



Gray Notebook Lite

"We don't take the public's trust lightly. It's the foundation for everything we do here at WSDOT and is stabilized by our continued commitment to being transparent in our work and accountable for our actions."

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

Excerpts from *Gray Notebook 47*, WSDOT's quarterly performance report on transportation systems, programs, and department management for the period ending September 30, 2012.

In this edition:

- Worker Safety Quarterly Update
- Highway System Safety Programs Quarterly Focus
- Asset Management: Capital Facilities Annual Report
- Aviation Annual Report
- Incident Response Quarterly Update
- Washington State Ferries Quarterly Update
- Washington State Ferries Annual Report
- Rail: Amtrak Cascades Quarterly Update
- Noise Quality Annual Report
- Air Quality Annual Report
- Endangered Species Act Documentation Annual Report
- Freight Rail Semi-Annual Update
- WSDOT Lean Special Report

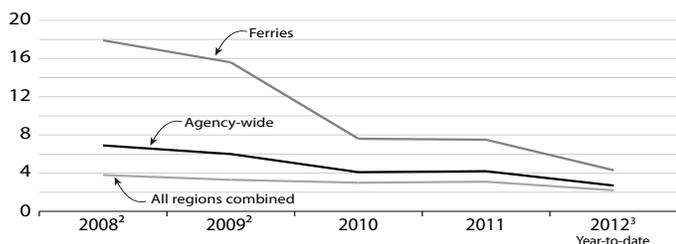
Safety

WSDOT “days away” rate reduced agency wide

The longer term trend for “days away” rates is illustrated in the graph below. The “days away” rate for Ferries showed a 74 percent improvement from 17.9 incidents involving days away, restricted duty, and/or job transfers for every 100 full-time employees in 2008, to 4.8 in the first three quarters of 2012. The highway regions and Headquarters improved more than 18 percent, from 3.8 in 2008 to 3.1 in the first three quarters of 2012 (January through September). See *Worker Safety Quarterly Update*, pp. 2-4.

WSDOT “days away” rate for ferries, regions, and agency wide

Number of recordable incidents involving days away, restricted work activities, and/or job transfer for every 100 full-time employees



Data source: WSDOT Office of Human Resources and Safety, WSF, Labor and Industries (L&I).
 Notes: 1 The “days away” or DART rate is calculated as the count of recordable incidents involving days away, restricted duty, or transfer, multiplied by 200,000 hours, and divided by the total hours worked. 2 The 2008-2009 Ferries “days away” rates are based on data from the Jones Act claims database and the L&I database. 3 Q1-Q3 (January - September 2012).

WSDOT identifies 221 priority locations for safety investments

WSDOT identified the top 221 statewide locations with the highest expected average frequency of fatal and serious injury crashes using Safety Analyst, a software model. These locations are separated into the following geographic categories, with expected average crash frequencies as noted:

- Urban Westside (100 locations), 2.86 crashes per mile per year,
- Rural Westside (21 locations), 1.08 crashes per mile per year, and
- Eastside (100 locations), 1.00 crash per mile per year.

Safety Analyst is used to analyze entire highway systems and identifies “collision analysis segments” and “intersection analysis locations.” A network screening approach combines observed collision data and a predicted average crash frequency to calculate an expected average crash frequency on roadway segments. The expected average crash frequency is compared to fatal and serious injuries collisions that occurred between 2005 and 2010.

Safety Analyst helps WSDOT identify sites with the highest potential for reducing collision severity or frequency, and potential countermeasures for addressing factors contributing to crashes. This, in turn, helps WSDOT improve safety and get even closer to achieving Target Zero goals. See *Highway System Safety Quarterly Focus*, pp. 5-6.

Preservation

Consolidation will save \$5.9 million in lease costs

As a result of the economic downturn and subsequent reductions in workforce, WSDOT is consolidating office space from leased buildings into those it already owns. WSDOT estimates that statewide consolidation efforts will save \$5.9 million in building lease payments; WSDOT spent \$27.1 million in the 2009-2011 biennium, and expects to spend \$21.2 million in the 2015-2017 biennium.

Condition rating for primary buildings holding steady

WSDOT assesses impacts to department operations through biennial facility condition assessments. In 2012, 40 percent of primary buildings are rated in poor condition, the same as two years ago.

Capital Facilities primary building condition

Number and percent of primary buildings by condition rating

Condition	2008		2010		2012	
Good	31	11%	24	8%	22	8%
Fair	142	52%	150	52%	150	52%
Poor	100	37%	113	40%	117	40%
Total	273		288		289	

Data source: WSDOT Capital Facilities Office.

Note: Difference in total building numbers are due to new construction or additions to the Capital Facilities program from another WSDOT program.

WSDOT’s primary buildings need repair, replacement

The 289 primary buildings managed by Capital Facilities have a total deficiency backlog of \$132.5 million. The main cause of the preservation and repair backlog is the steady aging of buildings; 66 percent of primary buildings are more than 25 years old.

Capital Facilities primary building age and backlog

As of July 2012; Dollars in millions

Age of buildings	Number	Percent of total	Backlog per building	Total backlog
25 years or less	96	33%	\$0.20	\$19.4
26 to 50 years	111	38%	\$0.58	\$64.6
More than 50 years	82	28%	\$0.59	\$48.5
Total	289			\$132.5

Data source: WSDOT Capital Facilities Office.

Note: 2012 revised backlog total was reduced by \$27.4 million, due to an updated and standardized estimating process.

Major building systems, such as heating and roofing, tend to require substantial repair or replacement after 20 to 25 years. Older buildings are also more likely to be unsuitable for today’s operations, and present problems ranging from bay sizes too small for modern trucks, to insufficient crew facilities. See *Capital Facilities Annual Report*, pp. 8-12.

WSDOT soars above last year's aircraft registration goal with highest numbers in six years

In the first six months of 2012, WSDOT registered 6,177 aircraft, an increase of 327 from the total registered in 2011. This surpassed WSDOT's goal to register at least 90 percent (5,345) of aircraft registered in 2011 by the close of FY2012, and it is higher than the numbers recorded in any of the past six years.

WSDOT grants provide crucial support to smaller airports

During the second round of 2011-2013 Airport Aid grants, WSDOT awarded \$998,809 in state funds to 23 airports for 28 different projects. WSDOT was able to use \$875,077 in state funds to leverage about \$32 million in federal funds, bringing the combined state, local, and federal total to approximately \$35.7 million for FY2012.

WSDOT's Airport Aid Grant Program helps support smaller airports that are not eligible for federal funding by targeting about 55 percent of grants toward these smaller airports. WSDOT allocates the remaining 45 percent of state grants to federally-funded airports, maximizing limited state dollars by leveraging millions of Federal Aviation Administration dollars. See *Aviation Annual Report*, pp. 14-16.

Local Airport Aid Grants

FY2012; By funding source

Funding source	Total funding
Federal	\$31,986,465
Local (matching)	\$2,710,681
State	\$998,809
Total funding	\$35,695,955

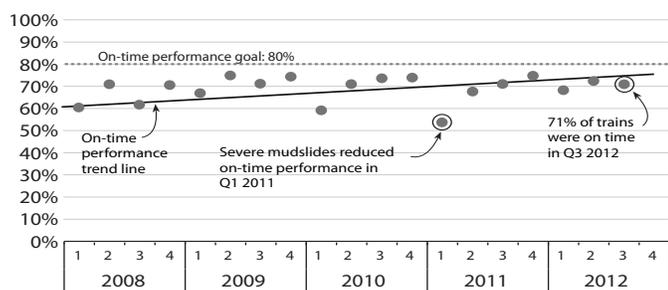
Data source: WSDOT Aviation.

Amtrak Cascades' revenue and ridership down, on-time performance steady during third quarter of 2012

Seventy-one percent of Washington state-supported Amtrak Cascades trains reached their destination on time during the third quarter (July through September 2012), steady with the same quarter of 2011. See *Rail: Amtrak Cascades Quarterly Update*, pp. 29-30.

Amtrak Cascades on-time performance

2008-2012; Percent of trains on time by quarter



Data source: Amtrak and WSDOT State Rail Office.

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

Washington State Ferries moves forward, despite slow economic recovery in the Puget Sound region

Washington State Ferries (WSF) continues to succeed despite challenges in maintaining ridership that stem from the slow economic recovery, and shifting demographics and work patterns in the Puget Sound region (see *Gray Notebooks* 43, p. 24; and 46, p. 27).

Ridership was 6.9 million for the first quarter of FY2013 (July through September 2012), which is about 200,000 passengers (2.9 percent) higher than projections for this quarter. WSF served 20,000 (0.3 percent) more riders in the first quarter of FY2013 than in the first quarter of FY2012.

Farebox revenue was \$53.6 million for the first quarter of FY2013. This was \$2.1 million (4.0 percent) higher than projections and about \$3.8 million (7.7 percent) higher than the same quarter last year. See *Washington State Ferries Quarterly Update*, pp. 20-21.

Ferries meets 15 of 17 performance goals for FY2012

The legislature established 17 performance measures for the Washington State Ferries system. Of these, 15 are new and two were previously reported. WSF met 15 of the 17 performance goals. See *Washington State Ferries Annual Report*, pp. 22-28.



The M/V Kennewick, the third new 64-car ferry arrives in Port Townsend in early 2012, offering more reliable service to commuters there.

Incident Response program saves travelers time, money

WSDOT's Incident Response (IR) program responded to 12,459 incidents in the third quarter of 2012, saving travelers and businesses in Washington about \$10.8 million by reducing the time and gas they would have wasted in travel delay due to incident-related congestion.

In the second quarter of 2012, IR teams responded to 11,292 statewide incidents with an average incident clearance time of 11.6 minutes. See *Incident Response Quarterly Update*, pp. 17-19.

Environment

WSDOT aims to reduce project and highway noise

WSDOT continues conducting research to reduce noise from pavement, bridges, rumble strips, and construction sites; and is evaluating alternatives to standard concrete noise walls. WSDOT also monitors hydro-acoustic, or underwater noise, to ensure construction-related sounds, like in-water pile driving, do not pose a risk to threatened or endangered species. See *Noise Quality Annual Report*, pp. 32-34.

WSDOT strategies reduce greenhouse gases

WSDOT's Air Quality program ensures the agency meets clean air standards, promotes clean transportation options, and provides technical support for WSDOT and other agencies.

Some of the options that Washington State Ferries is looking into to reduce emissions are:

- Analyzing the costs and benefits of using liquefied natural gas,
- Retrofitting Motorized Vessels (M/V) with power management systems that use batteries as backup power sources,
- Conserving fuel by reducing speeds while maintaining route schedules and on-time performance, and
- Reducing the amount of lube oil used.

See *Air Quality Annual Report*, pp. 35-37.

Economic Vitality

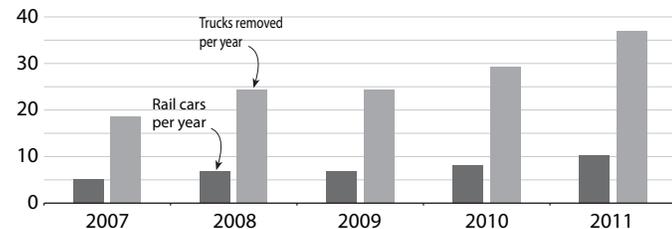
Eastern Washington rail system surges full steam ahead

The Palouse River and Coulee City (PCC) Rail System, a 297-mile short-line railroad owned by WSDOT, continues to meet program goals by nearly doubling railcar shipments during the first four years of state ownership.

The system generated 10,253 railcar shipments in 2011, a 26 percent increase from 8,119 railcar shipments in 2010. In 2011, the PCC Rail System was directly responsible for removing 36,911 trucks from Washington's roads, making travel safer and reducing the preservation funding needed to maintain these roadways. Moving these products by rail instead of by truck also benefits the environment due to the fact that rail transportation is up to three times more fuel efficient. See *Freight Rail Semi-Annual Update*, pp. 42-44.

Rail car shipments and trucks removed from roadways in Washington state

2007-2011; Number in thousands



Data source: WSDOT Freight Systems Division.

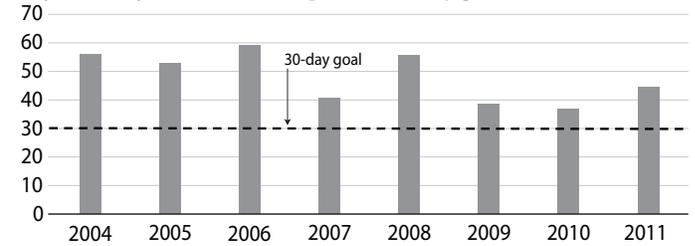
WSDOT reviews projects for Endangered Species Act compliance

WSDOT reviews all of its projects to ensure compliance with the federal government's Endangered Species Act (ESA). WSDOT has completed ESA reviews and consultations for 54 percent (277 of 514) of projects scheduled for advertisement in the 2011-2013 biennium and 14 percent of WSDOT projects (21 of 155) scheduled for advertisement in the 2013-2015 biennium.

Informal ESA consultations took an average of 44 days. WSDOT and federal regulatory agencies have a mutually agreed-to goal of 30 days. See *Endangered Species Act Documentation Annual Report*, pp. 38-40.

Average duration of Endangered Species Act informal consultations

Performance for 2004-2011 compared to 30-day goal



Data source: WSDOT Environmental Services Office.

Stewardship

Lean improves accountability, saves state millions

Secretary of Transportation Paula Hammond and Secretary of State Sam Reed presented members of the materials management team with the Extra Mile Award in May 2012. The award recognizes the team's innovative application of Lean management practices to improve inventory accountability and recover maximum value for surplus property. Their effort resulted in:

- 47 percent increase (\$13 million) in maintenance supplies,
- 72 percent reduction in inventory adjustments, and
- \$2.2 million in cost avoidance through reuse and redistribution of surplus furniture and materials.

See *WSDOT Lean Special Report*, pp. 69-70.



Secretary of State Sam Reed (second from left) and Secretary of Transportation Paula Hammond (far right) present materials management team members Dan Castro, Cynthia Shaw, Josh Klika and Linda Smith with the Extra Mile Award for their successes with Lean.

The *Gray Notebook* and *GNB Lite* are publications of the Washington State Department of Transportation. All pages referenced in the Lite are to the full edition of *Gray Notebook (GNB) 47*, available online at www.wsdot.wa.gov/accountability. For more information, contact: Daniela Bremmer, Director WSDOT Strategic Assessment Office, P.O. Box 47374 Olympia, WA 98504-7374. Phone: 360-705-7953 E-mail: daniela.bremmer@wsdot.wa.gov

WSDOT's Nickel and TPA projects continue to deliver on investment

WSDOT completed six more Nickel and Transportation Partnership Account (TPA) projects during the quarter ending September 30, 2012, bringing its total count to 336 out of 421 projects since the 2003 and 2005 gas tax funding packages were approved. The \$165.2 million I-405 South Renton Vicinity - Stage 2 Widening mega-project was among those recently completed. This project reduces congestion and enhances access to downtown Renton between SR 167 and SR 169. See *Mega-projects Special Report: I-405 Corridor Program*, pp. 72-73.

Of the 336 projects completed, 88 percent of these projects were on time, 91 percent have been on budget, and 81 percent were both on time and on budget (see table at bottom of page). The total value of these completed projects is more than \$5.1 billion.

WSDOT continues to build on Nickel and TPA success, 32 more projects currently under construction

WSDOT advertised two Nickel and TPA projects since July 1, 2012, for a total of 32 projects in the construction phase as of September 30, 2012 (pp. 50-52). Four additional projects are in the delivery pipeline and are scheduled to be advertised between October 1, 2012, and March 31, 2013 (p. 52).

WSDOT Nickel and TPA project status

Project status	Number of projects	Value in thousands
Projects completed in earlier biennia that are <i>not</i> included in the current Transportation Budget	81	\$371,970
Projects completed that <i>are</i> included in the current Transportation Budget	255	\$4,788,254
Completed projects subtotal:	336	\$5,160,224
Projects included in the current Transportation Budget that are not yet completed	85	\$11,182,954
Total:	421	\$16,343,178

Data source: WSDOT Capital Program Development and Management.

Cumulative delivery performance¹ of completed Nickel and TPA projects

January 1, 2010 - September 30, 2012

Calendar year	2010				2011				2012		
	Q1 ²	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Number of projects	264	272	282	296	300	304	310	325	325	330	336
Percent on time	89%	89%	90%	91%	90%	89%	89%	87%	87%	88%	88%
Percent on budget	91%	92%	93%	93%	92%	91%	91%	91%	91%	91%	91%
Percent on time and on budget	82%	83%	84%	84%	84%	82%	82%	81%	81%	81%	81%

Data source: WSDOT Capital Program Development and Management.

Notes: 1 A project is "on time" if it is operationally complete within the quarter planned in the last approved budget, and "on budget" if the budget is within five percent of the last approved budget.
2 Unbundled project counts started in Q1 2010; total projects increased from 391 to 421.

Nickel and TPA revenue forecasts still falling well below WSDOT's original projections

Revenues generated through the 2003 Nickel Account and 2005 Transportation Partnership Account are still well below original revenue projections largely due to reduced gasoline use by Washington drivers.

The September 2012 revenue forecast for the ten-year period of the Nickel Account is \$1.73 billion. This is 10.1 percent* less than the original projection of \$1.92 billion. As of September 2012, the revenue forecast for the 16-year TPA is 20.8 percent* lower than the original 2005 projection. There is more than a \$1 billion dollar difference from the \$4.94 billion in anticipated gas tax revenue and the \$3.91 billion forecast for September 2012.

Because the Nickel and TPA are both gas taxes, they fluctuate with demand, prices and overall statewide consumption. As less gas is purchased by consumers, the gap between projections and forecasts continues to widen. (*Note: Forecasts were corrected in Gray Notebook 47 from amounts provided in past editions.)

WSDOT adds one project to Watch List, removes six

WSDOT added the paving, bridge replacement, and safety project on U.S. 97 near Satus Creek in Yakima County to the Watch List of at-risk projects for the third quarter of 2012. The project's operationally complete date has been delayed eight months (see p. 64 for details). WSDOT also realized risks on six other projects and has removed them from the list.

WSDOT advertises 173 Pre-existing Funds projects for the 2011-2013 biennium

WSDOT has advertised 173 of 178 planned Pre-existing Funds (PEF) projects planned to date in the 2011-2013 biennium. The projects advertised were initially valued at \$357.1 million but have a current cost to complete of \$266.6 million - approximately \$90.5 million less than they were initially valued.

Of the 173 projects advertised from July 1, 2011, to September 30, 2012, 15 have been early, 76 were on schedule, 46 were late and 36 were considered emergent and addressed unexpected needs such as landslides and emergency repairs. An additional 94 projects were delayed or deferred and nine were deleted. See *WSDOT's Capital Project Delivery Programs*, pp. 60-62.

Current 2012 Legislative Transportation Budget

Performance Dashboard: Highways

Highway construction performance dashboard

As of September 30, 2012; Dollars in thousands

Combined Nickel and TPA programs		Number of projects	Value of program	
Projects completed in earlier biennia that <i>are not</i> included in the current Transportation Budget		81	\$371,970	
Projects completed that <i>are</i> included in the current Transportation Budget		255	\$4,788,254	
<i>Subtotal of completed projects</i>		336	\$5,160,224	
Projects included in the current Transportation Budget but not yet completed		85	\$11,182,954	
Total number of projects¹ in Improvement & Preservation budget		421	\$16,343,178	
Schedule and budget summary Nickel & TPA combined: Results of completed projects in the current Legislative Transportation Budget and prior budgets.		Completed in 2011-2013 biennium budget	Total in current legislative budget	Cumulative program ²
Number of projects completed		32	255	336
Percent completed early or on time		75%	85%	88%
Percent completed under or on budget		88%	92%	91%
Percent completed on time and on budget		72%	80%	81%
Baseline estimated cost at completion		\$1,034,432	\$4,788,254	\$5,160,224
Current estimated cost at completion		\$1,016,929	\$4,718,440	\$5,092,304
Percent of total program over or under budget		1.7% under	1.5% under	1.3% under
Advertisement Record: Results of projects entering into the construction phase or under construction detailed on pp. 50-52.		Combined Nickel & TPA		
Total current number of projects in construction phase as of September 30, 2012		32		
Percent advertised early or on time		72%		
Total number of projects advertised for construction in 2011-2013 biennium to date (July 1, 2011 - September 30, 2012)		15		
Percent advertised early or on time		80%		
Projects to be advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on p. 52.		Combined Nickel & TPA		
Total projects being advertised for construction bids October 1, 2012 - March 31, 2013		4		
Percent on-target for advertisement on schedule or early		100%		
Budget status; 2011-2013 biennium		WSDOT biennial budget		
<i>Dollars in thousands</i>				
Budget amount for 2011-2013 biennium		\$3,772,395		
Actual expenditures to date 2011-2013 biennium (July 1, 2011 - September 30, 2012)		\$1,717,955		
<i>Total 2003 Transportation Funding Package (Nickel) expenditure</i>		\$211,562		
<i>Total 2005 Transportation Partnership Account (TPA) expenditure</i>		\$652,538		
<i>Total Pre-existing Funds (PEF) expenditure³</i>		\$853,856		

Data source: WSDOT Capital Program Development and Management.

Notes: 1 The project total has been updated to show "unbundled" projects which may have been previously reported in programmatic construction program buckets (such as Roadside Safety Improvements or Bridges Seismic Retrofit). See the June 30, 2010, *Gray Notebook* 38, p. 55, for more details. 2 Cumulative projects completed from 2003 to September 30, 2012. 3 For full details of the PEF program, see pp. 60-62.