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GNB Lite

Washington State Department of Transportation

Gray Notebook Lite

"Washington's transportation system isn't just built with concrete and steel, it's built with trust. This report not only mirrors WSDOT's commitment to providing the public a return on its investment, but the solid assurance that our programs and projects will remain transparent and accountable for decades to come."

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

Excerpts from *Gray Notebook* 46, WSDOT's quarterly performance report on transportation systems, programs, and department management for the period ending June 30, 2012.

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Safety

Washington traffic fatalities reach 59-year low

Washington turned back the clock on traffic fatalities last year, lowering its numbers to levels not seen in nearly six decades. In 2011, Washington experienced a fatality rate of 0.8 fatalities per 100 million vehicle miles traveled, same as the previous year. The total number of traffic fatalities in 2011, on all public roads and state highways only, is 458 and 227, respectively.

The state has experienced a continuous reduction in the number of traffic fatalities each consecutive year over the past six years. A 29 percent reduction in fatalities has occurred, comparing 649 fatalities in 2005 with 458 fatalities in 2011 (2011 data is considered preliminary). In the spirit of the state's strategic highway safety plan "Target Zero," it is imperative that the number of fatalities and serious injuries continue to drop to meet the goal of zero by 2030.

Washington annual traffic fatalities
2005-2011

Year	2005	2006	2007	2008	2009	2010	2011
All public roads	649	633	571	521	492	460	458
State highways	316	308	280	234	241	233	227

Data source: Fatal Accident Reporting System (FARS).

Notes: GNB 42 reported the number of traffic fatalities in 2010 for all public roads and state highways as 459 and 232, respectively. These numbers have been updated to 460 and 233 due to updates made to FARS. The 2011 numbers are considered to be preliminary until January 2013.

Washington zeroes in on target of no traffic deaths and or serious injuries by 2030

Washington's Strategic Highway Safety Plan, "Target Zero" is recognized nationally for its goal of zero fatal and serious injury crashes, and for the success that the state has achieved.

Washington's success has helped build a consensus at the national level, as more states realize that working together with partner and stakeholder groups sharing a "zero fatal crash" vision is the appropriate thing to do. In fact, a national safety plan called "Toward Zero Deaths: A National Strategy on Highway Safety" is being developed by the Federal Highway Administration, draws on Washington's experiences. See *Highway Systems Safety Programs Quarterly Focus*, pp. 4-6.

WSDOT worker safety improving in 2012

During the first two quarters of 2012, WSDOT made progress toward the goal of zero Occupational Safety and Health Administration-recordable workplace incidents; the incident rate decreased to 4.3 incidents for every 100 full-time employees, an improvement of 33 percent from the same period in 2011, when it was 6.4.

Five WSDOT organizational units each improved their incident rates by 22 percent or more in this time frame, with North Central Region leading the way with a 62 percent decrease. See *Worker Safety Quarterly Update,* pp. 2-3.

Preservation

Ninety-five percent of state bridges in good or fair condition, but bridge deck deficiencies growing

Ninety-five percent of WSDOT's bridge structures and Washington state's local agency-owned bridge structures are in good or fair condition for fiscal 2012 (FY2012). At the same time, one element of the state's bridge conditions is declining. Some 11 percent of the deck area of all bridges is classified as structurally deficient, growing 49 percent since 2007.

The goal of WSDOT and the Governor's Government Management Accountability and Performance program is to maintain 97 percent of bridges at a rating of good or satisfactory (fair). For FY2012, 86 percent of WSDOT's bridge structures were in good condition and nine percent were fair, totaling 95 percent in good or fair condition.

FHWA list of structurally deficient bridges
All publicly owned bridges in Washington State, 2007-2011

Year	Number of SD bridges	SD deck area (square feet)	Percentage of SD deck area
2011	391	8,046,191	11.0%
2010	394	6,706,707	9.1%
2009	405	6,202,863	8.5%
2008	422	5,904,672	8.2%
2007	400	5,403,983	7.5%

Data source: WSDOT Bridge and Structures Office, FHWA.

Of Washington's 7,743 state and local agency-owned structures, 391 (11 percent of deck area of all bridges) were classified as structurally deficient in 2011. The percentage of structurally deficient deck area in the state increased by 20 percent between 2010 and 2011 and 49 percent between 2007 and 2011. This increase is mostly the result of several large bridges now having deficiencies.

Total bridges in poor condition drops in FY2012

In FY2012, five percent of WSDOT's bridge structures were rated in poor condition. There were 147 bridges in poor condition in FY2012 compared to 152 bridges in FY2011. Thirty bridges from FY2011 were no longer classified as poor in FY2012 due to preservation projects, but 122 bridges remained in poor condition both years, and 25 bridges were newly classified as poor.

Bridge replacement and rehabilitation projects in 2011-13 biennium to cost about $101.1 million

In the 2011-2013 biennium, $101.1 million is slated for bridge replacement and rehabilitation. This is primarily funded through the Federal Bridge Replacement Rehabilitation Account, including Federal Bridge Funds for the Alaskan Way Viaduct. The South Holgate Street to South King Street section of the Alaskan Way Viaduct is $72.5 million. Bridge replacement/rehabilitation projects currently under contract total $67.6 million. See *Asset Management: Bridge Assessment Annual Report*, pp. 8-14.

Statewide congestion increases since 2009, still remains below pre-recession levels

The trends of increasing congestion and delay that prevailed from 2009 through 2010 leveled off in 2011. Between 2009 and 2011, travel delay on state highways saw substantial increase, while vehicle miles traveled held steady. Statewide congestion data for the past five years shows that 2009 was the least congested year for Washington. Many indicators of economic growth and activity are still lagging from pre-recession levels, but 2011 showed some promise with reduced unemployment rates and an uptick in Washington real personal income.

Trends show that most congestion performance metrics for 2011 compared to 2009 show some increases, however, when compared to 2010 these increases are mostly marginal.

- In 2011, delay on state highways when measured at maximum throughput speed was 16 percent greater than in 2009 but only 3 percent higher than in 2010. Similar trends were seen when the delay metric was calculated at posted speed limits.
- Washingtonians spent 14 percent more time in traffic in 2011 compared to 2009, but only 2 percent more than in 2010; delay trends were similar when calculated at posted speed thresholds.
- Compared to 2009, annual vehicle miles traveled (VMT) saw a modest increase in 2011 on all roads (by 0.9 percent) and held steady on state highways.
- Compared to 2010, annual vehicle miles traveled (VMT) saw a modest decrease in 2011 on all roads (by -0.4 percent) and on state highways (by -1.0 percent).

The 2011 vehicle miles traveled in Washington is back to 2009 levels, which suggests higher fuel prices in 2011 compared to 2010 have made Washingtonians carefully consider travel options in terms of transportation costs. See *Measuring Delay and Congestion Annual Report*, pp. 16-20.

Incident Response program clears the way to save drivers, businesses time and money

WSDOT's Incident Response (IR) program responded to 11,292 incidents in the second quarter of 2012, saving travelers and businesses in Washington about $9.25 million by reducing the time and gas they would have wasted in travel delay due to congestion (see table, *Gray Notebook* 46, pp. 25).

In addition, IR teams provided an estimated $7.5 million (see gray box, *Gray Notebook* 46, pp. 26) in quarterly benefits from 2,258 avoided secondary crashes due to the team's safe quick clearance of primary incidents. The total second quarter benefits from the WSDOT IR program is $16.75 million. The IR program estimated quarterly benefit to cost ratio is about 15:1.

In Government Management Accountability and Performance (GMAP) corridors, there were 61 over-90-minute incidents in Q2 2012, with an average clearance time of 143 minutes. This is 12 minutes faster than the 155-minute goal and 20 minutes faster than last quarter (163 minutes). See *Incident Response Quarterly Report*, pp. 24-26.

Second fare hike in 2012 not expected to derail riders' interest in taking Amtrak Cascades trains

Passengers saw a six percent overall hike in fares this year, with the out-of-pocket cost about $1 to $2 more per ticket. The increase is not anticipated to have a major impact on ridership. Amtrak implemented the first three percent increase on March 6, and a second three percent increase went into effect June 12, 2012.

Rather than increasing ticket prices across the board, Amtrak Cascades used a "stretch increase" which did not impact the lowest-priced seats on its trains. The strategy was designed to capture additional revenues through higher fares, while limiting the potential loss in riders. As a result, mid-priced seats increased by two percent, while the highest-priced seats increased by five percent, for an average three percent increase across all ticket prices. See *Rail: Amtrak Cascades Quarterly Update*, pp. 31-32.

Washington State Ferries welcomed the new ferry Kennewick on the Keystone – Port Townsend route in early 2012.

Ferries' ridership, revenue float above projections

Washington State Ferries (WSF) ridership for the fourth quarter of fiscal 2012 was 5.7 million. This is about 10,000 more riders than projected for the quarter.

Compared to the same quarter last year, WSF ridership for the fourth quarter of FY2012 increased by about 7,000 people over the fourth quarter of FY2011. Overall WSF carried about 4,000 more riders in FY2012 than in FY2011.

Farebox revenue was $42 million for the fourth quarter, 2012. This is 3.7 percent higher ($1.5 million more) than projected. The higher than projected farebox revenue was largely due to a three percent fare increase effective in May 2012, which had not yet been approved by the legislature when the revenue forecasts were developed in June of 2011.

Compared to the same quarter last year, farebox revenue was about $2.9 million higher in the fourth quarter of FY2012, a 7.3 percent increase. Overall Washington State Ferries had a $7.6 million (5.2 percent) increase in revenue for fiscal 2012 compared to fiscal 2011. See *Washington State Ferries Quarterly Update*, pp. 27-30.

Environment

Programmatic permits, agreements save WSDOT staff thousands of hours each year

WSDOT estimates programmatic permits saved about 5,250 hours of WSDOT staff time in 2011. WSDOT develops these programmatic permits with the state's water resource regulatory agencies, Washington State Department of Ecology (Ecology) and Washington State Department of Fish and Wildlife (WDFW), to help simplify and expedite regulatory processes.

These permits cover routine environmental activities that present minimal risk in the construction and maintenance of state transportation facilities. The permits also provide standards that WSDOT can design its projects to meet. In 2011, WDFW programmatic permits covered 1,119 separate activities, saving WSDOT an estimated 4,476 staff hours that would have been spent completing the required permit applications.

Programmatic permits issued by Ecology cover activities such as washing and painting bridge structures, aquatic herbicide applications, and mosquito control. Again, an Ecology programmatic permit helps WSDOT better utilize resources. WSDOT's "washing and painting bridges and ferry terminals" permit issued by Ecology saved an estimated 760 hours of staff time in 2011.

More than 100 memorandums of agreement have been negotiated to avoid, minimize, or mitigate negative effects of WSDOT projects on cultural resources under terms of the programmatic agreements since 2003. These include prehistoric and historic archaeological sites, underwater sites, historic buildings and ferry terminals, and historic bridges.

Programmatic agreements streamline the review process for environmental compliance. These agreements allow WSDOT to "exempt" activities from further review if they are determined to have little or no potential effect on historic resources. See *Programmatic Permits Annual Report*, pp. 34-36.

The Pilchuck Creek Bridge (built in 1916), is eligible for listing on the National Register of Historic Places.

Stewardship

WSDOT awards 125 construction contracts in FY2012; 11.8 percent below engineers' estimates

WSDOT awarded 125 construction contracts from July 1, 2011 to June 30, 2012 (FY2012) compared to 171 in FY2011. For each contract awarded, WSDOT tracks the difference between the engineer's estimate and the contractor's bid to measure the accuracy of WSDOT's estimates. During FY2012, bids came in a total of 11.8 percent below estimates, improving on a 17.4 percent difference in 2011. On average, bids for each contract were 4.6 percent less than the engineer's estimate, compared to 15.2 percent less in 2011.

The chart below shows a year-to-year comparison of highway construction contracts awarded since 2007. The combined contract value awarded below estimate was 83.6 percent in FY2012, compared to 94.7 percent in 2011. The number of contracts awarded below estimate in FY2012 was 78, compared to 146 in 2011. WSDOT engineers use historical pricing information to prepare cost estimates for construction contracts. See *Construction Contracts Annual Report*, pp. 65-68.

Highway construction contracts awarded: Year-to-year comparison
Dollars in millions

	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012
Number of contracts awarded	160	149	172	150	171	125
Total award amount for these contracts	$539.0	$544.4	$677.8	$832.7	$500.9	$594.8
Total engineer's estimate for these contracts	$533.1	$605.4	$816.2	$1,053.1	$606.6	$673.7
Avg. % total awards were above/below the total estimate value	0.4%	-5.9%	-17.0%	-18.0%	-15.2%	-4.6%
% Total award is above/below the engineer's estimate	1.1%	-10.1%	-17.0%	-20.9%	-17.4%	-11.8%
Combined contract value awarded below the estimate	35.5%	77.8%	82.8%	78.3%	94.7%	83.6%
Number of contracts awarded below the estimate	77	99	150	130	146	78
% Contracts awarded below the estimate	48.1%	66.4%	87.2%	86.7%	85.4%	62.4%

Data source: WSDOT Construction Office.

Notes: Does not include design-build, Hood Canal Bridge, emergency, on-call, or ferry vessel repair contracts. Ferry terminal contracts were added in 2008.

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*) 46, 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

Tracking Nickel and TPA project performance

WSDOT completed five Nickel and Transportation Partnership Account (TPA) projects during the quarter ending June 30, 2012, bringing the agency even closer to its total of 421 projects.

The five projects completed in the second quarter of 2012 were on time and on budget and include:

- U.S. 395/North Spokane Corridor - U.S. 2 to Wandermere and U.S. 2 Lowering - New alignment (Spokane County)
- U.S. 12/SR 124 Intersection - Build interchange (Walla Walla County)
- SR 823 Selah Vicinity - Re-route highway (Yakima County)
- I-5/36th Street Vicinity to SR 542 Vicinity (Whatcom County)
- I-405/NE 8th Street to SR 520 Braided Ramps - Interchange improvements (King County)

In total, there are 249 completed projects in the current transportation budget. Of these, 85 percent were on time, 92 percent were on budget, and 80 percent were both on time and on budget for the quarter ending June 30, 2012.

The cumulative capital program delivery performance shows that 88 percent of the 330 Nickel and TPA projects were completed early or on time, 91 percent were completed on or under budget, and 81 percent of these completed projects were both on time and on budget.

Cumulative delivery performance[1] of completed Nickel and TPA projects
July 1, 2009 - June 30, 2012

Calendar year	2009		2010				2011				2012	
Quarter	Q3	Q4	Q1[2]	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Number of projects	215	240	264	272	282	296	300	304	310	325	325	**330**
On-time %	88%	88%	89%	89%	90%	91%	90%	89%	89%	87%	87%	**88%**
On-budget %	87%	88%	91%	92%	93%	93%	92%	91%	91%	91%	91%	**91%**
On-time and on-budget %	78%	78%	82%	83%	84%	84%	84%	82%	82%	81%	81%	**81%**

Data source: WSDOT Capital Program Development and Management.

Notes: 1 WSDOT defines a project as "on time" if it is operationally complete within the quarter planned in the biennial budget, and "on budget" if the budget is within 5% of the current approved budget. 2 Unbundled project counts started in Q1 2010; total projects increased from 391 to 421.

Constructing a four-lane divided freeway between U.S. 2 and U.S. 395 opens the northern two miles of the North Spokane Corridor project.

Washington leads the country in American Recovery and Rehabilitation Act performance

The Federal Highway Administration congratulated WSDOT in early August 2012 for its exemplary performance in delivering American Recovery and Reinvestment Act (ARRA) projects. Washington leads the nation in the percent of ARRA projects vouchered (86.67 percent).

The state also quickly obligated 99.79 percent of its ARRA funds, quickly got its ARRA projects under construction, has spent 99.5 percent of the funding it received, and is working hard to complete its remaining projects, according to the Federal Highway Administration. Read more about ARRA projects on page 40.

To date, WSDOT's Rail program has advertised eight projects overall, including two funded by ARRA that are budgeted for $4,370,000. Rail has seven ARRA projects being or scheduled to be advertised between July 1 - December 31, 2012.

Nickel and TPA revenue forecasts continue to slump as less drivers filling up at the pumps

Revenues generated through the 2003 Nickel and 2005 TPA continued to come in well below forecast amounts in June 2012. Current forecasted revenues include the most recent actual revenue collection data available as well as updated projections based on new and revised economic variables. The $1.73 billion June forecast for Nickel gas tax receipts, licenses and permits puts revenues at 11.2 percent less than the projected 2003 cumulative baseline total of $1.92 billion.

Likewise, as of June 2012, the 16-year revenue projections for the TPA are 26.1 percent below the 2005 cumulative baseline total. There is more than a $1 billion dollar difference from the $4.94 billion in anticipated gas tax revenues and the $3.92 billion forecast for June 2012.

This reduction is due primarily to continued lower gasoline consumption. Because Washington state's gas tax is based on gallons sold rather than price, reduced consumption results in reduced revenues. See *Capital Project Delivery Programs*, pp. 38-59.

Current 2012 Legislative Transportation Budget Performance Dashboard: Highways

Highway construction performance dashboard

As of June 30, 2012; Dollars in thousands

Combined Nickel and TPA programs	Number of projects	Value of program
Projects completed in earlier biennia that *are not* included in the current Transportation Budget	81	$373,000
Projects completed that *are* included in the current Transportation Budget	249	$4,453,403
Subtotal of completed projects	*330*	*$4,826,403*
Projects included in the current Transportation Budget but not yet completed	91	$11,516,775
Total number of projects[1] 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.	**2011-2013 Biennium Budget**	**Current[2] Legislative Budget**	**Cumulative[2] Program**
Number of projects completed	26	249	330
Percent completed early or on time	69%	85%	88%
Percent completed under or on budget	85%	92%	91%
Percent completed on time and on budget	65%	80%	81%
Baseline estimated cost at completion	$700,611	$4,453,403	$4,826,403
Current estimated cost at completion	$690,144	$4,390,450	$4,765,519
Percent of total program over or under budget	1% under	1% under	1.3% under

Advertisement Record: Results of projects entering into the construction phase or under construction detailed on pp. 43-46.	**Combined Nickel & TPA**
Total current number of projects in construction phase to date, July 1, 2003 – June 30, 2012	36
Percent advertised early or on time	78%
Total number of projects advertised for construction in 2011 - 2013 biennium to date (July 1, 2011 – June 30, 2012)	13
Percent advertised early or on time	92%

Projects To Be Advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on p. 46.	**Combined Nickel & TPA**
Total projects being advertised for construction bids July 1, 2012 - December 31, 2012	3
Percent on or better than anticipated advertisement schedule	33%

Budget status: 2011-2013 biennium

Dollars in thousands

	WSDOT biennial budget
Budget amount for 2011-2013 biennium	**$3,772,395**
Actual expenditures to date 2011-2013 biennium (July 1, 2011 – June 30, 2012)	$1,327,496
Total 2003 Transportation Funding Package (Nickel) expenditure	*$167,608*
Total 2005 Transportation Partnership Account (TPA) expenditure	*$365,547*
Total Pre-Existing Funds (PEF) expenditure[3]	*$794,340*

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 June 30, 2012. See p. 38 for definitions of the Current Legislative Budget and the Cumulative Program delivery performance metrics. 3 For full details of the PEF program, see pp. 51-54.