

Safety

Highway System Safety Programs

WSDOT has implemented various safety initiatives over the years to reduce run-off-the-road collisions. WSDOT installed 1,237 miles of shoulder rumble strips since May 2003, and 2,163 miles of centerline rumble strips since May 1996. Both forms of rumble strips notify drivers that they are leaving their lane through sound and vibration.

WSDOT installed over 229 miles of cable median barrier since March 2001, which help prevent head-on collisions along divided highways. The agency installed about 93 miles of guardrail since August 1989 and replaced about 62 miles of guardrail since 1996.

WSDOT has analyzed collision data for the five most frequent kinds of accidents to examine the effectiveness of its safety initiatives. The data was analyzed separately for eastern and western Washington, and urban and rural areas.

The graph at right shows the change in collision trends for urban areas in western Washington: these saw a reduction in collisions of between 11% and 20%; “vehicle overturned” collisions were down by 11% and “entering at angle” collisions dropped by 20%.

Eastern Washington urban areas saw collision reductions ranging from ‘no change’ to 23%. The frequency of “fixed-object” collisions was unchanged, while “rear-end” collisions dropped 23%.

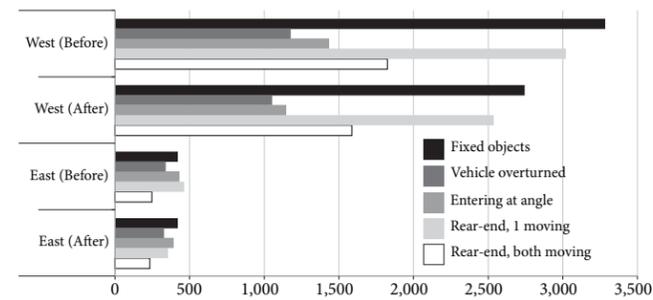
Western Washington rural areas saw reductions in the top collision

types of between 7% and 18%, while “rear-end” collisions for vehicles moving in the same direction increased by 1%. “Vehicle overturned” collisions were reduced by 18% while “entering at angle” collisions dropped by 6%. Eastern Washington rural areas showed collision reductions of between 5% and 23%. “Overturned” and “angle” collisions dropped 21% and 23% respectively.

The article also covers safety initiatives at or near tribal reservations and county grant programs. The entire report is on pages 5-8.

Collision analysis: Top five fatal, serious, and evident-injury collision types in urban Washington

Before data 2000-2004; After data 2005-2009



Source: WSDOT Collision Datamart, Capital Program Development and Management Office. Notes: East - Eastern Washington includes WSDOT North Central, South Central, and Eastern regions. West - Western Washington includes WSDOT North, Central, and South regions.

Safety

Safety Rest Areas Annual Safety Report

Safety rest areas on the highway system improve traveler safety by providing stopping opportunities when fatigue or other distractions impact driver attention. There are 47 rest areas statewide, 28 on the interstate system and 19 on state highways.

Rest area user data for 2010 show an increase in the number of visitors statewide over 2009. The total number of visitors statewide increased by 2.5% in 2010 (22.35 million users), about 559,000 more than in 2009 (21.79 million).

The new Elbe safety rest area on SR 7 in Pierce County is under construction and will be completed in 2011. The entire report is on pages 9-10.

Safety rest area visitation data, 2006-2010

Year	Total visitors	Change from previous year
2006	21,571,000	-- --
2007	20,884,596	-3% ▼
2008	20,273,428	-3% ▼
2009	21,788,595	7% ▲
2010	22,348,011	2.5% ▲

Data source: WSDOT Maintenance Office

1 2006 was the first year WSDOT used water usage as the primary evaluation tool to estimate user visitation, prior estimates used a different metric, and are not compared.

Preservation

Safety Rest Areas Annual Preservation Report

WSDOT conducts building and site condition assessments every two years. Condition ratings focus on evaluating building and site components, structures, and systems, and not maintenance or operational components. In 2010, the majority of rest area facilities have condition ratings in the Fair-Mid to Fair-Low categories.

New buildings will replace lowest-rated facilities

The two lowest-rated facilities based on building and site condition were the eastbound Selah Creek (Fair-Low) and the Vernita (Poor) safety rest areas. New buildings are under construction at both sites and will be completed in 2011. The entire report is on pages 12-14.

Condition ratings for 43 safety rest areas

Number and percentage of safety rest areas in each category in 2010

Condition	Number	Percentage
Good (meets standards)	8	19%
Fair - High (minimal deficiencies)	7	16%
Fair - Mid (adequate condition)	11	26%
Fair - Low (multiple deficiencies)	16	37%
Poor (multiple major deficiencies)	1	2%

Data source: WSDOT Facilities Office.

Note: Only 43 of 47 facilities were evaluated. The remaining four were not evaluated because they are fairly new, minimal-amenity facilities. All 47 are planned to be evaluated in 2012.

Economic Vitality

Trucks, Goods & Freight Annual Report

WSDOT is partnering with Transportation Northwest at the University of Washington (TransNow), and the Washington Trucking Associations (WTA) in a project to collect and analyze Global Positioning Systems (GPS) truck data from commercial, in-vehicle, truck fleet management systems.

In 2010, the state Legislature gave the program additional funding and directed that the study area be expanded statewide from the initial Puget Sound program. Funds were used to increase the number of trucks monitored to 6,000 and widen the study area to include all state highways with freight significance.

Bottleneck identification project

The bottleneck identification process developed for the program is designed to find sections of Washington’s roadways that perform poorly for trucks, then to develop quantitative measures that allow these bottlenecks to be ranked and compared. Results will be replicable and statistically valid, producing useful data that are straight-forward to use by transportation professionals and decision makers.

Freight volumes increased from 2009 to 2010

Truck volumes in Washington have shown steady, long-term increases. Although 2009 saw an annual decrease, volumes appear to have begun to increase again in 2010. Growth in overall average

Example truck bottleneck data

I-90 Snoqualmie Pass – Tinkham Rd to Denny Creek

- Speeds below threshold 61% of the time
- Average truck speed is 37 mph
- Truck traffic averages 6,000 trucks per day
- This route is considered *Unreliable* at all measured times of day: AM, midday, PM, and night.

daily truck volumes on Washington’s major highways may be a sign that economic conditions are beginning to stabilize and grow.

Marine freight container volumes were 14.8% higher in 2010 compared to 2009, following a 12.2% decline in 2009 compared to 2008.

2009 freight volumes down for rail and up for air freight

The economic downturn finally hit rail freight traffic in Washington, as rail traffic declined more than 11% in 2009 from 2008. The most significant drop is in import rail traffic passing through Washington to the Midwest on the trans-continental route. Air cargo handled at Washington airports increased 3.77% between 2008 and 2009.

Air and rail freight data for 2010 was not available in time for publication. The entire report is on pages 42-50.

CVISN – Commercial Vehicle Information Systems

As part of the Intelligent Transportation Systems program, the Commercial Vehicle Information Systems and Networks (CVISN) program provides information to Washington State Patrol Commercial Vehicle Enforcement Offices allowing for more targeted inspections of commercial vehicles.

In 2010, CVISN truck transponders were read about 2.2 million times at open weigh stations in Washington. In this period, WSDOT estimates that 35.31% of all commercial vehicles moving through the state were using transponders. This is a 5.7% increase from 2008 and 1.3% more than 2009.

The program saved the trucking industry in Washington about 113,000 hours and an estimated \$8.5 million. Trucks received more than 1.3 million green lights in 2010, a 24% increase since 2008. The entire report is on pages 51-52.



Fort Lewis weigh station, I-5 northbound.

Preservation

Ferries Terminal and Vessel Preservation

WSDOT Ferries Division is responsible for the repair and preservation of the 19 terminals and repair facility located in Washington. WSDOT inspects and evaluates terminal assets for condition and remaining service life at least every three years.

2010 terminals condition rating results

Eighty-four percent of state ferry terminal systems are rated in “good” or “fair” condition – down 1% from 2009. Vessel condition reporting is under development and vessel status is reported in terms of life cycle assessment in the interim. The entire report is on pages 18-20.

WSF structural condition ratings for terminal systems

Inspection results for 2010

Type of facility or system	# of systems	Good 90-100	Fair 70-89	Poor 50-69	Substandard 0-49	Not rated
Landing aids*	179	55%	22%	12%	11%	0%
Vehicle transfer spans	210	35%	49%	16%	0%	0%
Overhead loading systems	66	62%	30%	8%	0%	0%
Trestle & bulkheads	72	31%	58%	7%	3%	0%
Pavement	77	25%	42%	19%	14%	1%
Buildings	136	45%	54%	1%	0%	1%
Passenger facilities	15	53%	33%	13%	0%	0%
Total average	755	43%	42%	11%	4%	0%

Data source: WSDOT Ferry System.

Environment

Stormwater quality report

Managing the stormwater that comes from its facilities helps WSDOT fulfill its environmental stewardship commitment, as well as meet regulatory conditions imposed by local, state, and federal authorities. In response, WSDOT developed a stormwater program to meet regulatory obligations which are among the most comprehensive and stringent in the country.

WSDOT increases inventory of stormwater management facilities

WSDOT tracks the number of stormwater facilities built statewide within the permit-regulated areas and the Puget Sound Basin. In 2010, WSDOT built 384 facilities statewide, 202 of which are in the permit area, and 144 of which are in the Puget Sound Basin.

WSDOT's Municipal Stormwater Permit requires development of individual Stormwater Pollution Prevention Plans (SWPPPs) for maintenance facilities, rest areas, ferry terminals, and WSDOT maintained park & ride lots located within the permit coverage area.

The agency has developed SWPPPs for 31 maintenance facilities, six rest areas, 11 park & ride lots, and 11 ferry terminals. These plans identify potential sources of pollutants at each facility, methods to prevent stormwater from coming in contact with pollutants and best management practices to prevent and control the discharge of contaminated water to surface and groundwater.

Highway maintenance crews have received training on the SWPPPs and all plans have been implemented. The entire report is on pages 32-37.

Wetland monitoring and evaluation

WSDOT designs transportation projects to avoid and minimize wetland disturbance. The department obtains permits from regulatory agencies when projects have unavoidable wetland disturbances. Wetlands are then enhanced, restored, established, or preserved to meet permit conditions and the state and department 'No Net Loss' policies.

WSDOT has constructed and monitored 183 wetland mitigation sites on 908 acres since 1988. WSDOT is responsible for these sites in perpetuity.

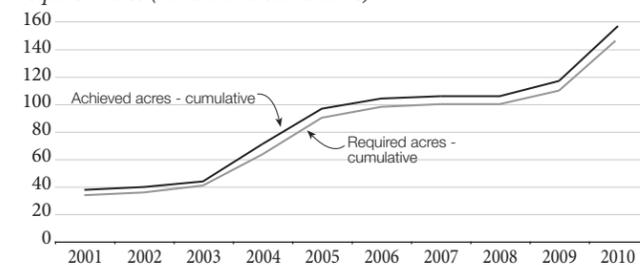
Collectively, as the graph at right shows, the 68 sites where final area has been determined have produced 9% percent more wetland than required (159 acres achieved compared to 146 acres required).

Since 1999, WSDOT has developed and operates three certified wetland mitigation banks, which have provided mitigation for 17 transportation projects; 100.9 credits remain for use by future

projects. These banks help reduce costs for design, permits, purchasing, construction, monitoring, and maintaining mitigation sites. The banks also reduce time needed to obtain permits for future projects. The entire report is on pages 38-40.

WSDOT wetland mitigation acres achieved, 2001 - 2010

Number of acres achieved (annual and cumulative) vs. required acres (annual and cumulative)



Data source: WSDOT Environmental Services.

Mobility

Traveler Information Annual Report

WSDOT provides traveler information to the public in a variety of formats. The system that started with the 5-1-1 Traveler Information phone system is now greatly expanded, with options including the travel information website, Twitter and RSS feeds, the Traffic PDA mobile application, e-mail alerts, highway radio transmissions, and variable message signs (VMS).

5-1-1 Calls low for second consecutive winter

Calls to the 5-1-1 information line for this fall/winter season (October 2010 through March 2011) totaled more than 1.1 million, up 1.1% from last winter's record-low call volume of just less than 1.1 million. This year's call volume mirrors those of last year, when few major storms took place in the heart of the winter season.

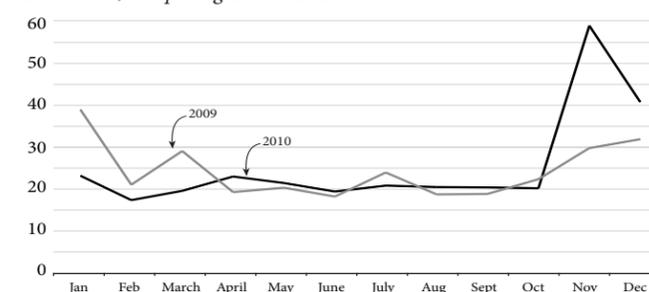
Average daily call volume remains near 2,000 in the spring/summer season (April to September), up to a range of 5,000 to 30,000 calls a day during the few severe storm event days that occur during the fall/winter season.

WSDOT website traffic increased 4% in 2010

WSDOT traffic and travel information website page views stayed relatively level in 2010 compared to the previous year, rising 4% to nearly 298.7 million from 285.5 million. Weather disruptions in late 2010 helped account for the increase as usage topped 1.9 million views a day in November 2010. The entire report is on pages 22-23.

WSDOT traffic and travel website monthly page views

In millions, comparing 2009 to 2010



Data source: WSDOT Communications Office.



Washington State
Department of Transportation

The Gray Notebook Lite

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

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



A decade of transparency
2001-2011

GNB 41 Excerpts

The *Gray Notebook*, WSDOT's quarterly performance report, celebrates its tenth year of publication with this edition (see page 96 for details). This edition of *Gray Notebook Lite* includes highlights from the annual reports covering safety rest areas, freight, travel information, water quality, and wetlands protection reports. This edition also includes analysis on state and local highway safety programs.

An insert provides updated figures for the 2003 Nickel, and the 2005 Transportation Partnership Account project delivery programs. A second insert provides information on the projects funded and supported by the 2009 American Recovery and Reinvestment Act.

An electronic copy of the *Gray Notebook Lite* as well as the complete edition of the *Gray Notebook* can be found at www.wsdot.wa.gov/Accountability/GrayNotebook/default.htm