



The Gray Notebook Lite

GNB excerpts for
the quarter ending
June 30, 2011

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Excerpts from WSDOT's quarterly performance report on transportation systems, programs, and department management

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

Additional highlights from Gray Notebook 42

Gray Notebook 42 presents information on WSDOT's performance for the quarter ending June 30, 2011. In addition to the topics in the *Lite*, selected highlights include:

- **WSDOT accepted delivery of M/V Salish on May 12, and the vessel entered service on July 1, 2011.** Other new ferry construction updates include completion of major construction on the *M/V Kennewick* on April 1, and the completion of detailed design for construction of 144-car ferries on June 30. (*New Ferry Construction Update*; pp. 59-60)
- **In FY 2011, 146 of 171 highway construction and ferry terminal contracts were awarded to contractors at a cost less than WSDOT estimated.** The awards averaged 17.4% below estimates. The number of projects with contract cost overruns is down 2.1% from FY 2010. (*Construction Contracts Annual Report*; pp. 77-80)
- The *Gray Notebook* continues to celebrate the publication's tenth year with a short article highlighting then-and-now performance measures (pp. 88).

Other articles in GNB 42 include the Commute Options Annual Report, Construction Cost Trends Semi-Annual Report, and updates on worker safety, Amtrak Cascades, Ferries, Incident response, and progress on federal Recovery Act-funded projects.

2001-2011
A decade of transparency

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All pages referenced in the *Lite* are to the full edition of the *Gray Notebook 42* or *2011 Annual Congestion Report*. Both publications are available on line at www.wsdot.wa.gov/Accountability

The *Gray Notebook* and *GNB Lite* are publications of the Washington State Department of Transportation. 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.wa.gov

Safety

Washington traffic fatalities lowest since 1954

The downward trend in traffic fatalities continues on Washington highways, city streets, county roads, and other public roadways. For the first time in the state's history, Washington experienced a consecutive annual downward trend in the number of traffic fatalities over a five year period. The 459 fatalities in 2010 reflects the lowest number of traffic fatalities recorded since the 413 deaths in 1954.

Target Zero plan aims for zero fatalities

Washington's Strategic Highway Safety Plan, "Target Zero," unites WSDOT and other agencies in efforts to reduce the factors that contribute to severe or fatal collisions. The countermeasures selected do not always lead to highway modifications, and may focus on issues such as speeding, impaired driving, seatbelt use, and other human behaviors.

Washington annual traffic fatalities

2005-2010

Year	2005	2006	2007	2008	2009	2010
All public roads	649	633	571	521	492	459
State highways	316	308	280	234	241	232

Data source: Fatal Accident Reporting System (FARS).

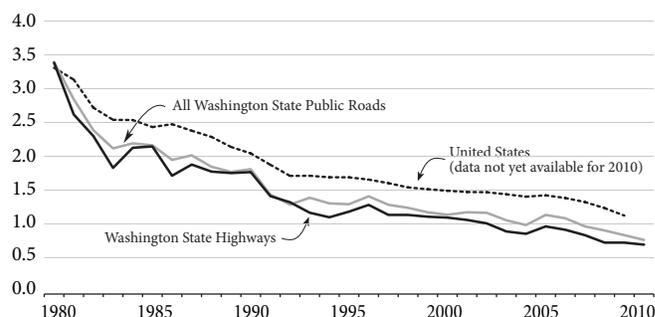
Note: GNB 38 reported the number of traffic fatalities for 2008 and 2009 as 522 and 491 respectively. These numbers have been updated to 521 and 492 due to updates made to FARS. The 2010 numbers are considered to be preliminary until December 31, 2011.

Washington's fatality rate at its lowest since 1910

Washington's fatality rate in 2010 was its lowest per 100 million vehicle miles traveled in 100 years at 0.80. The most recent national average fatality rate reported by the National Highway Traffic Safety Administration was 1.14 for 2009. Washington's fatality rate of 0.87 in 2009 was tied with New York as the nation's seventh lowest fatality rate among all states. The state and national fatality rates for 2010 are not yet available for comparison. More information on highway safety is on pages 4-6.

Traffic fatalities rates in Washington compared to the national average

Fatalities per 100 million vehicle miles traveled; 1980-2010



Data source: US Fatalities/VMT: FARS Encyclopedia, WA Fatalities: FARS; State Hwy Fatalities: WSDOT-Statewide Travel & Collision Data Office (STCDO); WA VMT: WSDOT-STCDO

Preservation

Bridge condition update: 95% of WSDOT bridges in good or fair condition

For fiscal year (FY) 2011, 86% of WSDOT bridges were rated in good condition and 9% were in fair condition, for a total of 95% in good or fair condition. The criteria used to determine condition are different from those used in FY 2010.

WSDOT uses a performance measure which classifies a bridge as good, fair, or poor using the National Bridge Inspection Standards (NBIS) bridge superstructure, substructure, and deck codes. Previously, WSDOT used only the structural codes; although the bridge deck is a primary load-carrying element, deck area codes were excluded from the condition ratings due to problems with

data quality, which WSDOT has since worked to improve through better tracking. Deck codes were included in 2011 analysis because WSDOT has improved the measurement and consistency of data.

FHWA: Washington's structurally deficient deck area up

The FHWA's national inventory shows Washington has 7,755 total bridges, which includes structures owned by both state and local agencies. In 2010, 394 bridges (9.1% of the total deck area) were classified as structurally deficient (SD). Between 2007 and 2010, the percentage of SD deck area has increased by 24.1% mainly due to the inclusion of many of WSDOT's largest bridges. Washington's percentage of SD bridge deck area is ranked 23rd highest nationally. More information is on pages 8-14.

Bridge structural condition ratings

Condition ratings by fiscal year (based on the number of bridges)

Description	2006	2007	2008	2009	2010	2011*
Good A range from no problems to some minor deterioration of structural elements.	88%	88%	88%	89%	90%	86%
Fair All primary structural elements are sound but may have deficiencies such as minor section loss, deterioration, cracking, spalling, or scour.	9%	9%	9%	8%	8%	9%
Percentage of Good + Fair bridges	97%	97%	97%	97%	98%	95%
Poor Advanced deficiencies such as section loss, deterioration, cracking, spalling, scour, or seriously affected primary structural components. Bridges rated in poor condition may have truck weight restrictions.	3%	3%	3%	3%	2%	5%

Source: WSDOT Bridge and Structures Office.

* Note: For fiscal year 2011 NBIS deck codes are now included as part of the "good/fair/poor" performance measure, previously only superstructure and substructure codes were included. The addition of deck codes brings WSDOT's "good/fair/poor" into alignment with FHWA's SD metric.

Highway Construction: Nickel and TPA Project Delivery Performance Overview

Dashboard shows progress against 2010 Transportation Budget and includes individual programmatic and bucket projects

The 2010 Supplemental Transportation Budget signed into law by Governor Gregoire on March 30, 2010, directs WSDOT to develop and construct a specified list of projects in the course of the biennium. The greater part of these line-item projects were itemized in the original 2003 and 2005 Nickel and TPA programs. The 2011-2013 Transportation Budget was approved and signed into law on May 16, 2011; information about the list and number of projects for this biennium will be presented, along with an end-of-biennium wrap up article, in *Gray Notebook 43*.

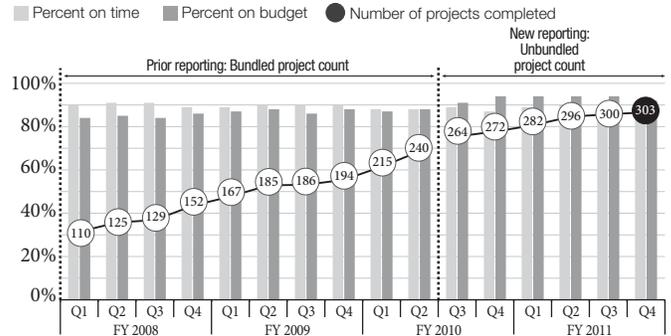
The Beige Pages' tables show individual "unbundled" projects from programmatic budget items (such as the Bridges Seismic Retrofit Program), as well as subprojects within mega-projects (such as the Alaskan Way Viaduct project). The total combined number of projects in WSDOT's capital project delivery program through June 30, 2011, is 421.



This TPA project used a barge in the Columbia River to install heavy reinforcement support beams below the George Sellar Bridge deck in order to build an additional eastbound lane on the existing bridge.

Cumulative on time and on budget performance of Nickel and TPA projects

303 of 421 projects completed as of June 30, 2011



Data source: WSDOT Capital Program Development & Management.

On time and on budget delivery performance on individual projects is unchanged from last quarter

WSDOT's on time and on budget results for the current highway construction program are shown on page 43. The cumulative capital program delivery performance, including 70 projects completed in earlier biennia, currently shows 89% of projects completed early or on time and 94% completed on or under budget, both unchanged from last quarter. As of June 30, 2011, 85% of all completed projects were both on time and on budget.

Eighty-nine projects were completed in the 2009-2011 biennium, including three completed in the quarter ending June 30, 2011. Of the 89 projects completed this biennium, 89% were early or on time and 96% were under or on budget.

Of the three projects completed this quarter, all three were delivered on or under budget. One was delayed by unsuitable soils and winter weather, a second by additional time required for analysis and design; the third was not a WSDOT led project. More information on completed projects is on pages 45 and 55-57.

Recovery Act: 200 highway projects complete

In June, WSDOT completed the 200th Recovery Act highway project: more than 90% of the 219 state and local highway projects funded in part by stimulus funds through the Federal Highway Administration (FHWA) are now complete. Seven state and 12 local Recovery Act projects are still under way.

Between April 1 and June 30, 2011, workers on state and local Recovery Act highway projects earned almost \$14.3 million working more than 338,000 hours. To date, the projects have provided more than \$177 million in payroll to workers.

Second advertisement under way for North Spokane Corridor TIGER grant

In June, WSDOT advertised a project to build the Parksmith Interchange on the North Spokane Corridor using funds from

a \$35 million TIGER grant. The southbound lanes of the North Spokane Corridor between Francis and Farwell roads are under way and scheduled for completion in spring 2012.

Rural transit agencies receive new buses and complete transit facility project

Three Washington transit agencies recently accepted eight Recovery Act-funded buses. In June, Clallam Transit received four buses and Jefferson Transit received two buses. Pacific Transit received two 30-foot buses in May.

Grant Transit Authority opened its new maintenance and operations base in Moses Lake on June 17. The Recovery Act provided \$3.6 million for the \$5.1 million project, while WSDOT invested an additional \$600,000.

Current 2011 Legislative Transportation Budget Performance Dashboard: Highways

Highway construction performance dashboard

As of June 30, 2011; 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	70	\$239,485
Projects completed that <i>are</i> included in the current Transportation Budget	233	\$3,864,526
<i>Subtotal of completed projects</i>	303	\$4,104,011
Projects included in the current Transportation Budget but not yet completed	118	\$11,433,170
Total number of projects¹ in Improvement & Preservation budget²	421	\$15,537,181
Schedule and Budget Summary: Results of completed projects in the current Transportation Budget detailed on page 45.		
		Combined Nickel & TPA
Number of projects in current Transportation Budget completed to date: 2003 – June 30, 2011		233
Percent completed early or on time		89%
Percent completed under or on budget		94%
Percent completed on time and on budget		85%
Baseline estimated cost at completion		\$3,864,526
Current estimated cost at completion		\$3,810,727
Percent of total program over or under budget		-1% Under
Total number of projects completed in 2009-11 biennium to date	89	
Percent completed early or on time	89%	
Percent completed under or on budget	96%	
Percent completed on time and on budget	85%	
Baseline estimated cost at completion this biennium		\$1,641,355
Current estimated cost at completion this biennium		\$1,596,604
Percent of total program under or over budget		-3% Under
Advertisement Record: Results of projects entering into the construction phase or under construction detailed on pages 46-49.		
		Combined Nickel & TPA
Total cumulative number of projects in construction phase to date, 2003 – June 30, 2011		50
Percent advertised early or on time		74%
Total number of projects advertised for construction in 2009-11 biennium to date	38	
Percent advertised early or on time	71%	
Projects To Be Advertised: Results of projects now being advertised for construction or planned to be advertised, detailed on page 50.		
		Combined Nickel & TPA
Total projects being advertised for construction bids July 1, 2011 - December 31, 2011		2
Percent on or better than anticipated advertisement schedule		50%
Budget status: 2009-2011 biennium		
<i>Dollars in thousands</i>		WSDOT biennial budget
Budget amount for 2009-2011 biennium		\$3,234,650
Actual expenditures to date 2009-2011 biennium		\$2,020,708
<i>Total 2003 Transportation Funding Package (Nickel) expenditure</i>		\$478,779
<i>Total 2005 Transportation Partnership Account (TPA) expenditure</i>		\$1,114,595
<i>Total Pre-Existing Funds (PEF) expenditure³</i>		\$427,334

Data source: WSDOT Capital Program Development & Management.

1. This 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, page 55, for more details.

2. Per the 2005-2007 Transportation Budget, Section 603.

3. For full details of the PEF program, see pages 83-87.

2011 Annual Congestion Report: Congestion increasing since 2009, nears 2008 levels

The trends of decreasing congestion and lessening delay that prevailed from 2008 through 2009 appear to have slowed, as both delay and vehicle miles traveled on Washington’s roadways increased in 2010. Statewide congestion data for the past five years shows that 2009 was the least congested year for Washington. But in 2010, as Washington’s economy slowly began to regain ground and gas prices stabilized, congestion on the state highway system rose. It is unclear if this rise in congestion will continue.

Trends in this year’s report show that most congestion performance metrics for 2010 are higher than 2009 but below 2008 levels.

In 2010, delay on state highways when measured at maximum throughput speed was 13% greater than in 2009 but still 9% lower than in 2008. Similar trends were seen when the delay metric was calculated at posted speed limits. Per person, people in Washington spent 12% more time in traffic in 2010 compared to 2009, but 4% less time compared to 2008; again, the delay was similar when calculated at posted speeds. WSDOT measures delay against both posted speed and maximum throughput speed, and uses the latter to most efficiently manage the transportation system.

Compared to 2008, annual vehicle miles traveled (VMT) increased in 2010 on all roads (by 3.1%) and on state highways (by 3.3%). This means that Washingtonians drove about 65 more miles in 2010 (8,505 vehicle miles per person) compared to 2008 (8,440 miles), and 57 of those 65 miles were on state highways: per person VMT on all roads increased by 0.8% and on state highways by 1.2%.

Factors influencing congestion

As Washington’s economy rebounds, economic growth will result in more people spending more time on the road as they drive to work, to school, to shopping centers, or on other errands. Congestion metrics demonstrate these signs, as the leading performance indicators showed an increase in 2010 compared to 2009, even though the magnitude of this increase is below 2008 levels.

Although congestion can be an indicator of economic growth, it also has negative economic consequences. Delay costs money as drivers waste fuel in stop-and-go traffic or businesses suffer lost

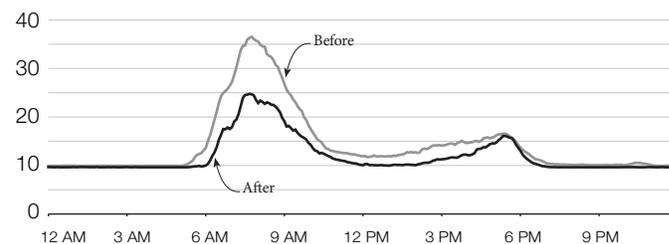
productivity when shipments take longer to deliver. When estimated against posted speeds, statewide travel delay cost drivers and businesses in Washington \$1.11 billion in 2010; the cost of this delay in 2008 and 2009 was \$1.22 billion and \$1.06 billion respectively.

This year’s report includes before and after analysis of four Moving Washington projects to add capacity on state highways, including the I-5/Port of Tacoma to King County Line – Add HOV Lanes and using the shoulders on US 2. The chart below shows how morning peak period travel times have dropped on I-405 northbound since projects were completed in 2009. The report includes detailed analysis of each route, like the productivity graph below, which show how I-405 lanes were more productive in 2010 than in 2008. More information on the before and after analysis is in the 2011 Congestion Report on pages 58-64.

Before and After travel time profile on I-405 Northbound between I-5 and Coal Creek Parkway (10 miles)

Weekday data for March - April 2007 & 2011

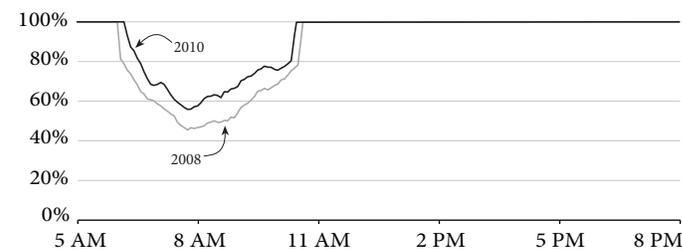
Travel time in minutes



Data source: WSDOT Northwest Region Traffic Office.

Throughput productivity, 2008 to 2010 NB I-405 at SR 169 (MP 4.0)

Based on highest observed 5 min flow rate



A look at 2011 travel times

In addition to the Annual Congestion Report, WSDOT uses a snapshot of the latest available travel data to provide a semi-annual update on the recent conditions. This report, on pages 22-24 of the Gray Notebook, shows the latest performance on key routes.

Taken as a whole, travel times in both the morning and evening commute periods in the Puget Sound region for the first five months of 2011 have changed only modestly in comparison to those in both 2009 and 2010.

The morning commute shows very little change from 2010, with the greatest change being a one minute gain on the Bellevue to

Seattle via SR 520. Traffic volumes along the key routes have also stayed mostly flat, with only the SR 520 corridor showing a peak period volume reduced by almost 3% from 2010.

In the afternoon commute, travel times changed slightly, with two routes – Bellevue to Everett via I-405 and I-5, and Bellevue to Seattle via SR 520 – showing improvements of more than two minutes. Only three other routes changed by more than a minute. Peak period traffic volumes on those routes have not changed significantly; however, volumes have dropped more than 3% on the commute back to the Eastside from downtown Seattle across the two floating bridges.

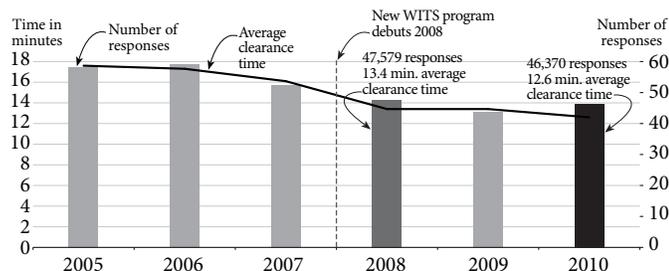
Incident Response Program annual report

The mission of WSDOT's Incident Response (IR) program is the safe, quick clearance of traffic incidents on state highways.

WSDOT cleared 46,730 incidents in 2010, down 2.5% from 47,579 incidents in 2008, but 5.9% higher than the 43,786 incidents in 2009. The statewide average annual clearance time for incidents in 2010 of 12.6 minutes improved by 6.3% compared to the 13.4 minutes in both 2008 and 2009. More information is in the annual *2011 Congestion Report* on page 54. A quarterly update is also available on pages 25-27 of the *Gray Notebook*.

Number of responses and overall clearance time

Clearance time in minutes, responses in thousands
2005-2010



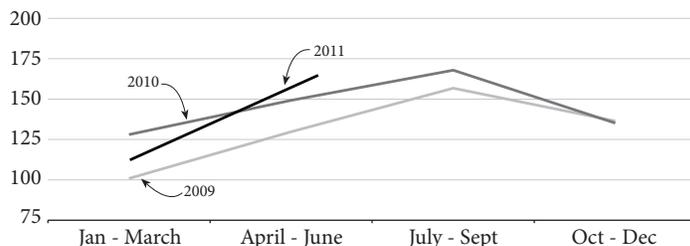
Data source: Washington Incident Tracking System (WITS), WSDOT Traffic Office.
Note: In Q1 2008, WSDOT's Incident Response Program moved to a new database system and began calculating average clearance time in a different way. This accounts for the apparent decrease in the average clearance time value.

Amtrak Cascades ridership up

Ridership on the state-supported Amtrak *Cascades* service was up 7.5% from the same period in 2010 and up 23.6% for the same time period in 2009. The increase in ridership between 2009 and 2011 can be explained by the addition of a second train to Vancouver, B.C.; the increase between 2010 and 2011 is likely associated with high gasoline prices seen in the second quarter of 2011.

Amtrak Cascades quarterly ridership

Number of passengers per quarter, 2009 - 2011
Riders in thousands



Data source: WSDOT State Rail and Marine Office.
Note: Ridership for Washington-funded trains only.

Amtrak Cascades customer satisfaction scores at 90%

Amtrak regularly surveys its passengers to gauge customer satisfaction. Amtrak *Cascades* customer satisfaction scores (CSI) were 90% for FY 2011, the same as FY 2010. The CSI measures satisfaction with Amtrak *Cascades* services. See pages 30-31.

Programmatic permits annual report

WSDOT's programmatic permits are agreements with the state's natural resource regulatory agencies: the Washington State Department of Ecology (Ecology) and the Washington State Department of Fish and Wildlife (WDFW). These permits cover routine environmental activities in the construction and maintenance of state transportation facilities. WSDOT develops these programmatic permits with other agencies to help simplify and expedite regulatory processes.

WSDOT saves time using programmatic permits

WSDOT estimates that for 2010, programmatic permits saved the agency up to 4,300 hours of staff time. The nine WDFW programmatic permits covered 953 separate activities in 2010 and saved WSDOT an estimated 3,100 hours that would have otherwise been required to fill out the required permit applications; in most cases this would have been an individual permit for specific in-water activities. The four Ecology programmatic permits also saved time, including an estimated 950 hours through its "Washing and Painting Bridges and Ferry Terminals" permit, which was used for 24 activities in 2010.

Ecology reissued one programmatic permit in the 2011 fiscal year, covering Aquatic plant and algae management. More information is on pages 34-36.

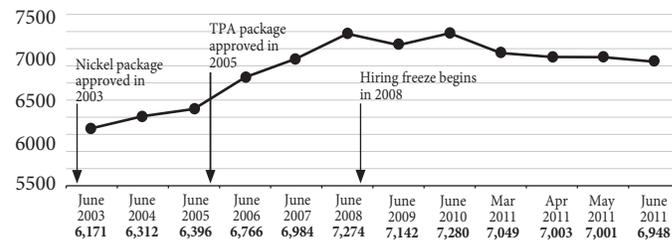
Workforce level dropped in the quarter

WSDOT had 6,948 permanent full-time employees on June 30, 2011, down 101 from the previous quarter and 332 from the same quarter in 2010. More retirements and a hiring freeze that requires the agency to fill only critical positions led to the drop.

In 2009, the Legislature authorized programs to provide voluntary retirement and separation incentives to reduce the size of the state workforce. WSDOT developed a program and 89 eligible employees accepted incentives of up to \$30,000 to leave state service or retire on or before June 30, 2011. More information on the program and the agency workforce level is on pages 81-83.

Number of permanent full-time employees

From June 2003 to June 2011



Data source: Dept. of Personnel Data Warehouse, HRMS, WSDOT and the Ferry System payroll.