOT protects mitigation site investments

wetlands are included in the original construction project. This project replaced two culverts with bridges, realigned two curves and widened lanes to meet current design standards. The vegetation WSDOT planted on the Bonaparte Creek site faced challenges from competing weeds and damage from foraging beavers and deer.

Throughout the 10-year monitoring period WSDOT cares for this site by:

- Installing plant protectors and fencing to prevent damage to plants;
- Controlling weeds several times each year by hand pulling, mowing and applying herbicide; and
- Mulching around plants.

Without this kind of proactive management, weeds grow and newly planted trees and shrubs struggle to survive.

This level of care should result in Bonaparte Creek meeting its permit requirements and moving into long-term stewardship on time. In 2013, WSDOT requested the Corps and Ecology to verify permit requirements for this site have been met. Refer to WSDOT's Bonaparte Creek final monitoring report for additional information see http://1.usa.gov/1lw7isl.

WSDOT has dedicated crews who take care of wetland mitigation sites. Before WSDOT hired these crews, mitigation sites developed slowly and some failed to meet their permit requirements.

Refer to WSDOT's Managing Mitigation Sites web page for a description of how WSDOT takes care of mitigation sites at http://1.usa.gov/1lw6Yud.

Willows at the State Route 20 Bonaparte Creek mitigation site, June 2012.

The life of a WSDOT wetland mitigation site

After WSDOT constructs a mitigation site, the agency monitors it each year to evaluate progress on meeting specific permit requirements established by Ecology and the Corps. The initial monitoring period is normally 10 years, but can be longer or shorter depending on how the site develops. WSDOT maintains mitigation sites to ensure their success. WSDOT evaluates sites to:

- Make sure sites hold enough water to provide sufficient wetland area, and
- Monitor how planted vegetation is growing.

WSDOT issues annual monitoring reports to regulatory agencies and stakeholders that compare each mitigation site to its specific permit requirements. When WSDOT determines a mitigation site meets its permit requirements, the agency requests the Corps and Ecology verify its findings. If they agree, the permit is considered complete and monitoring is no longer required.

Permit conditions make WSDOT responsible for wetland mitigation sites in perpetuity. This means WSDOT maintains the site as a landowner would. Closed mitigation sites are moved into long-term stewardship or transferred to another organization like a county or city willing to take responsibility for the site.

Refer to WSDOT's Wetland Monitoring web page for additional information on the life of a mitigation site at http://1.usa.gov/1pmYWWf.

WSDOT fixes mitigation sites that have not met permit requirements

WSDOT was able to reduce the number of sites not meeting their permit requirements from 13 to 12 in 2013. In 2012, WSDOT expected to request permit verification from Ecology and the Corps for six sites that have been failing, however, only one site met the required conditions. Limited funding — and the increased number of sites to care for — reduced the time and resources available for improving these sites.

In 2014, WSDOT crews are working toward having six of the 12 sites meet their permit requirements. Two of the 12 sites need more time for vegetation to grow after it was replaced and weeds were controlled. Four other sites are not likely to develop enough wetlands area.

WSDOT looks for better strategies to mitigate impacts

WSDOT proposes purchasing credits or substitute mitigation at different sites when this occurs.

WSDOT projects benefit from mitigation banks, in-lieu fee programs

Four WSDOT projects purchased 6.09 credits from four privately-owned mitigation banks and one project purchased five credits from an in-lieu fee program in 2013. WSDOT prefers to take advantage of the benefits of approved mitigation banks and in-lieu fee programs instead of building agency-owned mitigation sites for projects impacting wetlands.

A privately-owned mitigation bank site establishes wetland mitigation before project impacts. An in-lieu fee program collects fees and uses them to build wetland mitigation sites. The wetland mitigation area for in-lieu fee programs and mitigation banks is converted to "credits" that can be used as compensation for unavoidable wetland impacts with approval from the Corps and Ecology. WSDOT benefits from these options because they reduce time spent on permitting, mitigation design and construction. These choices are more cost-effective for WSDOT because the agency does not have to manage, monitor or maintain the mitigation sites in perpetuity.

Mitigation bank credits help deliver projects on time

The SR-502/Interstate 5 (I-5) to Battle Ground Project purchased 4.72 credits from a nearby privately-owned mitigation bank. This construction project will widen SR 502 from two to four lanes to improve access between Battle Ground and I-5. It also adds a median barrier, controlled access, sidewalks and bike lanes. WSDOT originally planned to purchase five parcels to develop into wetland mitigation sites to compensate for the unavoidable impacts to wetlands in this corridor.

However, WSDOT was unable to complete the negotiations with one of the five landowners as the permit deadline approached. WSDOT's mitigation banks were too far away to use, so WSDOT purchased credits from a nearby privately-owned mitigation bank.

In-lieu fee credits support priorities

The SR 520/I-5 to Medina Bridge Replacement and High Occupancy Vehicle Project purchased five credits from the in-lieu fee component of the King County Wetland Reserves Program in 2013. This project will construct the approaches to the floating bridge across Lake Washington, causing unavoidable impacts to the lake and its adjacent wetlands. WSDOT purchased in-lieu fee credits because King County had a high priority restoration project that would compensate for the bridge project impacts. King County will be responsible for building and taking care of this site. For more information refer to the WSDOT's in-lieu fee Web page at http://1.usa.gov/RFjOsY.

Strategy: improve habitat and save money

WSDOT needed to compensate for disturbances from five I-405 Corridor projects. These projects between Renton and Lynnwood will reduce congestion by adding lanes, replacing and upgrading bridges and improving access ramps. WSDOT has completed three of the five projects, with one project not yet funded. These projects cannot avoid disturbing the existing wetlands that are considered to be low quality for wildlife habitat due to the proximity to the freeway, especially when there are no safe pathways to other habitats.

WSDOT agreed to restore a historic wetland parcel in the city of Bellevue's Kelsey Creek Park as compensation. As part of the mitigation agreement, the Bellevue Parks Department will become responsible for the long-term care of the site.

The Kelsey Creek mitigation site provides safe pathways for wildlife to many other habitats, perches for birds, and woodpiles for small mammals and reptiles.

WSDOT restored as much wetland as possible on this parcel even though it was not all needed for the first three projects. The extra wetland area is like putting money into an interest-bearing savings account; the value increases with time. The extra wetland area will be used as mitigation for other projects in the future.

The Kelsey Creek site illustrates how WSDOT supports Gov. Jay Inslee's Results Washington by providing mitigation to improve habitat functions. To see how the mitigation site is doing, view the WSDOT 2012 Kelsey Creek Year Five monitoring report at http://1.usa.gov/1fgvPtl.

Contributors include Cyndie Prehmus, Doug Swanson and Joanne Wearley

53 Commercial Vehicle Information Systems and Networks Annual Report

Notable results

- *WSDOT's commercial vehicle electronic screening program allowed trucks to bypass weigh stations 1.3 million times in 2013*
- *Weigh station bypasses in 2013 helped commercial trucks avoid $13.3 million in operating costs*

Truck drivers save time with WSDOT program

WSDOT's Commercial Vehicle Information Systems and Networks (CVISN) program gave more than 1.3 million "green lights" in 2013, allowing commercial trucks equipped with CVISN transponders to bypass open weigh stations. See the gray box on p. 23 for CVISN operating principles. These bypasses helped the trucking industry avoid an estimated 108,000 hours of travel time and resulted in an economic benefit of approximately $13.3 million in avoided operating costs. Benefits are calculated using industry standards of five minutes of avoided travel time per bypass, providing an economic benefit of $10.28 each. This includes 0.4 gallons of fuel avoided per bypass. See *Gray Notebook* 45, p. 45, for more information on estimating program benefits.

WSDOT green lights truckers

The 1.3 million green lights given in 2013 is 7 percent more than the 1.2 million given in 2012, and 5 percent less than the 1.4 million in 2010, which had the most green lights on record. The number of CVISN-equipped weigh stations open in the state directly affects the number of green lights given. In 2013, two of the 12 CVISN-equipped weigh stations were inactive, both southbound on Interstate 5 (I-5). One closed in SeaTac in October 2010 due to the I-5/ State Route 18 interchange construction. One in Everett was destroyed by a drunk driver in April 2011. Reconstruction of the SeaTac interchange (completed in 2013) changed traffic patterns. Washington State Patrol (WSP) is evaluating how these traffic patterns affect weigh station operations. The WSP received $1.2 million from the Legislature to rebuild the Everett weigh station. WSDOT estimates an additional $240,000 is needed to reinstall roadside equipment, purchase computers and servers, and program equipment to make it fully operational. WSDOT anticipates the site will be open in late 2015.

Transponder sales increase in 2014

Sale of transponders continues to grow, with 4,885 sold in fiscal year (FY) 2013 (July 2012 through June 2013). A total of 4,130 were sold in the first three quarters of FY2014 (as of March 31, 2014), and FY2014 sales are expected to be the largest on record. Truckers or their corporate offices can purchase transponders for $35 each through WSDOT. There are no recurring operating costs to the users, and a transponder typically lasts five to seven years. Those who purchase transponders through WSDOT may register them for use in other states and Canadian provinces.

While transponder sales and the number of transponder readings increased from 2012 to 2013, WSDOT's estimate showed a slight decline in the percent of commercial vehicles moving through the state that used CVISN transponders: 42.2 percent down to 39.4 percent. Some trucking companies may purchase transponders through WSDOT's CVISN office for trucks that do not travel in Washington state.

To promote transponder use, WSDOT installed signs with the toll-free number 1-888-877-8567 for WSDOT's Commercial Vehicle Services office at all CVISN-equipped weigh stations. Commercial vehicle drivers can call to get a transponder application while they wait in line at a weigh station.

Transponders save state trucking industry $13.3 million in 2013
2010 through 2013; Estimated economic benefit in millions of dollars

Statewide CVISN transponder use	2010	2011	2012	2013
Number of transponders read[1]	2,230,546	1,920,241	2,000,863	2,170,019
Percent given "green light"	61.0%	61.4%	60.5%	59.7%
Percent of trucks with transponders	35.3%	39.0%	42.2%	39.4%
Number of active weigh stations	10/11[3]	9/10[4]	10	10
Number of green lights	1,359,740	1,178,452	1,210,522	1,295,860
Estimated CVISN program benefits				
Estimated hours of travel time avoided[2]	113,000	98,000	101,000	108,000
Estimated economic benefit[2]	$13.9	$12.1	$12.4	$13.3

Data source: WSDOT Commercial Vehicle Information Services office.
Notes: 1 A truck's transponder is read multiple times a day when it passes multiple weigh stations. 2 Calculation of estimated economic benefit and travel hours avoided are based on industry standard values of $10.28 (including operating cost, time and fuel savings) and five minutes saved per bypass. Values are held constant for all years evaluated. 3 The southbound station at SeaTac closed in 2010; 4 In 2011, the Everett weigh station closed and the new Spokane Port of Entry opened in September.

WSDOT nationally recognized for brake inspection project

Commercial vehicle transponders read more than two million times in 2013

Of the 2.2 million transponder readings in 2013, 59.7 percent were given a green light to bypass the weigh station. This is a decrease from 60.5 percent in 2012. In the same timeframe, the total number of readings increased 8.5 percent from 2.0 million. See the gray box below for conditions when a truck may not receive a green light. The number of transponder readings does not equal the number of trucks using CVISN transponders on Washington's highways. This is because a truck's transponder is read multiple times if that truck passes multiple weigh stations while traveling through the state.

WSDOT improves reliability of freight movement

WSDOT's CVISN program supports Gov. Jay Inslee's Results Washington initiative by improving the reliable movement of freight transportation. See p. vii or the Results Washington website http://results.wa.gov/ for more information. WSDOT's annual *Corridor Capacity Report* documents existing highway corridor reliability along with many of WSDOT's strategies to improve travel times and reliability for all users of the highway system, and is available online at http://www.wsdot.wa.gov/Accountability/Congestion/.

Federal legislation aims to address freight mobility performance

Freight mobility performance metrics are part of the Moving Ahead for Progress in the 21st Century (MAP-21) federal legislation, with the first draft of the freight measures expected later this year. The use of advanced technology like CVISN to improve the safety and efficiency of the freight network could be a performance metric. For more information on the MAP-21 performance measures, federal requirement, and a status of draft rules or guidance see p. v or http://www.fhwa.dot.gov/map21/.

WSDOT's Automated Infrared Roadside Screening (AIRS) project wins national award

In recognition of WSDOT and WSP's joint effort to develop an infrared commercial truck brake screening system, the Roadway Safety Foundation and the Federal Highway Administration awarded them the 2013 National Roadway Safety Award. National Roadway Safety Award recipients were evaluated on three criteria: innovation, effectiveness and efficient use of resources.

The AIRS technology is designed to help improve safety by keeping trucks with defective brakes off the road. See *Gray Notebook* 49, p. 45 for more details. Currently in Washington, AIRS is deployed at the Fort Lewis weigh station near Tacoma. WSDOT expects the AIRS system being installed at the Bow Hill Port of Entry southbound on I-5 between Bellingham and Burlington to be fully functional later this spring.

Contributors include Doug Deckert, Anne Ford and Anna St. Martin

Tony Furst, Federal Highway Administration (FHWA) Associate Administrator for Safety, Washington State Patrol's Bill Balcom, WSDOT's Bill Legg, and Greg Cohen, Executive Director of the Roadway Safety Foundation (left to right) after WSP and WSDOT received the 2013 National Roadway Safety award for their agencies' collaborative work on the Automatic Infrared Roadside Screening project. Photo courtesy FHWA.

The Commercial Vehicle Information Systems and Networks program keeps freight moving

The CVISN program uses weigh-in-motion technology, transponders and Automated License Plate Recognition (ALPR) to electronically screen trucks as they approach open weigh stations. Weight, credentials and carrier safety characteristics are rapidly verified; if satisfactory, the truck is allowed to bypass the weigh station rather than having to stop for inspection.

Operation of the CVISN program is a cooperative effort between WSP and WSDOT. The state patrol operates the weigh stations and enforces laws associated with commercial vehicles and safety, and WSDOT installs and maintains CVISN equipment. For more information on transponders and ALPR, see *Gray Notebook* 26, p. 79, and *Gray Notebook* 37, p. 54, respectively.

53 FHWA Disadvantaged Business Enterprise Special Report

Notable results

- ***Nearly 700 Disadvantaged Business Enterprise (DBE) firms are certified to do business with WSDOT***
- ***WSDOT met its FHWA DBE goal in federal fiscal year 2013 with contracts that were awarded and committed, but did not meet the goal for those completed***

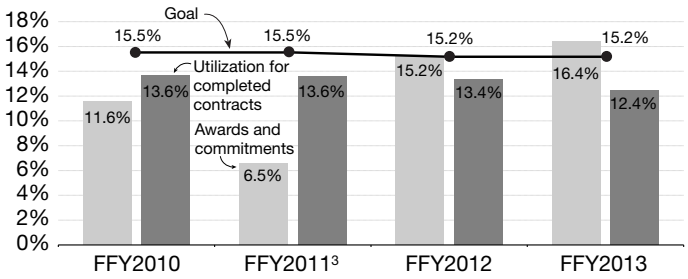
WSDOT has mixed results on enterprise goals

WSDOT met its Disadvantaged Business Enterprise (DBE) program goal for contracts with Federal Highway Administration (FHWA) aid that were *awarded and committed* in federal fiscal year (FFY) 2013, October 2012 through September 2013, with an achievement rate of 16.41 percent against a goal of 15.17 percent. WSDOT failed to meet the goal in terms of "*utilization for completed contracts,*" meaning contracts that were completed or paid. The goal was 15.17 percent and WSDOT achieved 12.44 percent.

WSDOT is committed to increasing opportunities for disadvantaged business enterprises

In FFY2013, WSDOT committed $66.3 million to DBE firms on projects with FHWA financial aid, compared to $53.79 million in FFY2012. The value of paid contracts with DBE goals in FFY2013 was $43.52 million, compared to $33.42 million in FFY2012, an increse of 30 percent.

WSDOT Disadvantaged Business Enterprise program participation awards and commitments grow in 2013
Federal fiscal years 2010 through 2013[1]; Percent of contracts awarded and committed versus completed contracts[2]



Data source: WSDOT Office of Equal Opportunity.

Notes: 1 Federal fiscal years (FFY) run October through September (FFY2013 began October 1, 2012 and ended September 30, 2013). 2 Utilization for completed contracts refers to those completed in the fiscal year. 3 In FFY2011, megaproject awards significantly impacted awards and commitments as the DBE commitment is not reported at time of award.

What is a Disadvantaged Business Enterprise?
According to the United States Department of Transportation, "DBEs are for-profit small business concerns where socially and economically disadvantaged individuals own at least a 51 percent interest and also control management and daily business operations. African Americans, Hispanics, Native Americans, Asian-Pacific and Subcontinent Asian Americans, and women are presumed to be socially and economically disadvantaged. Other individuals can also qualify as socially and economically disadvantaged on a case-by-case basis."

Disadvantaged Business Enterprise goals are designed to ensure that firms owned and operated by disadvantaged individuals have an equal opportunity to obtain and perform on contracts. The U.S. Department of Transportation (USDOT) requires state DOTs and other agencies that receive federal financial aid (from the Federal Transit Administration, Federal Aviation Administration and/or the FHWA) to ensure non-discrimination, remove barriers and create a level playing field for DBEs.

The unique nature of reporting large multi-season construction projects means that a contract award may be reported in one year with the corresponding DBE utilization (contract completion) reported in another.

Majority of projects achieve goals

Seventy-seven percent of WSDOT projects, defined as completed contracts, met or exceeded their DBE goals in FFY2013. WSDOT has a statewide DBE goal and individual projects receiving federal aid have DBE goals (see gray box on how goals are set on p. 25).

More than a third of certified DBE firms do business with WSDOT

State has 684 disadvantaged business firms eligible for transportation work

As of April 2014, there are a total of 684 DBEs certified to do transportation-related work in the state, including out of state contractors. As of September 2013, 571 businesses were certified as DBEs; 195 of those did business with WSDOT between October 2009 and September 2013. An effective outreach campaign led to the increase in certified DBEs.

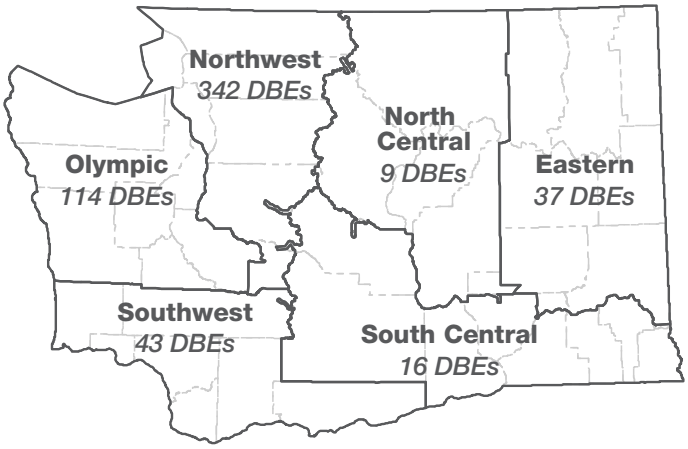
Washington State Office of Minority and Women's Business Enterprises (OMWBE) is responsible for certifying the eligibility of DBE firms on behalf of WSDOT to participate in contracts when federal-aid highway dollars are involved. The map at right shows a breakdown of the number of DBEs by region. DBEs are considered to be available for work statewide. In addition to those located in the state, 123 firms from other states are certified to do work in Washington. WSDOT establishes goals for the participation of disadvantaged businesses by evaluating contracts and establishing contract-specific DBE subcontracting goals necessary to achieve the agency's overall goal.

More than a third of Disadvantaged Business Enterprise certified firms do business with WSDOT
October 2009 through September 2013 participation

Primary certification category	Certified	Participated	Percent
Construction	151	74	49%
Transportation (trucking)	39	26	67%
Professional, scientific and technical services	266	52	20%
Administrative and support services	71	32	45%
Manufacturing and regular dealer	44	11	25%
Total	571	195	34%

Data source: WSDOT Office of Equal Opportunity.
Note: The number of Disadvantaged Business Enterprises certified to do business with WSDOT increased to 684 as of April 2014. This includes out of state contractors.

Crews work to assemble wooden girder braces for the new State Route 520 bridge.



This map shows the location of Disadvantaged Business Enterprises by region as of April 2014. In addition to the 561 DBE certified firms in Washington, 123 from other states are certified to do business in Washington, for a total of 684 firms. This is in contrast to September 2013, when 571 firms were certified. Source: WSDOT Office of Equal Opportunity.

How are DBE goals set?

As a recipient of federal financial aid, WSDOT is required to set an overall DBE goal. This goal is a percentage of the total federal aid which WSDOT expects to spend with DBEs. The present FHWA DBE goal of 15.17 percent is based on an outdated 2005 Availability Analysis and the agency's recent median past DBE participation.

The state is required to submit a separate overall DBE goal for programs funded by FHWA, the Federal Transit Administration (FTA) and the Federal Aviation Administration (FAA).

The overall DBE goal is typically based upon the availability of firms. Individual project goals are based upon the type of work in the project, the project size/duration, location and availability of DBEs.

In an effort to meet the overall DBE goal, WSDOT is required to use both race/gender-conscious measures and race/gender-neutral measures. WSDOT's present overall DBE goal is broken down into race/gender-conscious portion of 11.78 percent and race/gender-neutral portion of 3.39 percent. Race/gender-conscious measures include "condition of award" or project goals. On projects with DBE goals, the prime contractor is required to use certified DBEs for a percentage of the contract or demonstrate adequate good faith efforts to do so. Race/gender-neutral measures include voluntary utilization of DBEs, DBEs working as prime contractors, outreach, training and technical assistance.

Disadvantaged business enterprise reform a priority

WSDOT launches action plan

WSDOT is taking action to improve the rate of DBE participation in agency projects and programs. The agency's intent is to meet or exceed DBE utilization goals. In November 2013, Secretary Peterson addressed the Washington State House of Representatives Transportation Committee, proposing 10 Reforms, including one for DBE. WSDOT has established a "DBE Programmatic Reform Action Plan" outlining strategies, outcomes, measures and a timeline for completion. As part of the agency's tracking and monitoring efforts, DBE data will be reported in future editions of the *Gray Notebook.*

Reform aims to strengthen disadvantaged business enterprises program performance

Disparity study leads to new goal

WSDOT's DBE goals since Federal Fiscal Year (FFY) 2006 have been based on a 2005 study, which was done prior to the recession. The marketplace and availability of DBE businesses has changed.

WSDOT conducted a new disparity study in 2012 to analyze whether there is a difference between the number of specified individuals or groups available to participate in contracting opportunities, and those that actually do participate. As a result, WSDOT's overall DBE goal for federal fiscal years (FFYs) 2015-2017 is proposed to be 11.6 percent, compared to 15.17 percent in FFY2012 and FFY2013. WSDOT anticipates approval on the new goal by September.

Information from the study reflects the current availability of DBEs for WSDOT contracts. Many factors go into calculating the availability, including the types and sizes of WSDOT contracts, the capacity of minority- and women-owned businesses, and the qualifications and interest of minority- and women-owned businesses for WSDOT contracts.

Read about the study background, purpose and next steps at http://1.usa.gov/1lVc14W.

WSDOT Reform IV: Increase opportunities for Disadvantaged Business Enterprise

Maximizing Disadvantaged Business Enterprise (DBE) participation in WSDOT projects is the fourth of Transportation Secretary Lynn Peterson's 10 reforms. Work is underway on several focus areas. A DBE Executive Committee was formed and the agency is working on 38 tasks to increase and broaden DBE participation. Most of this work is expected to be complete by July 2014.

Strategy: clear expectations, accountability measures

WSDOT is establishing clear lines of accountability for achieving DBE goals. The agency is developing expectations and accountability measures for contractors with DBE participation requirements and establishing consistent contract language for all WSDOT projects with DBE participation goals, including design-build projects.

WSDOT's focus is on producing construction contracts that better define and enforce each project's DBE requirements. Prime contractors are strongly encouraged to offer subcontracts that are feasible for smaller firms.

Strategy: technology supports reporting

As reported in *Gray Notebook* 52, a WSDOT Lean process in partnership with OMWBE resulted in a tenfold increase in processing speed for DBE applications.

WSDOT is once again looking to technology, this time to solve under-reporting. One of the reasons for not

Crushed rock is placed prior to paving a new section of State Route 520.

Strategies designed to encourage participation

meeting past goals is that some project participation was under-reported. WSDOT has relied upon paper forms submitted to various offices and agencies for DBE participation, these forms have not always been distributed properly, which results in under-reporting. WSDOT is in the process of creating a reporting application that incorporates best practices in DBE participation reporting. Progress on this project will be reported in future editions of the *Gray Notebook*.

Strategy: encourage small business participation, even voluntary

WSDOT has sized its contracts to encourage more small business participation. WSDOT evaluated contracts executed between FFYs 2009 and 2011. Of 1,138 construction contracts, 664 or 58 percent were less than $1 million each.

On megaprojects administered through the design-build process, WSDOT is requiring small business participation plans. These plans will identify the types of work the company can subcontract to smaller firms, how the contractor will outreach and include firms of all sizes, and how the company will restructure bidding and procurement to better enable smaller companies to compete.

On federal-aid projects without an established DBE goal, WSDOT has implemented aspirational (or voluntary) Small Business Enterprise (SBE) goals. These SBE goals are a standard 10 percent of the project or contract total.

WSDOT works to increase DBE participation with lower dollar limits

WSDOT has undertaken measures to increase DBE participation in the agency's architectural and engineering contracts program. Among efforts, it has set dollar thresholds (limits) on task orders and lowered those limits for on-call agreements. These actions mean more project-specific agreements are subject to DBE goals, which increases opportunities for DBE certified firms. Task orders are mini-agreements within a master on-call agreement. WSDOT has also decreased the number of available on-call agreements, which means more project-specific agreements are subject to DBE goals. On-call agreements can be used for work on multiple projects across the state. They are over-arching umbrella agreements under which task orders can be written.

Strategy: engagement supports increased participation

The agency is working toward increased engagement with and support of the DBE community. Recent efforts from October 2013 through March 2014 include:

- Hosted the Regional Contracting Forum, the largest government trade show in Washington. This event was attended by approximately 1,000 business owners.
- Agency staff attended the Alliance NW Conference, the second largest government trade show, attended by approximately 600 business owners.
- Agency staff taught an introductory "How to Do Business with WSDOT" class to interested small businesses.
- WSDOT participated in the quarterly Supplier Diversity Best Practices Summit.
- WSDOT participated in the governor's small business liaison team meetings.
- WSDOT, Sound Transit and the Port of Seattle cohosted an event where Secretary Peterson presented Scarsella with WSDOT's Champion of Inclusion award. The three agencies together presented Tabor 100 and the National Association of Minority Contractors with Advocate of the Year awards.
- WSDOT co-sponsored the "Let's get Certified" campaign to encourage minority and women-owned businesses to become certified, providing increased visibility to government and private sector procurement groups.
- Secretary Peterson provides a monthly column for the "Tabor 100" newsletter, providing members with up to date information about the positive changes happening across WSDOT's DBE programs.
- The agency also attends many community and trade-based organization meetings including those for Tabor 100, National Association of Minority Contractors, Women's Transportation Seminar, Northwest Mountain Minority Supplier Development Council, Association of General Contractors and the Entrepreneurial Institute of Washington.

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53 Workforce Training Report

Notable results

- *One hundred-twenty-two supervisors have completed WSDOT's new leadership courses since June 2013*
- *Compliance rates went up for four of WSDOT's seven mandatory training courses in 2013*

Developing leadership is WSDOT training focus

WSDOT has developed three courses to provide the "soft" skills needed by entry and mid-level supervisors. Seventy-eight supervisors have completed the 16-hour "Leadership Foundations" course since June 2013. Twenty-three supervisors have completed the nine-hour "Understanding the Role and Responsibilities of a Supervisor" course since August 2013. The 24-hour "Entry Level Management" course launched as a pilot with 21 participants in February 2014. It consists of eight hours of eLearning and 16 hours of instructor-led training. The course curriculum meets the requirements for entry level supervisory training cited in the Washington Administrative Code. Examples of "soft" skills include: teambuilding, getting along with others, dealing with stress, interpersonal communications and respect in the workplace.

Developing leadership and retaining talent are WSDOT priorities

Mandatory training rate improves

The employee training completion rate went up in four areas, held steady in two and was slightly down for one of WSDOT's seven mandatory courses in 2013. A goal of 90 percent completion applies to each. WSDOT requires employees to participate in seven training courses to educate employees on agency policies and methods for maintaining a respectful workplace, ensuring WSDOT remains an employer of choice. Employees must complete refresher classes for three of the mandatory courses on a pre-defined schedule.

WSDOT Reform III: Develop Workforce

Developing the workforce is the third of Transportation Secretary Lynn Peterson's 10 reforms. Part of this reform involves developing leadership, preparing the right employees for future executive level positions and retaining talent within the agency.

Training at WSDOT is not strictly a classroom function. Here participants learn how to tie down, secure and transport equipment and material.

WSDOT deployed the Learning Management System (LMS) in May 2012. All mandatory training courses are now available in an online, self-directed format. Not all Ferries Division employees have access to computers. For those employees, three mandatory courses are instructor-led.

WSDOT employees continue to make progress in completing the mandatory classes online. As of March 31, 2014, more than 5,600 WSDOT employees have logged onto the new system; this represents 87 percent of the active workforce, up from 4,000 employees (57 percent) one year ago.

WSDOT mandatory training compliance improves
Calendar years 2012 and 2013; Percent of employees in compliance

Course	2012	2013	Trend
Disability Awareness	92	92	↔
Valuing Diversity	93	92	↓
Sexual Harassment and Discrimination[1]	89	89	↔
Violence that affects the Workplace	88	91	↑
Information Security[1]	32	52	↑
System Security Awareness	84	90	↑
Ethical Standards[1]	64	77	↑

Data source: WSDOT Office of Human Resources and Safety, Talent Acquisition and Development.
Note: 1 Refresher course required.

WSDOT training responds to workplace needs

Department offers technical training

WSDOT offers technical courses presented by the safety office, construction trainers and maintenance trainers. Technical training includes courses involving a variety of certifications, compliance standards, development, risk management, safety, traffic operations, bridges and structures, construction, consultant services, design, environmental, ferries, human resource development, and more.

Curbing conflict in the workplace

In 2013, WSDOT delivered 14 training courses to 585 employees designed to address conflict in the workplace. Courses delivered include Civility and Respect, Coaching, Communication + Cooperation = Success, Conflict Resolution, Evaluating and Mentoring Employees, Generations in the Workplace, Healthy Workplace Relationships, High Performing Teams, and Workplace Success. The purpose of these trainings is to fine-tune employees' knowledge, skills and abilities to manage teams.

$ WSDOT has about 6,450 employees. The agency spends approximately $40 annually per employee to access to the Learning Management System (LMS) and Skillsoft. LMS and Skillsoft offer 24-hour access to more than 35,000 books and eLearning courses. In contrast, Marcia Conner In her article "Stats on Workplace Learning" quotes the American Society of Training and Development statistic that companies with 500 to 9,999 employees spent about $1,102 per employee for training in 2011.

WSDOT water quality engineer Gregor Myhr teaches maintenance personnel how to manage, possibly clean up, and report unexpected or potentially dangerous material to proper regulating agencies.

Training responses to layoffs

Six WSDOT staff travel statewide to provide information and training for employees impacted by a reduction in force. In 2013, the group provided outplacement counseling for 168 employees who were at risk of lay off.

Conference emphasizes leading change, improving management skills

WSDOT has nominated seven of its managers to attend the annual National Transportation Leadership Institute, a two week training in Indianapolis. The conference is conducted by the American Association of State Highway and Transportation Officials through the National Transportation Management Conference.

This training emphasizes recognizing the manager's multiple jobs, creating a nationwide network for mid-level transportation managers, leading change, team building, managing people in today's world, improving communication skills, learning to detect and mitigate risks in managing projects and evolving transportation policy.

Contributors include Paul Ganalon, Christine Harrison, Ted Koska and Yvette Wixson

53 WSDOT Lean Quarterly Update

Notable results

- ***WSDOT has completed 11 of 30 Lean projects undertaken in the past 18 months***
- ***WSDOT improved the process for responding to public disclosure requests, reducing the average days to process a request by 55%***

New Lean improvements benefit WSDOT and customers

WSDOT's Public Disclosure team is using Lean management and process improvement methods to reduce the time it takes to provide records to customers by 55 percent, from an average of 24 days to an 11-day turnaround.

In July 2013, WSDOT started focusing on how to reduce the turnaround time when responding to public disclosure requests (PDR). WSDOT incorporated the Lean principle of "flow" and began processing work in smaller batches; this was more efficient, and helped the agency provide records to customers more quickly. In November, WSDOT's Public Disclosure team mapped their process during a Lean workshop, and focused on identifying the root cause for waste. During the workshop, the team discovered that they could process and provide the records to external customers more quickly. They did this by providing better internal customer service, enabling the record holders to gather the records more quickly. The team created and adopted standard operating procedures including customer service standards to reduce internal confusion and increase consistency.

To manage their work more efficiently on a daily basis, the team started using visual management to track their process and team huddles to review workload and share information in an effort to remove any barriers to their work. The team is improving their process daily, and expects to see further gains in the PDR turnaround time as they pursue continuous improvements.

WSDOT has initiated 30 Lean projects since August 2012 (see *Gray Notebook* 52, pp. 29-30) to improve the effectiveness of processes and better meet customers' needs. WSDOT is incorporating the Lean process and learning what it has to offer to address identified issues and improve the way the agency does business. This quarter's progress and benefits of projects are presented here — three of these projects were completed in prior quarters and are being reported now due to availability of information. Ten Lean projects not reported here are also underway; results will be reported when they are available.

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

Project	Changes to process	Measuring success	As a result
COMPLETED: Improve government contracts process *Office of Research and Library Services (Multimodal Planning Division)*	■ Developed a checklist of information needed to complete an agreement. ■ Established timeline for submittal of a final scope of work prior to planned start date. ■ Required use of standard contract form with few exceptions allowed. ■ Established clear expectations for staff for what a complete contract package contains.	■ Contract processing time improved from 135 days to an average of 56 days for new contracts, and 37 days for contract modifications, a 59% time savings for new contracts.	Customers will be informed of the process, required information, and timeline for contract development, and new or revised governmental agency contracts will be executed in a timely manner, so projects can start on time.
COMPLETED: Standardize tolling project status reports *Toll Operations Office (Toll Division)*	■ Modified the format and contents of "status gauge reports" to contain the information needed for the "confidence reports," so the team no longer has to duplicate efforts to produce different reports.	■ Eliminating duplicative efforts is estimated to save about three hours of staff time monthly.	The team saves time and reduces opportunities for errors by using standardized status report formats that eliminate the need for duplicative work.

Table continued on p. 31

Ongoing Lean projects continue to provide efficiencies

Table continued from p. 30

Project title, program	Changes to process	Measuring success	As a result
COMPLETED: Enhance processing of Tacoma Narrows Bridge (TNB) toll transactions *Toll Operations Office (Toll Division)*	■ Some license plate images for transactions on the Tacoma Narrows Bridge were not stored due to processing and storage limitations. WSDOT added image processing capacity and storage capacity to allow all images to be stored for every transaction, using additional Optical Character Recognition engines.	■ Capturing all license plate images for users of the TNB will result in a projected increase in annual toll revenue of $33,948, paying off the capital investment of $65,310 in about two years.	Toll revenue will increase and the 25 cent "Pay By Plate" surcharge will be applied more equitably by capturing license plate images for all TNB users.
Improve delivery of collision data (eliminated backlog) *Transportation Data and GIS Office (Multimodal Planning Division)*	■ Adjusted workflow so collision report is processed from start to finish by the same analyst instead of multiple staff. ■ Created standards regarding which collision report fields to review for accuracy, and which to accept "as-is" to reduce the number of clarification requests to officers. ■ Improving data quality, creating new query tools for customers and standardizing data extraction methods.	■ January 2014 was the first time collision reports were processed in the month they occurred; the 8.5-month backlog has been eliminated. ■ Provide preliminary data for emphasis patrols within 48 hours to law enforcement agencies.	Customers will receive complete, accurate and timely collision data, and have access to data through an online query tool. Law enforcement agencies will be able to assess the preliminary results of their emphasis patrols within 48 hours.
Standardize Ferries' digital schedule updating *Ferries Division*	■ The process for ferry schedule digitization was improved by removing an intermediate step in the data upload process, creating a single unified process.	■ The ferry reservation schedule was published 55 days before the start of the season, 20 days earlier than using the original process.	Customers will receive the vessel sailing schedule earlier in advance of changes, and with fewer errors, resulting in more satisfied customers, while reducing the staff effort to publish and maintain the schedules.
Streamline traffic count delivery process *Transportation Data and GIS Office (Multimodal Planning Division)*	■ Eliminated repetitive copying by providing electronic data records to customers, instead of paper records.	■ Elimination of repetitive copying reduced staff processing time by about 120 hours each year, and avoided use of about 75,000 sheets of paper annually.	Customers receive electronic data records, which better meet their needs, while staff focuses on value-added activities.
Improve information and process flow for traffic data collection *Transportation Data and GIS Office (Multimodal Planning Division)*	■ Reduced time between retrieving and validating data from permanent traffic data collection sites. ■ Automated process for renaming files – eliminated the manual steps. ■ Designed and established criteria for a new database and applications with input from workgroups, suppliers and customers. ■ Standardized steps and verbiage for responses to Automated Data Collection (ADC) request. ■ Implemented instructions for recurrent data request users on how to use Datamart, in order to eliminate frequent follow up requests. ■ Eliminated or replaced all Windows 7 incompatible ADC processing applications.	■ Eliminated duplications, reduced form submittals from three to one per trouble site. ■ Reduced process time from 48 hours (worst case) to two hours (best case) for one staff. ■ The automated import of Oregon transportation data reduced data import time by about 40%.	Staff are able to identify equipment issues sooner, reducing the loss of traffic data. Standardized processes mean customers receive the data they need with fewer requests.
Standardize traffic count data collection process *Statewide Travel and Analysis Branch (Multimodal Planning Division)*	■ Standardized equipment and information dissemination. ■ Clarified roles and responsibilities, and established visual management techniques to improve activity scheduling.	■ Standardized equipment reduced data errors and increased time efficiency by 5% to 15% for up to nine crew members.	Automated process for collecting traffic counts in the field improved data reliability, reduced data loss and improved efficient use of time.

Table continued on p. 32

New Lean projects address tolling and employee travel

Table continued from p. 31

Project title, program	Changes to process	Measuring success	As a result
Improve Public Disclosure Request (PDR) response process *Records and Information Services Office (Enterprise Risk Management Division)*	■ Eliminated unnecessary second acknowledgement letters for PDR responses. ■ Standardized work for employees and customers by creating reference material and storing it in a central location, developing customer service standards, and creating an internal supplier contact list. ■ Moved to electronic signatures for denial letters to requestors (eliminated five steps). ■ Switched from printed to electronic correspondence records (eliminated 20 steps).	■ Eliminated unnecessary second acknowledgement letters that would have been sent to about 50-100 external customers annually. ■ Improved average days a PDR is open from 24 days between January and October 2013 to 11 days since November 2013, with a low of seven days in March 2014.	Customers will receive appropriate and timely notifications regarding their public disclosure requests, and they will receive a high-quality response in accordance with the intent of public disclosure laws. Staff will use standardized processes, which will improve work quality and reduce time spent searching for material.
NEW: Increase accuracy of short-term bridge toll accounts *Toll Operations Office (Toll Division)*	■ Modified website language to more prominently display terms of the short-term (14-day) toll account, information needed to complete the registration and timeline for toll transactions to post to the account. ■ Implemented a month-end process to close short-term toll accounts older than 19 days. ■ Established protocols to ensure customer service representatives are reviewing information with customers prior to ending the call, to ensure accuracy. Additionally, placed emphasis on accuracy of information in training program to correct key-stroke issues.	Planned improvements include: ■ Reduce the number of customer contacts (phone calls, e-mails, and walk-in traffic) related to short-term accounts by 30%.	The process for creating short-term toll accounts will improve in order to better manage and meet customer expectations.
NEW: Improve out of state travel approval process *Accounting and Financial Services Division*	■ Eliminated the need for assistant secretaries' second approvals for planned trips. ■ Increased the responsibilities of directors to better manage and account for their trips and travel budgets.	Planned improvements include: ■ Decrease the average number of times a request for travel approval stops moving through the approval process by 49%. ■ Reduce the total queue wait time to complete an average trip approval by 78 hours.	The process for approving out of state business travel for WSDOT employees is more efficient, less time-consuming and easier to understand.
NEW: Reduce number of partial toll bill payments resulting in penalties *Toll Operations Office (Toll Division)*	■ Standardizing the process for applying payments to tolls before fees. ■ Analyzing best practices from other government and toll agencies related to short pays. ■ Considering modifying rules allowing customer service representatives to waive certain fees if the tolls are paid in full prior to moving to the notice of civil penalty stage.	Planned improvements include: ■ Reduce costs associated with collecting tolls resulting from partial payments (short pays) of $5 or less by 50%.	Toll revenue will increase by addressing issues associated with partial payment of toll bills.

Data source: WSDOT Accounting and Financial Services, Development, Enterprise Risk Management, Ferries, Multimodal Planning and Toll divisions.

Contributors include Lori Beebe, Lucinda Broussard, Dave Bushnell, Tim Carlile, Bruce Cebell, Jennifer Charlebois, Jean Denslow, Mark Finch, Nadine Jobe, Catherine Larson, Tony Marti, Patty Michaud, John Milton, Leni Oman, Tyler Patterson, Sayee Vaitheesvaran, Patrick Watson and Anna St. Martin

Capital Project Delivery Programs Quarterly Report

53

Notable results

- *WSDOT completed one Transportation Partnership Account project this quarter bringing the total to 353 of 421*
- *WSDOT added 10 new projects to the Watch List and removed five others during the quarter*

One additional TPA project complete during quarter

One Transportation Partnership Account (TPA) project was operationally complete in the third quarter of the 2013-2015 biennium (January through March). Operationally complete means the project is open to motorists, but not all work (landscaping, lane striping, etc.) may be finished. The project replaced a timber bridge approach on State Route (SR) 99 Alaskan Way in King County, reducing the potential for collisions.

Eight projects have been designated operationally complete so far in the 2013-2015 biennium (June 2013 through March 2014; the biennium goes through July 2015). Of these, 75 percent were on time and 75 percent were on budget. The projects' current cost at completion is about $153.8 million, which is 10.7 percent less than the baseline estimate of $172.2 million. A total of 353 of 421 Nickel and TPA projects have been completed since July 2003, with 88 percent on time and 91 percent on budget. The 353 projects' current cost at completion is $5.7 billion, about $100 million (1.67 percent) less than the $5.8 billion baseline cost at completion originally projected by WSDOT.

Goal is 90%

353 projects complete **88** % on time **91** % on budget

Data source: WSDOT Capital Program Development and Management.

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

WSDOT completes 353 Nickel and TPA projects
July 2003 through March 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	222	$5,051.1
Completed projects subtotal:	**353**	**$5,784.0**
Projects included in the current transportation budget that are not yet complete	68	$10,547.6
Total:	**421**	**$16,331.6**

Data source: WSDOT Capital Program Development and Management.

Nickel, TPA funding falling short of original 2003, 2005 projections

Fuel tax collections show that the revenue forecasts from 2003 and 2005, which were used to determine the project lists, did not foresee the economic recession in projecting future growth in fuel tax revenues. The 2003 Nickel and 2005 Transportation Partnership Act (TPA) gas taxes that fund projects are fixed tax rates 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 developed 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 (20.9 percent) from the original 2005 projection. This revenue shortfall has caused nine TPA projects to be deferred indefinitely.

Gas tax revenues are used to pay the debt on the bonds sold to finance the Nickel and TPA projects. Once all the bonds are sold, all revenues collected will be used to pay the debt. In the legislatively enacted 2014 supplemental budget proposal, Nickel bonds are projected to be sold through the 2019-2021 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 workforce numbers decline

As of March 31, 2014; Compared to March 31, 2013

Agency permanent full-time employees

3% **less** than the 6,620 employed one year ago

Highway construction program workforce

6% **less** than the 2,176 employed one year ago

Data sources: Department of Enterprise Services Department of Personnel Data Warehouse, Human Resource Management System, WSDOT and Ferries Division payroll and Capital Program Development and Management.

Note: The number of highway construction employees changes due to seasonal fluctuations; winter represents the annual low point for the employee level, and the summer construction season is the annual high. Highway construction full-time equivalent employee (FTE) counts are not just permanent full-time positions, but also include temporary hires and part-time workers. The Legislature directed 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 68 projects

Highway construction performance summary shows about $5.8 billion in projects completed

As of March 31, 2014; Dollars in millions

Combined Nickel and TPA programs		Number of projects	Value of program
Subtotal of completed projects		**353**	**$5,784.0**
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		*222*	*$5,051.1*
Projects included in the current transportation budget but not yet complete		68	$10,547.6
Total number of projects[1] in improvement and preservation budget		**421**	**$16,331.6**
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	8	222	353
Percent completed early or on time[3]	75%	86%	88%
Percent completed under or on budget[3]	75%	93%	91%
Baseline cost at completion	$172.7	$5,051.1	$5,784.0
Current cost at completion	$153.8	$4,958.2	$5,688.8
Percent of total program over or under budget	10.9% under	1.8% under	1.6% under
Advertisement record: Results of projects entering into the construction phase or under construction are detailed on pp. 37-38.			**Combined Nickel & TPA**
Total current number of projects in construction phase as of March 31, 2014			22
Percent advertised early or on time			82%
Total number of projects advertised for construction in 2013-2015 biennium to date (July 1, 2013 through March 31, 2014)			3
Percent advertised early or on time			33%
Projects to be advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on p. 36.			**Combined Nickel & TPA**
Total projects being advertised for construction bids April 1, 2014 through September 30, 2014			7
Percent on-target for advertisement on schedule or early			57%
Budget status for the 2013-2015 biennium:			**WSDOT biennial budget**
Budget amount for 2013-2015 biennium			$3,037.7
Actual expenditures to date 2013-2015 biennium (July 1, 2013 through June 30, 2015)			$840.1
Total 2003 Transportation Funding Package (Nickel) expenditure			*$63.6*
Total 2005 Transportation Partnership Account (TPA) expenditure			*$386.6*
Total Pre-existing Funds (PEF) expenditures[4]			*$389.9*

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 2003 to March 31, 2014. 3 On-time and on-budget is no longer tracked as a single performance measure in the *Gray Notebook*. 4 For full details of the Pre-existing Funds program, see pp. 42-43. Note: Numbers may not total 100 due to rounding.

No new Nickel, TPA rail or ferries projects complete

WSDOT did not complete any new Nickel and Transportation Partnership Account (TPA) rail or ferries projects this quarter. Cumulatively, WSDOT has completed 18 rail projects and 20 WSDOT Ferries Division projects since 2003. Nickel and TPA funding supported approximately $103.3 million in rail projects and another $269.2 million in ferries projects to date. Four Nickel- and TPA-funded rail projects, with awards amounting to $158 million, are under construction or entering the construction phase. Two Nickel and TPA Ferries projects, with awards amounting to $224.7 million, are also under construction or entering the construction phase.

WSDOT finishes 18 rail construction projects since 2003
As of March 31, 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 March 31, 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 March 31, 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).

WSDOT finishes 20 Ferries' construction projects since 2003
As of March 31, 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 March 31, 2014)	11	9	20
Percent completed early or on time[2]	100%	100%	100%
Percent completed within scope[2]	100%	100%	100%
Percent completed under or on budget[2]	100%	100%	100%
Baseline cost at completion	$59.9	$209.3	$269.2
Current cost at completion	$59.9	$209.3	$269.2
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 March 31, 2014)	1	1	2
Percent advertised early or on time[2]	100%	100%	100%
Total award amounts to date	$109.4	$115.3	$224.7

Data source: WSDOT Capital Program Development and Management.
Notes: 1 Ferries completed projects record includes three 64-car vessels, the Motor/Vessel (M/V) *Chetzemoka,* which started service in November 2010, the M/V *Salish*, which started service in July 2011, and the M/V *Kennewick*, which started service in February 2012. 2 The Legislature funds ferry projects at a grouped-project or 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). The data above is unchanged from the previous quarter because no additional ferries projects were completed. Numbers may not total 100 due to rounding.

WSDOT finishes eight projects in current biennium

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

Nickel and Transportation Partnership Account (TPA) projects; Costs estimated at completion; Dollars in 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 This information is updated quarterly throughout the biennium.	1 Nickel 7 TPA	5 on time 3 late	6 on time 2 late	8	$171.9	$154.0	6 on budget 2 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 Numbers have been updated since *Gray Notebook* 51 to reflect the addition of a completed project that was reported after the biennium. 2 In editions of the *Gray Notebook* 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 rounded up. Prior *Gray Notebooks* may be accessed at http://1.usa.gov/125yGCo.

Projects to be advertised

Seven projects in the six-month delivery pipeline for April through September 2014

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

Project description (County)	Fund type	Baseline planned ad date	Current planned ad date	On schedule	Baseline estimated cost at completion	Current estimated cost at completion
SR 167/SR 18 Interchange West-North Ramp North-East Ramp Overcrossing – Seismic Retrofit	TPA	Nov-2014	Jul-2014	√	$0.3	$0.3
SR 3/Belfair Area – Widening and Safety Improvements	TPA	Jun-2013	May-2014		$18.2	$19.3
U.S. 101/Hoh River (Site No. 2) – Stabilize Slopes	TPA	Dec-2014	Apr-2014	√	$9.6	$5.6
SR 162/Puyallup River Bridge – Replace Bridge	TPA	Dec-2013	Sep-2014		$15.6	$15.6
SR 302/Key Peninsula Highway to Purdy Vicinity Safety and Congestion	TPA	Oct-2013	Apr-2014		$6.5	$5.0
I-205/Mill Plain Interchange to Northeast 18th Street – Build Interchange – Stage 2	TPA	Apr-2014	May-2014	√	$94.2	$62.6
SR 167/8th Street East Vicinity to South 277th Street Vicinity – Southbound Managed Lane	TPA	Nov-2014	Jul-2014	√	$82.0	$82.0

Data source: Capital Project Delivery Programs.

Nickel and TPA project advertisements go forward

Twenty-two WSDOT projects in construction phase as of March 31, 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.						
I-5/Northeast 134th Street Interchange (I-5/I-205) – Rebuild Interchange – Stage 2 (Clark)	Nickel	√	Apr-2012	Max J. Kuney	Dec-2014	$54.9
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	$4,902.0 $114,569.0
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.						
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	$21.6
The operationally complete date was delayed to allow additional time for environmental and geotechnical analysis and to finalize designs for drainage and intersections.						
SR 502/I-5 to Battle Ground – Add Lanes – Stage 2 (Clark)	TPA	√	Jan-2014	Rotschy	Oct-2016	$27.5
SR 105/North River Bridge – Replace Bridge (Pacific)	TPA	√	Jun-2012	Scarsella Bros.	Sep-2014	$23.0
SR 105/Smith Creek Bridge – Replace Bridge (Pacific)	TPA	√	Combined with SR 105/North River Bridge project (above) for efficiency.			
U.S. 101/Middle Nemah River Bridge – Replace Bridge (Pacific)	TPA	√	Jun-2012	SB Structures	Aug-2014	$3.3
SR 9/Pilchuck Creek – Replace Bridge (Snohomish)	TPA	Late	Jul-2012	Granite Construction	Jul-2014	$8.9
The advertisement date was pushed back due to a delay in the hydraulic report, which then postponed the shoreline permit.						
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	Pending	Nov-2014	Pending
SR 6/Rock Creek Bridge East – Replace Bridge (Lewis)	TPA	Late	Dec-2013	Pending	Sep-2015	Pending
Advertisement was delayed to address permitting issues with several agencies.						
SR 6/Rock Creek Bridge West – Replace Bridge (Lewis)	TPA	Late	Dec-2013	Pending	Sep-2015	Pending
Advertisement was delayed to address permitting issues with several agencies.						

Table continued on p. 38

Nickel and TPA project advertisements go forward, *continued*

Table continued from p. 37

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	Jul-2014	$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	Aug-2014	$306.3
Contractor delays due to pontoon construction repairs continue, and delayed the operationally complete date from Match to July 2014.						
SR 6/Willapa River Bridge – Bridge Replacement (Pacific)	TPA	√	Mar-2013	Rotschy	Nov-2014	$7.1
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.						
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
SR 161/24th Street East to Jovita – Add Lanes (Pierce)	Nickel	Late	Feb-2011	Tri-State Construction	May-2014	$11.9
Advertisement date was delayed to coordinate with local agencies. Project operationally-complete date delayed from June 2012 due to an error in the electronic bidding system, which required re-advertisement. Operationally complete date has been delayed from September 2013, marking a change from *Gray Notebook* 50, p. 33.						
SR 11/Padden Creek – Fish Barrier Removal (Whatcom)	TPA	√	Feb-2013	Ram Construction	Apr-2014	$1.8
The operationally complete date was delayed from March to April 2014 due to longer than anticipated times needed to pour concrete sidewalks, barrier and roadway.						
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.

WSDOT completes 24 Nickel-funded rail projects

The performance summaries below and those on p. 40 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. 34-35.

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 or rail.

WSDOT project delivery and budget update: Original 2003 Transportation Funding Package (Nickel)
As of March 31, 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	**157**		**128**		**5**		**24**	
Completed projects	118	75%	102	80%	2	40%	14	58%
Total projects underway	29	18%	26	20%	2	40%	1	4%
In pre-construction phase	*16*		*15*		*1*		*0*	
In construction phase	*13*		*11*		*1*		*1*	
Projects scheduled to start	1	1%	0	0%	0	0%	1	4%
Projects deferred or deleted from program	9	6%	0	0%	1	20%	8	33%
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	$4,092.3	105%[1]	$3,542.3	105%[1]	$417.1	140%[1]	$132.9	63%
Actual expenditures, 2003 through March 31, 2014	$3,835.4	99%	$3,361.3	99%	$342.5	115%[1]	$131.6	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 Fiscal Year 2013-2015. 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.

WSDOT completes four TPA Ferries projects

WSDOT project delivery and budget update: Original 2005 Transportation Partnership Account (TPA)
As of March 31, 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	183	74%	176	77%	0		7	47%
Total projects underway	47	19%	42	18%	1	25%	4	27%
In pre-construction phase	*22*		*21*		*0*		*1*	
In construction phase	*25*		*21*		*1*		*3*	
Projects starting in the future	7	3%	3	1%	1	25%	3	20%
Projects deferred or deleted from program	11	4%	8	3%	2	50%	1	7%
Number of legislatively-approved scope changes	*23*		*23*		*0*		*0*	
Pre-construction starts within six months	*0*		*0*		*0*		*0*	
Construction starts within six months	*6*		*6*		*0*		*0*	

Data source: WSDOT Capital Program Development and Management.
Notes: Totals do not include local programs projects. Percents may not equal 100% due to rounding. Since the 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,

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	$5,385.2	77%	$5,228.7	78%	$77.0	42%	$79.5	67%
Actual expenditures, 2005 through March 31, 2014	$4,190.8	60%	$4,042.7	61%	$77.0	42%	$71.1	60%

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

Definitions

Completed projects Projects operationally complete, open to traffic.

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

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

Projects in construction Projects that are in construction from ground-breaking to completion.

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

Projects deferred or deleted Projects that are deferred beyond the 16-year program window or deleted from the program with legislative approval.

Note

The column headed "Percent of program" shows the percentage of each category represented by the base number of projects. For example, the ferries columns show that of the five projects listed in the Nickel package, two have been completed, representing 40 percent of the total ferries program; two ferries projects are under way, representing 40 percent of the total program; and one ferries project has been deferred or deleted, representing the remaining 20 percent of the total program.

WSDOT completes bridge project on State Route 99

WSDOT completed one Transportation Partnership Account (TPA) project in the third quarter of the 2013-2015 biennium (January through March 2014). The project replaced a timber bridge approach on State Route (SR) 99 Alaskan Way with a concrete structure in King County, reducing the potential for collisions.

A second project replaced the southern section of SR 99 in Seattle, improving traffic flow and bolstering the interchange's resistance to earthquakes. While this project was operationally complete, because it is part of the larger Alaskan Way Viaduct Replacement Program it doesn't affect the overall count of completed Nickel and TPA projects.

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 may have 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.

SR 99/Spokane Street Bridge — Replace Bridge Approach *TPA (King County)*

This TPA project replaced a section of the SR 99 Spokane Street overpass that was constructed in the late 1950s. The old section had timber supports, which were splitting and rotting.

Project benefits: In addition to making the section more resistant to earthquake damage, the project installed a new barrier to reduce the potential for collisions, improved drainage to reduce maintenance, installed energy-efficient lighting and removed creosote-treated timber to reduce future negative impacts on the environment.

Budget performance: This project was completed for $11.3 million, on target with the last approved budget, and approximately $2.2 million less than the original budget of $13.5 million.

Schedule performance: The project was completed in March 2014, seven months earlier than the last legislatively approved schedule and approximately three-and-a-half years later than the original schedule of July 2010.

Highlights/challenges: The advertisement date was delayed by approximately one-and-a-half years due to design modifications that re-aligned the one-way truck access under the structure, and that required extensive coordination with the city of Seattle and the Port of Seattle. This modification delayed work and added $2.7 million to the project cost, which was covered by freight agencies and the Port of Seattle.

SR 99/South Holgate Street to South King Street — Viaduct Replacement *TPA (King County)*

This project removed and replaced the southern mile of the SR 99 Alaskan Way Viaduct with a transportation facility that features improved earthquake resistance. It is part of the larger Alaskan Way Viaduct Replacement Program, which is still under construction.

The project included a new interchange in the vicinity of Royal Brougham Way, a bridge crossing the railway track at South Atlantic Street, improvements to local bicycle and pedestrian facilities along with changes to the BNSF railway track west of Alaskan Way, which will be modified and/or relocated.

Project benefits: The work improves the structure's earthquake resistance and retains or improves mobility for people and goods.

Budget performance: This project was completed for $351.3 million, on target with the last approved budget, and approximately $188.3 million less than the original budget of $539.6 million.

Schedule performance: The project was completed in January 2014, on target with the last legislatively approved schedule and approximately two years later than the original schedule of December 2012.

Highlights/challenges: The bid came in 24.9 percent below the engineer's estimate, reducing project costs by about $38 million. Additional project savings were due to good bids and because some of the original work was moved to other projects within the Alaska Way Viaduct Replacement Program. The date for operational completion was delayed from December 2013 to January 2014 to coordinate the timing and number of project-related road closures.

WSDOT advertises 43 Pre-existing Funds projects

WSDOT advertised 43 Pre-existing Funds (PEF) projects in the third quarter of the 2013-2015 biennium (January through March 2014). Of these advertised projects, 38 were on time and five were late. Twelve projects scheduled for the quarter were delayed and one was deleted (see *Gray Notebook* 51, p. 38 for definitions of PEF terms).

The current cost to complete the 43 PEF projects advertised this quarter is approximately $68.2 million, about $13.2 million (16 percent) less than the original value of $81.4 million. The Stillaguamish Bridge rehabilitation received a bid $11.8 million below the engineer's estimate. The award for this bid is on hold, pending resolution of the State Route 530 landslide.

Since the beginning of the 2013-2015 biennium there have been 124 advertisements. The current cost to complete them is approximately $203.0 million, about $46.5 million (19 percent) less than the original value of $249.5 million. The cost reduction is due to competitive bids resulting in savings the projects.

In total, WSDOT has 258 PEF advertisements planned during the 2013-2015 biennium. The current estimated cost to complete them is $360.6 million, about $213.9 million (37 percent) less than the original value of $574.5 million.

Unlike Nickel and Transportation Partnership Account (TPA) 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 pavement preservation, bridge rehabilitation and fish passage improvements on an as-needed basis.

Cost to complete WSDOT's project advertisements indicates savings through March 2014
2013-2015 biennium (July 2013 through June 2015); Quarter ending March 31, 2014; Dollars in millions

	Number of projects	Original value	Current cost to complete
Total PEF advertisements planned 2013-2015 biennium	258	$574.5	$360.6
Planned advertisements through March 31, 2014	138	$275.4	$170.6
Actual advertisements through March 31, 2013	124	$249.5	$203.0

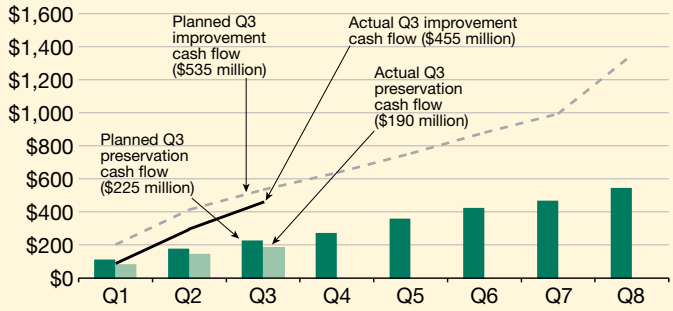
Data source: WSDOT Capital Program Development and Management.

WSDOT completes 91 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 on time	38	114
Emergent projects advertised	0	5
Late projects advertised	5	5
Total projects advertised	**43**	**124**
Projects delayed within the biennium	12	21
Projects deleted	1	1

Data source: WSDOT Capital Program Development and Management.
Notes: 1 The quarter refers to January through March 2014.
2 Cumulative refers to July 2013 through March 2014. July 1, 2013 marked the beginning of the 2013-2015 biennium.

WSDOT Pre-existing Funds preservation and improvement cash flows lower than planned
2013-2015 biennium; Quarter ending March 31, 2014; Planned vs. actual expenditures; Dollars in millions



Data source: WSDOT Capital Program Development and Management.
Note: Q3 refers to the third quarter (January through March) of the 2013-2015 biennium (July 2013 through June 2015).

Improvement and preservation costing less than planned

WSDOT planned to spend $535 million on improvement projects, but spent $80 million less ($455 million) during the third quarter of the biennium. This 15 percent reduction was due to continued project savings and bids coming in below the engineer's estimate. The improvement program funds projects that optimize highway capacity, enhance safety, and reduce the environmental impact of construction projects.

Preservation expenditures for PEF during the third quarter of the 2013-2015 biennium were also less than WSDOT planned to spend, $190 million instead of $225 million. The 15 percent reduction, which amounts to about $35 million, was due to favorable bids, projects being delayed to future quarters and design element changes that resulted in overall project savings. The preservation program includes pavement, bridges and other projects that maintain the structural integrity of the existing highway system.

Contributors include Dean Walker and Joe Irwin

Slope stabilization and rock scaling projects on the rise

WSDOT advertises 38 Pre-existing Funds projects on time this quarter

January through March 2014

On time (38)	
I-5/Southbound Stillaguamish River Bridge – Major Bridge Rehabilitation	U.S. 2/Rocklyn Road to Davenport – Chip Seal
SR 99/Spokane Street Bridge to Alaskan Way Viaduct – Concrete Pavement Rehabilitation	SR 410/0.80 Miles East of Chinook Pass – Rock Scaling
SR 509/Wapato Creek to Marine View Drive – Paving	U.S. 195/Colton to Junction SR 27 – Chip Seal
SR 527/I-405 Interchange to SR 524 Vicinity – Paving	SR 410/Enumclaw Golf Course Vicinity to National Park Gate
SR 25/Davenport to Fruitland – Chip Seal	SR 520/108th Ave Northeast to West Lake Sammamish Parkway – Paving
SR 509/South of East West Road to Norpoint Way – Paving	SR 9/132nd Street Northeast Vicinity to Highland Drive Vicinity – Chip Seal
SR 410/0.47 Miles East of Chinook Pass – Rock Scaling	SR 9/Doran Road to SR 542 – Chip Seal
SR 410/0.96 Miles East of Chinook Pass – Rock Scaling	I-405/SB Southeast 8th Street to Northeast 4th Street Vicinity – Paving
SR 129/7.80 Miles North of Oregon State Line – Stabilize Slope	South Central Region: Region Wide Basic Safety – Signing
SR 129/Grande Ronde Road Vicinity – Stabilize Slope	SR 164/High Point Street to SR 410 – Paving
SR 410/1.30 and 1.36 Miles East of Chinook Pass – Rock Scaling	SR 211/Junction U.S. 2 to Junction SR 20 – Chip Seal
SR 410/0.71 Miles East of Chinook Pass – Rock Scaling	U.S. 2/Stevens Pass East – Paving
SR 410/0.64 Miles East of Chinook Pass – Rock Scaling	SR 129/7.86 Miles North of Oregon State Line – Stabilize Slope
SR 410/0.58 Miles East of Chinook Pass – Rock Scaling	SR 99/Airport Road Intersection – Transit Queue Bypass and Safety Improvements
SR 410/1.23 Miles East of Chinook Pass – Rock Scaling	SR 194/Almota to Junction U.S. 195 – Chip Seal
SR 129/Oregon State Line Vicinity – Stabilize Slope	I-5/Nooksack River Bridges – Painting
SR 410/1.45 Miles East of Chinook Pass – Rock Scaling	SR 20/Pend Oreille Mill to Newport – Chip Seal
SR 27/Palouse-Albion Road to Palouse – Chip Seal	SR 16/Tacoma Narrows Bridge – Replace Maintenance Traveler
U.S. 2/Creston to Rocklyn Road – Chip Seal	SR 129/0.3 Miles North of Grande Ronde Road – Stabilize Slope
Late (5)	
SR 410/Watson Street – Signal Project delayed to combine with another project for efficiencies.	SR 243/Mattawa – Intersection Improvements Project delayed to accommodate workload schedule of WSDOT design office.
SR 410/Scatter Creek Bridge – Seismic Project delayed to ensure environmental permit specifications were met.	SR 539/Lynden-Aldergrove Port of Entry Improvements Project delayed to allow time for right of way acquisitions.
SR 16/Olympic Drive Northwest Bridge – Special Repair Project delayed for design of additional sign structures.	
Delayed (12)	
I-90/Columbia River Vantage Bridge – Painting Project delayed for completion of wind load study, with potential savings.	SR 14/Benton County Line to Whitcomb Island Road Vicinity – Chip Seal Project delayed to allow additional coordination with rail facility.
SR 21/SR 20 to Canada – Chip Seal Project delayed to allow reprioritization of program funding.	SR 507/Yew Street – Intersection Improvements Project delayed to allow completion of right of way certifications.
U.S. 97/Branch Road/Railroad Crossing – Install Gates, Attenuators and Stop Refuge Project delayed to further discuss issues raised by the diagnostic team.	SR 241/SR 22 Mabton Vicinity/Railroad Crossing – Install Beacons and Stop Refuge Project delayed to allow additional coordination with rail facility.
SR 3/SR 304 to SR 303 – Paving Project delayed to combine with another project for efficiencies.	SR 20/Okanogan County Line to Republic – Chip Seal Project delayed to allow reprioritization of program funding.
SR 124/South Lake Road to Charbonneau Park Vicinity – Chip Seal Project delayed to allow reprioritization of program funding.	U.S. 12/Turner Road Vicinity to Messner Road Vicinity – Chip Seal Project delayed to allow reprioritization of program funding.
U.S. 12/Tieton River Bridges to Naches – Chip Seal Project delayed to allow reprioritization of program funding.	SR 99/George Washington Bridge – Painting Project delayed to accommodate workload schedule of WSDOT bridge office.
Deleted (1)	
SR 124/Monument Road/Railroad Crossing – Install Gates, Lights Project deleted after additional analysis of assumptions with adjoining project.	

Data source: WSDOT Capital Program Development and Management.

WSDOT adds 10 projects to the Watch List

WSDOT added 10 projects to its Watch List and removed five during the quarter from January through March 2014. There are currently 31 projects 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, and updated if new issues arise or old issues persist.

See *Gray Notebook* 51, p. 40 for a list of common issues that might land a project on the Watch List. The table below and on the next page provides brief overviews of how these issues are affecting specific projects throughout the state. 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 March 31, 2014

Project (County)	Date added	Date removed	Watch List issue
North Spokane Corridor (Spokane)	Mar-2014		Changes to the locations of noise walls as well as public input to postpone this portion of the project has resulted in a delay.
SR 530 Slide (Snohomish)	Mar-2014		Emergency repair work on SR 530 is required to restore roadway use after a catastrophic landslide occurred March 22, 2014.
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.
I-90/Hyak to Keechelus Dam Phase 1G – Salvage and Plant Supply (Kittitas)	Feb-2014	Feb-2014	Native species plant work elements increased, delaying the schedule and requiring more funds. These changes have been incorporated and the project has been removed from the Watch List.
U.S. 101/Hoh River (Site No. 2) – Stabilize Slopes (Jefferson)	Feb-2014		Environmental permit processing due to a design change that is anticipated to reduce costs is delaying the project's 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 11/Padden Creek – Fish Barrier Removal (Whatcom)	Jan-2014		Paving of the bridge ends, and a pedestrian trail was delayed due to weather. As a result, the completion schedule has been delayed.
SR 16/Olympic Drive – Special Repair (Pierce)	Jan-2014	Mar-2014	The project scope changed and the budget increased. The project met its advertisement date as scheduled and was removed from the Watch List.
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.
I-5/SR 16/Eastbound Nalley Valley – High Occupancy Vehicle (HOV) (Pierce)	Dec-2013	Jan-2014	Adverse weather reduced the number of available work days in the schedule and delayed the operationally complete date. The schedule changes have been incorporated into the project and it has been removed from the Watch List.
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 allow 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.

Table continued on p. 45

Watch List keeps sharp eye on WSDOT's projects

Table continued from p. 44

Project (County)	Date added	Date removed	Watch List issue
SR 520/I-5 to Medina – Evergreen Point Floating Bridge and Landings (King)	Dec-2013		Additional funding is required to complete this project. WSDOT and the contractor are negotiating to resolve issues related to funding which arose due to delays and repairs on SR 520 pontoon construction.
SR 520 Pontoon Construction (Grays Harbor, King)	Dec-2013		Construction materials problems have delayed the schedule. Repair work on the pontoons has delayed the schedule for this project and the related project (above) to allow time for the repairs.
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.
SR 16/Anderson Creek Tributary to Sinclair Inlet – Fish Barrier Removal (Kitsap)	Oct-2013		Cultural resource work following the discovery of shell midden and additional work zone traffic control are resulting in schedule and cost increases. The project is being deferred for approximately two years.
SR 307/Dogfish Creek – Fish Barrier Removal (Kitsap)	Oct-2013		This project has been delayed until additional funding is acquired. The project is being deferred for approximately two years.
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.
I-90/Snowshed to Keechelus Dam Phase 1C – Replace Snowshed and Add Lanes (Kittitas)	Sep-2013		The completion date has been delayed one year due to delays in the contractor's schedule which reflect design revisions. Also delaying the project is slower-than-expected progress on construction of a wall supporting the westbound lanes due to unanticipated voids in the existing embankment.
SR 302/Key Peninsula Highway to Purdy Vicinity – Safety & Congestion (Pierce)	Sep-2013		The advertisement date may be delayed to complete right of way acquisition and utility relocation work. This may also delay the completion date.
I-5/M St. to Portland Ave. – HOV (Pierce)	Jul-2013	Mar-2014	The cost has increased due to construction work, bridge demolition and shaft obstructions. These costs and delays have been incorporated and the project has been removed from the Watch List.
SR 16/Tacoma Narrows Bridge – Replace Maintenance Traveler (Pierce)	Jul-2013	Mar-2014	Design revisions due to issues with the maintenance traveler rail have increased costs and may delay the schedule. The project achieved its advertisement date and was removed from the Watch List.
SR 532/Davis Slough Bridge Replacement – Widening for Flood Prevention (Island, Snohomish)	Apr-2013		Design work due to ongoing environmental permitting issues delayed the schedule.
I-5/Portland Ave. to Port of Tacoma Rd. – Northbound HOV (Pierce)	Feb-2013		The schedule is at risk due to ongoing negotiations on project impacts with the Puyallup Tribe of Indians. This issues have delayed the schedule and the bid opening has been canceled.
SR 3/Belfair Area – Widening and Safety Improvements (Mason)	Feb-2013		The schedule is at risk due to a complex right of way acquisition.

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

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

During the quarter ending March 31, 2014, WSDOT approved three change orders costing $500,000 or more. These change orders totaled approximately $79.6 million with the majority— some $77.5 million — addressing the re-design work on the final four State Route (SR) 520 floating bridge pontoon construction cycles. 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.

53 Quick Response Codes and A Guide to Understanding Reporting Periods

Codes offer convenience

Quick Response codes, also known as QR codes, accompany many *Gray Notebook* articles. Many mobile operating systems have the ability to "read" QR codes and link the reader to Web pages. Readers with mobile operating systems can scan the codes to read other information related to articles found in this issue of the *Gray Notebook* (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://1.usa.gov/1fQi0bu	
Gray Notebook archives http://1.usa.gov/125yGCo	
2012 Biennial Transportation Attainment Report http://1.usa.gov/16QkfDT	

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. Web addresses have also been truncated to improve access for website visitors.

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 53 reports quarterly performance data for January through March 2014, which is the first quarter of the calendar year (Q1 2014). This time period is also considered the third quarter of the state's current fiscal year (Q3 FY2014) as well as the second quarter of the federal fiscal year (Q2 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 the matter of biennial quarters. The Washington State Legislature sets a biennial budget. This issue highlights the third 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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53 *Gray Notebook* Edition Index

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)

Subject index and acronym list are online

The *Gray Notebook* subject index is available online at http://1.usa.gov/1fQi0bu. All editions of the *Gray Notebook* are available online at http://1.usa.gov/125yGCo. WSDOT's transportation acronym guide is also available online at http://1.usa.gov/15FwlLF.

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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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