

STATE OF WASHINGTON
Office of Financial Management

Transportation Progress Report:

The State of Washington's Transportation System

Washington State Transportation Goals, Objectives and
Performance Measures

2008 Biennial Report
(Published February 2009)



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Authority

RCW 47.01.071(5) requires the Office of Financial Management to submit a report on state transportation agencies' progress toward the attainment of the state transportation policy goals in 2008, and biennially thereafter. This report fulfills that requirement.

Contributors

The report was developed by the Office of Financial Management's Budget Division with assistance and input from many agencies, including the Washington State Department of Transportation Strategic Assessment Office, the Governor's Policy Office, Senate and House Transportation committee staff, and the following transportation-related agencies:

County Road Administration Board	Transportation Improvement Board
Department of Ecology	Washington Public Ports Association
Department of Licensing	Washington State Department of Transportation
Freight Mobility Strategic Investment Board	Washington State Patrol
Metropolitan and regional transportation planning organizations	Washington State Transportation Commission
Ports of Seattle, Tacoma and Vancouver	Washington Traffic Safety Commission
Puget Sound Regional Council	

Message from the Office of Financial Management

Dear Governor, Legislators and Interested Readers,

Washington's economy and quality of life depend on a transportation system that functions well. To promote a high-functioning system, the 2007 Legislature established five overarching goals in the areas of safety, mobility/congestion, preservation, environment and stewardship. Attaining these demands requires attention at the state, regional and local levels. During the past year, many state agencies and a number of other transportation partners have realigned their planning, reporting and decision making to be consistent with the five transportation goals.

I am pleased to submit this 2008 Biennial Progress Report on the state's transportation system to the Governor and 2009 Legislature. The report relies heavily on data, much of which is tied to the Washington State Department of Transportation and state-owned or -operated components of the transportation system. This is not a report card on individual agencies, but a report on the state of the transportation system. Over time, we will add data from other transportation partners, including transit, regional, tribal and local governments.

The trends reflect both good news and challenges. The good news is:

- The number and rate of traffic fatalities continue to decrease.
- Most state highways are in good or fair condition.
- Most state and local bridges are in good or fair condition.
- Response times for major highway incidents continue to decrease.
- Ferry on-time performance is outstanding.
- Passenger rail performance is improving.
- The rates of growth for key indicators of congestion are beginning to level off.

We also have challenges ahead:

- The demands on our transportation system are growing as the population continues to increase.
- Transportation is the largest contributor to global warming.
- The global economy has been causing large, unexpected increases in construction costs, affecting our ability to afford the preservation of our transportation assets.
- Given these challenges, and the data available, we have identified a number of areas of concern, including preservation and replacement of ferry vessels, preservation of small city roads, replacement of concrete highways, replacement of major bridges, continued congestion, delivery of capital projects and implementation of new stormwater rules.

We look forward to continuing to work with the Legislature; federal, regional, tribal and local governments; and freight, ports, transit and other transportation partners as we continue to report on the state's progress toward the transportation goals.

Sincerely,



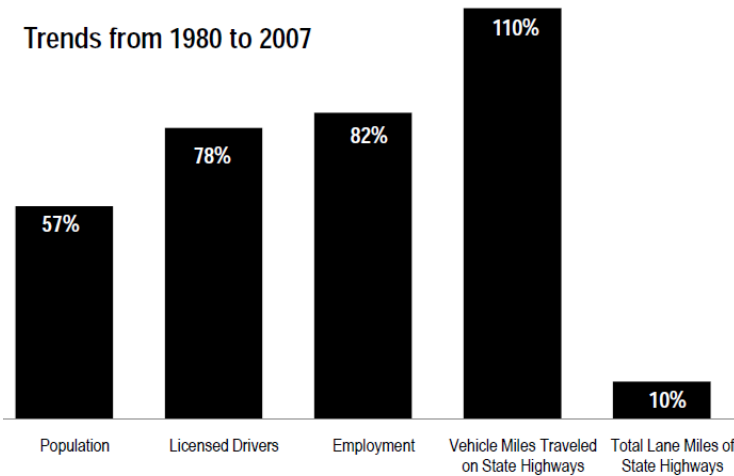
Victor A. Moore
Director, Office of Financial Management

Washington State Transportation System Overview

Washington's Transportation System:

- Is a network to move people and products.
- Is under increasing pressure as population and employment grow. Our population has increased 50 percent since 1980, totaling 6.6 million, including 3.2 million employed.

Trends from 1980 to 2007



Source: WSDOT 2008

- Is owned and operated by many entities. These include local, regional, tribal, ports, state and federal governments; transit agencies; ports; and private owners.
- Includes infrastructure, such as roads and bridges. The state is served by 174,022 lane miles of highways, roads and streets. It includes bridges, airports, marine ports, railroads, bicycle and pedestrian facilities, and ferry and transit systems.
- Includes key transportation services. These include transit, passenger rail, ferry service and air travel.

Key Facts

On the ground

- 5 million licensed drivers
- 4 million registered passenger vehicles
- 6.6 million registered total vehicles
- 56 billion vehicle miles traveled per year
- 531 gallons of fuel consumed per vehicle per year on average
- 17 miles per gallon on average per vehicle
- 9,600 miles per vehicle per year on average
- 18,389 state highway lane miles (2006)
- 80,777 county road lane miles (2006)
- 35,548 city road lane miles (2006)
- 44 percent of traffic on county roads and city streets
- 56 percent of traffic on state highways
- 1.2 million miles of roads snowplowed per year
- 8,690 bridges statewide
- 233 miles of HOV freeway lanes complete
- 357 park-and-ride and park-and-pool lots
- 2,787 vanpools
- 22,700 vanpool riders daily
- 28 transit systems
- 192 million transit passenger trips
- 457,000 Amtrak Cascades passengers
- 79.7 million tons of freight carried by rail (2005)
- 283 million tons of freight carried by truck (2002)

In the air

- 16 state-owned airports
- 139 total airports
- 600,000 tons of air cargo pass through airports per year

On the water

- 20 ferries, largest system in the nation
- 12 ferry routes
- 23.3 million passengers carried on ferries per year
- 10.4 million vehicles carried on ferries per year
- 20 terminals
- 75 port districts
- 2.5 million 20-foot container equivalent units through Seattle and Tacoma ports (2006)
- \$84.4 billion of cargo pass through ports per year






2007 figures unless otherwise noted
Source: WSDOT 2008

Purpose of Transportation Progress Reports

Washington’s Transportation Progress Reports provide a high-level assessment of the state's progress in achieving its transportation goals using key performance measures and data.

Statewide Transportation Goals

In 2007, the Washington State Legislature amended RCW 47.04.280 to establish five statewide transportation policy goals to guide the planning, operation, performance of, and investment in the state’s transportation system. The goals are not prioritized.

-  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 (addressing congestion): 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.
-  Stewardship: To continuously improve the quality, effectiveness and efficiency of the transportation system.

Biennial Transportation Progress Reports

The Office of Financial Management (OFM) is responsible for establishing objectives and performance measures for the five goals, and for preparing a biennial progress report (also referred to as an “attainment report”) for the Legislature and Governor, beginning in 2008 (RCW 47.01.071(5)). The purpose of these reports is to assess progress toward the goals and contribute to the overall performance of the transportation system. Rather than report on agency-specific performance, the focus is on overall system performance.

In January 2008, OFM submitted initial proposed objectives and performance measures to the Legislature in a baseline report. The objectives and measures were developed with input from transportation agencies, stakeholders and the Legislature. In some cases, “placeholders” indicate that specific measures have yet to be developed.

Feedback on that baseline report was incorporated in this first biennial transportation progress report. Many of the measures and supporting data are used to make investment decisions, develop strategies and programs, provide accountability and manage internal resources. The measures will evolve as we continue progress in assessing the performance of the state’s transportation system.

Statewide Transportation Goals, Objectives and Performance Measures

Summary of Progress—2008 Status Compared to 2007 Baseline

GOAL 1. SAFETY

To provide for and improve the safety and security of transportation customers and the transportation system.

Objectives: ◇ Reduce fatalities and serious injury collisions ◇ Reduce risks and ensure security

<i>Measures</i>	<i>2007 Baseline</i>	<i>2008 Status</i>	<i>Progress</i>	<i>Comments</i>
Measure 1.1 Traffic Fatalities Number and rate of traffic fatalities per 100 million vehicle miles traveled (VMT)	633 traffic fatalities in 2006 <hr/> 1.12 per 100 m. VMT	571 traffic fatalities in 2007 <hr/> 1.00 per 100 m. VMT	● ●	2008 projected to be lower than 2007. The lowest rate in state history.
Measure 1.2 Collision Reduction Percent reduction in injury and damage collisions before and after safety improvements	For 60 projects, 12-16 percent reduction in collisions and 30-37 percent reduction in injuries	Cable median barriers reduce fatal and serious injury collisions by 62 percent, centerline rumble strips by 28 percent	●	2008 projects are not the same as the 2007 baseline, but before-and-after studies show safety improvements yield results.

GOAL 2. PRESERVATION

To maintain, preserve and extend the life and utility of prior investments in transportation systems and services.

Objective: ◇ Extend the useful life of existing facilities, systems and equipment

<i>Measures</i>	<i>2007 Baseline</i>	<i>2008 Status</i>	<i>Progress</i>	<i>Comments</i>
Measure 2.1 State Highway Pavement Percent of state highway pavement in fair or better condition	93.5 percent in 2006	93.3 percent in 2007	●	Goal is 90 percent. Percent in poor condition includes concrete, which is costly to replace.
Measure 2.2 Local Roadway Pavement Percent of city and county roadway pavement in fair or better condition	For data collected, a majority of city and county center line miles are in fair or better condition	For data collected, 86.7 percent of city and county center line miles are in fair or better condition	◆	Year-to-year comparison will require 100 percent data collection, expected to occur in 2009. Pavement in some small cities is of concern.
Measure 2.3 Bridges Percent of state, city and county bridges in fair or better condition	96 percent overall in 2006	96 percent overall in 2007	●	Replacement of major bridges, such as SR 520 and the Columbia River Crossing, is a concern.
Measure 2.4 State Highway Maintenance Percent of targets met for state highway maintenance levels	53 percent in 2007	50 percent in 2008	◆	Cost increases and new facilities are stretching resources.
Measure 2.5 Ferry Vessels and Terminals Percent of state ferry terminals in fair or better condition	87 percent in 2007	84 percent in 2008	◆	Future reports will include data on state vessels and county ferry systems.

● Performance is improving or holding steady

◆ Performance is not improving or is an area of concern

Summary of Progress (continued)

GOAL 3. MOBILITY (ADDRESSING CONGESTION)				
To improve the predictable movement of goods and people throughout the state.				
Objectives: ◇ Address congestion ◇ Maximize operational performance and capacity of existing systems ◇ Increase the reliability of travel for goods and people ◇ Reduce bottlenecks and choke points				
<i>Measures</i>	<i>2007 Baseline</i>	<i>2008 Status</i>	<i>Progress</i>	<i>Comments</i>
Measure 3.1 Hours of Delay Hours of delay statewide and on the 5 major corridors around Puget Sound	Statewide, drivers were delayed about 99,400 hours daily in 2005	Statewide, drivers were delayed about 101,960 hours daily in 2007	◆	While the hours of delay increased, the rate at which they increased has started to level off.
	Drivers on major Puget Sound corridors were delayed about 20,791 hours daily in 2005	Drivers on major Puget Sound corridors were delayed about 23,185 hours daily in 2007	◆	While the hours of delay increased, the rate at which they increased has started to level off.
Measure 3.2 Travel Times Travel times on 52 congested state highways around Puget Sound	From 2004 to 2006, 8 corridors had improved (shorter) travel times, 7 stayed the same and 37 worsened	From 2005 to 2007, 10 commutes had improved (shorter) travel times, 12 stayed the same and 30 worsened	●	This shows a leveling off of increases in travel times.
Measure 3.3 Trip Reliability 95 percent reliable travel times on 52 congested highways around Puget Sound	From 2004 to 2006, 9 commutes had 95 percent reliable travel times improve (shorten), 4 stayed the same and 39 worsened	From 2005 to 2007, 13 commutes had 95 percent reliable travel times improve (shorten), 7 stayed the same and 32 worsened	●	This shows a leveling off of increases in 95 percent reliable travel times.
Measure 3.4 High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) Lanes Placeholder – still being developed	TBD	TBD	na	Still developing a high-level measure.
Measure 3.5 Commute Modes Percentage of commute trips taken while driving alone	72.8 percent in 2006	73.1 percent in 2008	●	65.5 percent in 2007 at Commute Trip Reduction work sites (major employers in 9 most congested counties)
Measure 3.6 Incident Response Times Average length to clear major incidents	161 minutes in 2007	154 minutes in 2008 (through Sept. 30, 2008)	●	Governor's goal was 165 minutes in 2007, 155 minutes in 2008.
Measure 3.7 Freight Placeholder – still being developed	TBD	TBD	na	See mobility measures 3.1-3.4 for travel time, hours of delay and reliability.

● Performance is improving or holding steady

◆ Performance is not improving or is an area of concern

Summary of Progress (continued)

GOAL 3. MOBILITY (ADDRESSING CONGESTION) — CONTINUED				
Measure 3.8 Ferries Percent of trips on time and ridership	On average, more than 90 percent on time in 2007	On average, more than 90 percent on time in 2008	●	Currently includes only state ferry trips.
	24 million riders in 2007	23.3 million riders in 2008	◆	Currently includes only state ferry ridership.
Measure 3.9 Passenger Rail Percent of trips on time and ridership on state-supported Amtrak Cascades service	On average, 60 percent on time in 2007	On average, 64 percent on time in 2008	●	82 percent in Nov. 2008 was best performance ever.
	457,000 riders in 2007	521,500 riders in 2008	●	14 percent increase from 2007 to 2008.
Measure 3.10 Transportation-Efficient Land Use Placeholder – still being developed	TBD	TBD	na	Still developing a high-level measure.
GOAL 4. ENVIRONMENT				
To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities and protect the environment.				
Objectives: ◇ Protect habitat ◇ Reduce degradation of air and water quality				
<i>Measures</i>	<i>2007 Baseline</i>	<i>2008 Status</i>	<i>Progress</i>	<i>Comments</i>
Measure 4.1 Fish Passage Number of culverts fixed and miles of stream habitat opened up	12 culverts in 2007	8 culverts in 2008	◆	Needs to be evaluated in conjunction with miles of habitat opened up.
	50 miles of stream habitat in 2007	13 miles of stream habitat in 2008	◆	Targeting stand-alone culvert projects (vs. highway projects) yields significant results.
Measure 4.2 Stormwater Runoff Quality Number of WSDOT stormwater treatment facilities constructed	129 facilities in 2007	92 facilities in 2008	◆	New stormwater requirements expected in early 2009.
Measure 4.3 Air Quality Tons of greenhouse gases produced statewide	94.8 million metric tons CO ₂ equivalent in 2005	New data will not be available until 2010	na	2005 data showed a decrease from 105 million metric tons CO ₂ equivalent in 2000.

● Performance is improving or holding steady

◆ Performance is not improving or is an area of concern

Summary of Progress (continued)

GOAL 5. STEWARDSHIP				
To continuously improve the quality, effectiveness and efficiency of the transportation system.				
Objective: ◇ Improve program and project delivery				
<i>Measures</i>	<i>2007 Baseline</i>	<i>2008 Status</i>	<i>Progress</i>	<i>Comments</i>
Measure 5.1 Capital Project Delivery Percent of 2003 (Nickel) and 2005 (Transportation Partnership Act or TPA) revenue packages capital projects completed on time and within budget	78 percent on-time and on-budget in 2007	79 percent on-time and on-budget in 2008	◆	Goal is 90 percent. As of Dec. 2008, 185 of 391 projects funded by the Nickel and TPA packages were successfully completed.
Measure 5.2 Tolling Placeholder – still being developed	TBD	TBD	na	Still developing a high-level measure.

● Performance is improving or holding steady

◆ Performance is not improving or is an area of concern

SAFETY

Measure 1.1 Traffic Fatalities

Number and rate of traffic fatalities per 100 million vehicle miles traveled

Statewide, traffic fatalities decreased from 633 in 2006 to 571 in 2007. Traffic fatalities decreased from 1.12 per 100 million vehicle miles traveled in 2006 to 1.00 in 2007. This is the lowest rate in state history.

The state is taking aggressive action to reduce traffic fatalities and disabling injuries through education, enforcement and safety improvements. The state's target as adopted through the Strategic Highway Safety Plan is zero traffic fatalities by 2030.

To meet Target Zero, state and local partners are taking an integrated approach to traffic safety. The primary focus is on reducing traffic fatalities that involve impairment, speed and/or no seat belt use, which account for 77 percent of all traffic deaths. Additional emphasis is on reducing motorcyclist deaths and reducing fatalities and disabling collisions on specific corridors. The Nickel and TPA revenue packages funded more than 150 safety improvement projects, ranging from complex capital projects to installing low-cost enhancements such as rumble strips and cable median barriers.

Overall, traffic fatalities are decreasing statewide. Traffic fatalities decreased from 633 in 2006 to 571 in 2007. Fatalities decreased from 1.12 per 100 million vehicle miles traveled in 2006 to 1.00 in 2007. This is the lowest rate in state history and meets the federal goal of no more than one traffic fatality per 100 million vehicle miles traveled.

What's been happening?

As a result of the corridor safety program, the number of fatal-disabling collisions on 28 corridors has decreased by 34 percent and alcohol-related collisions decreased by 15 percent.

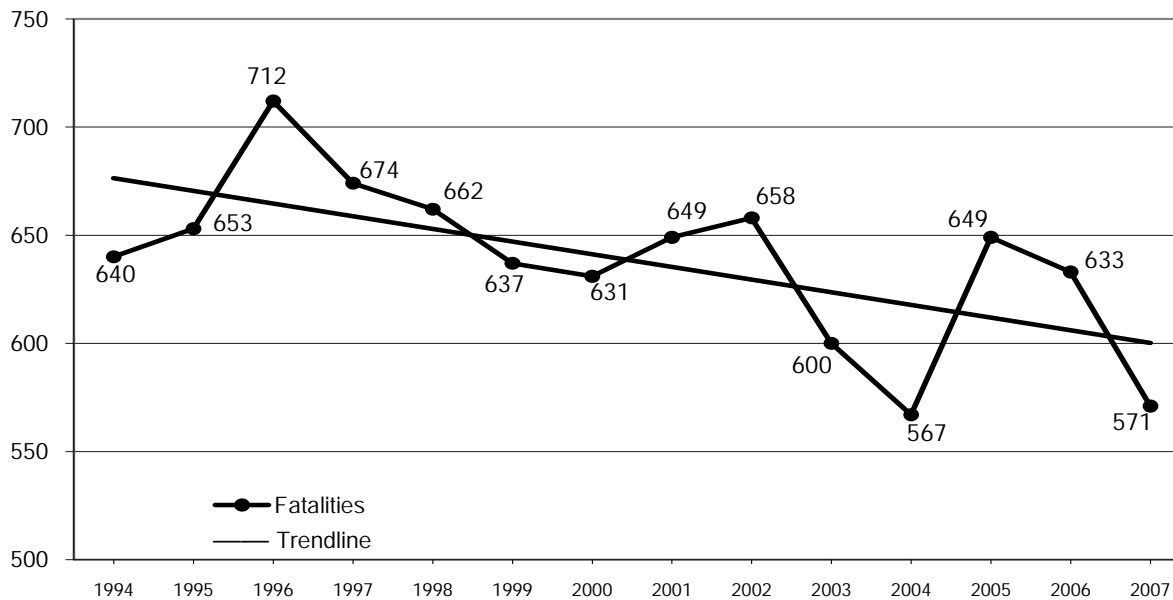
What's the focus now?

Emphasis on enforcement of impaired and speeding drivers, particularly at night.

What's next?

Additional emphasis on two-lane rural roads.

Washington Traffic Fatalities, 1994–2007



Source: WTSC 2008 (FARS data)

However, traffic fatalities on rural two-lane roads have increased. The number of fatal and serious collisions on rural two-lane roads increased from 273 in 2005 to 310 in 2007. WSDOT's analysis showed that 61 percent were caused by drivers running off the road and 30 percent involved crossover collisions.

State and local agencies are using tools such as the corridor safety program and specific safety projects to address rural two-lane roads. Within the past year, WSDOT began roadside safety projects and centerline rumble strip projects, which have proven to be effective. See Measure 1.2 for the before-and-after results of rumble strips.

Measure 1.2 Collision Reduction

Percent reduction in injury and damage collisions before and after safety improvements

Rumble strips and cable median barriers reduce the risk of serious injury and fatal collisions. Preliminary results indicate that fatal and serious injury collisions are reduced 62 percent by cable median barriers and 28 percent by rumble strips.

Barriers and safety improvements reduce deaths, injuries and property damage.

There were 65 fatal collisions in 2006 where “over centerline” was a contributing circumstance. Many transportation projects include safety improvements to roadways. Data show these investments are working to reduce injuries, collisions and fatalities.

Cable median barriers reduce collisions and fatalities. Concrete barriers and steel beam guardrails reduce the risk of vehicles crossing into oncoming traffic or leaving the roadway. While it’s not possible to prevent all crossover collisions or vehicles leaving the road, cable barriers help reduce the risk of very severe collisions.

WSDOT installed 43 miles of cable median barriers in 2007, bringing the statewide total to 177 miles. An analysis of almost 2,550 collisions from 1995 to 2007 found:

- A 62 percent reduction of serious and fatal collisions (from 24.8 per year before to 9.5 per year after installation); and
- Annual cross-median collisions decreased 73 percent.

Rumble strips also reduce collisions and fatalities. Rumble strips are grooves or rows of raised pavement markers located on the shoulder or centerline of highways that produce noise and vibration to alert drivers they are drifting from their lane. WSDOT has installed centerline rumble strips on about 960 miles of highways. In some cases, other safety improvements have been installed at the same time. Preliminary before-and-after analysis of 518 of these miles indicates:

- 28 percent reduction in fatal and serious injury collisions;
- 26 percent reduction in cross-centerline collisions; and
- 50 percent reduction in fatal and serious injuries resulting from cross-centerline collisions.

What's been happening?

WSDOT has installed rumble strips on 960 miles of roadway and cable median barriers on 177 miles of highway.

What's the focus now?

WSDOT is gathering data for its annual before-and-after safety study for projects.

What's next?

The state is focusing on replacing large, vulnerable bridges, including the Alaskan Way Viaduct and SR 520.

PRESERVATION

Measure 2.1 State Highway Pavement

Percent of state highway pavement in fair or better condition

In 2007, 93.3 percent of state highway lane miles were in fair or better condition, above the target of 90 percent.

Maintaining and preserving highway pavement is important to ensure ongoing usability and safety. WSDOT conducts an annual assessment of 18,000 lane miles to determine road condition. Since 1999, the state has consistently maintained 90 percent or more of the pavement on state highways in good or fair condition.

What's been happening?

The cost of hot mix asphalt has gone up 85 percent since 2003 and will remain high in spite of falling oil prices. This affects the state's ability to preserve roughly two-thirds of the state highway system.

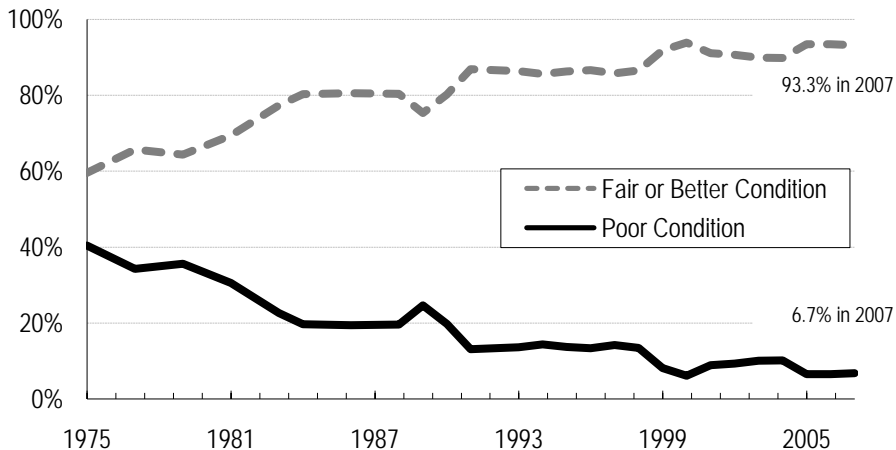
What's the focus now?

Address the growing asphalt preservation backlog.

What's next?

Replacing concrete pavement on some of the most important locations in the state highway system.

State Highway Pavement Trends (1975-2007)



Source: WSDOT 2008

Chip seal and asphalt comprise the majority of highway lane miles. Asphalt makes up 63 percent of lane miles and supports 69 percent of total traffic volume.

Condition by Type of Pavement - 2007

Pavement Type	Percent in fair or better condition *	Total lane miles **	Percent of lane miles	Traffic volume (billions) ***	Total volume per lane mile	Percent total traffic volume
Chip seal	91.50%	4,365	24%	1.2	254,984	3%
Asphalt	94%	11,624	63%	21.8	1,863,461	69%
Concrete	93.30%	2,384	13%	8.8	3,685,092	28%

Source: WSDOT 2007

* Data Source: WSDOT Materials Lab

** Data Source: State Highway Log Planning Report, 2005; includes all lane miles

*** Data Source: Transportation Data Office; excludes ramps, collector-distributors and frontage roads

Much of the concrete is nearing the end of its life cycle. Concrete does not age evenly: It deteriorates more quickly at the end of its life cycle. While most concrete is in fair or better condition, a substantial amount is nearing that end. A University of Washington study will help WSDOT determine how quickly this process occurs.

Concrete pavement on I-5 in Seattle will have significant preservation needs. The concrete pavement on I-5 through Seattle is more than 40 years old. Preservation work, such as grinding and dowel bar retrofits, has allowed the pavement to outlive its expected life cycle of 25 years. However, many of these efforts to prolong the life cycle of the concrete pavement have run their course. In a recent study, WSDOT determined that out of 196 lane miles examined, 129 lane miles need rehabilitation or reconstruction.

PRESERVATION

Measure 2.2 Local Roadway Pavement

Percent of city and county roadway pavement in fair or better condition

In 2008, the majority of local road pavement inventoried (about 75 percent of roads) was in fair or better condition (83 percent for large cities, 72 percent for medium cities, 66 percent for small cities and 93 percent for counties). (Year-to-year comparison will require 100 percent data collection, expected to occur in 2009.)

Preservation of local roadways is vital to the state's economy, providing critical links for the movement of people and goods. City streets and county roads comprise 67 percent of total miles in the state, and carry more than 42 percent of the traffic. Replacing pavement costs more than rehabilitating it, so most agencies work to preserve pavement based on the lowest life cycle cost.

The majority of the pavement on local roadways is in fair to excellent condition. Existing pavement condition data for cities covers about 75 percent of the large and medium city arterial and collector network statewide.

What's been happening?

Cities partner with the state to reduce road preservation costs.

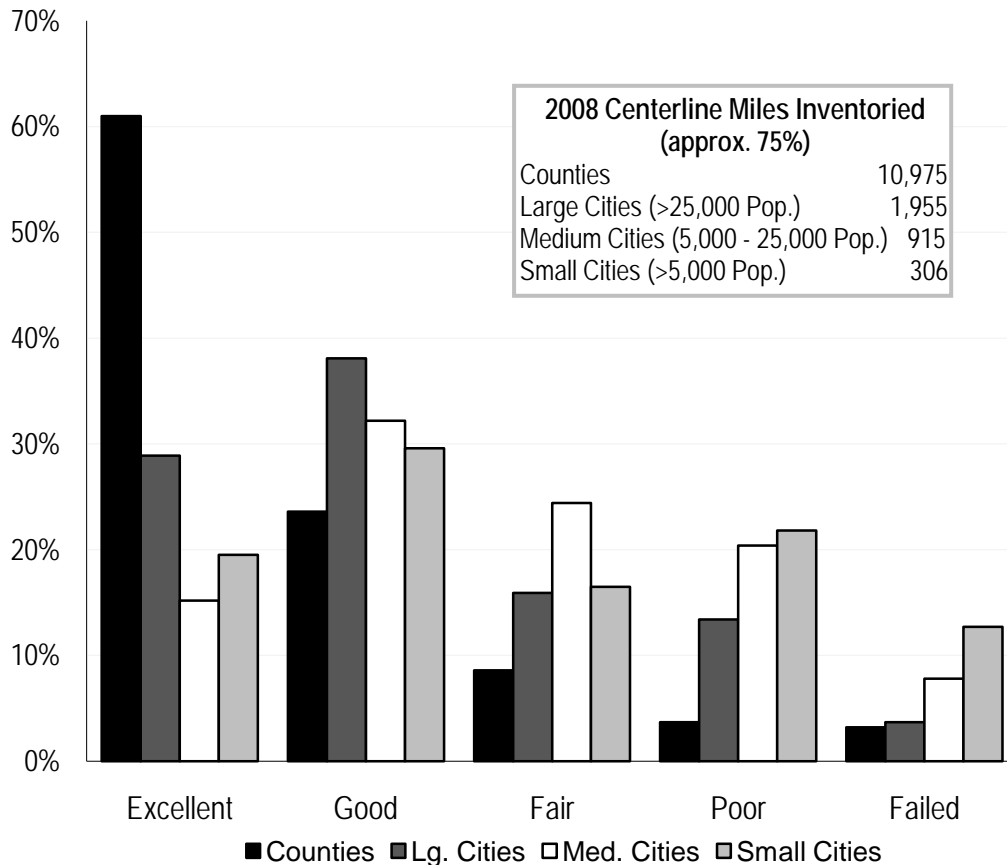
What's the focus now?

While small cities have the fewest miles of road, they have the largest percentage in poor or failed condition. The Transportation Improvement Board (TIB) targets 9 towns with critically low pavement condition to bring the roads up to the state average pavement rating.

What's next?

TIB is initiating new sustainability practices, including recycling asphalt.

Road Condition Rating



Source: WSDOT and CRAB (Prepared by OFM 2009)

PRESERVATION

Measure 2.3 Bridges

Percent of state, city and county bridges in fair or better condition

In 2008, more than 96 percent of all state, city and county bridges were in fair or better condition, the same as in 2007. State-owned bridges met the target of 97 percent in fair or better structural condition.

Maintaining state, city and county bridges in safe, sound and usable condition is a high priority for state and local government. WSDOT manages more than 3,600 state bridges and related structures that carry vehicle and pedestrian traffic, and oversees the management of more than 4,000 local government bridges.

Bridges are inspected at least every two years. Each bridge is inspected every two years. Some bridges are inspected annually due to their condition or design. A few structures require more frequent inspection, such as the Alaskan Way Viaduct, which is inspected every six months. Inspections use federal standards for superstructure, deck, substructure, overall structural adequacy and waterway adequacy.

The majority of the bridges are in fair or better structural condition. In 2008, more than 96 percent of all bridges in the state were in fair or better condition structurally, the same as in 2007. (Note: The data for 2007 was adjusted to more accurately reflect local ownership.) State-owned bridges met the target of 97 percent in fair or better condition structurally.

What's been happening?

Increased inspections on bridges in poor conditions.

What's the focus now?

Several large and expensive state bridge replacements are needed, including the Alaskan Way Viaduct and State Route 520 Bridge.

What's next?

Replacing the 82-year-old Columbia River Crossing.

2008 Condition of State- and Locally Owned Bridges			
Bridges	State	County	City
Total Bridges 7,460	3,607	3,201	652
Bridge Condition			
Good	88%	85%	78%
Fair	9%	11%	14%
Poor	3%	4%	8%

Source: WSDOT 2009

“Structurally deficient” bridges are not unsafe for public travel. Being structurally deficient does not imply that the bridge is in danger of collapse or unsafe to the traveling public. Of the 3 percent of state-owned bridges rated in poor structural condition, none are unsafe for public travel, based on federal standards, though some are subject to weight restrictions. A list of the 142 structurally deficient bridges on the state highway system can be found at <http://www.wsdot.wa.gov/NR/rdonlyres/B78C9E1A-DD7E-4187-8038-3A9E5D5E7B1B/0/2008StateSDbycounty.pdf>. In addition, about 25 percent of Washington’s bridges are “functionally obsolete.” This occurs when bridges do not meet operational needs, such as height and roadway alignment, because of their age.

PRESERVATION

Measure 2.4 State Highway Maintenance

Percent of targets met for state highway maintenance

In 2008, 50 percent of state highway maintenance targets were met compared to 53 percent in 2007.

Washington achieved 50 percent of its maintenance accountability targets in 2008. In 2004, WSDOT failed to meet only one of its maintenance targets. In 2008, WSDOT failed to achieve 16 of its 32 targets. (See prioritized list to the right.)

Challenges in meeting the targets include:

- Inflation drives up costs.
- Miles added to highways require maintenance.
- Backlog of essential maintenance continues to grow.
- Additional environmental requirements and related cost increases.
- Severe weather patterns strain resources at the expense of performing preventive maintenance.

Record snow and ice diminishes resources to meet maintenance needs.

The maintenance budgets of state and local agencies have been strained by winter storms. Almost 600 inches of snow fell on Snoqualmie Pass in 2007–08, 200 inches more than during the 2006–07 winter. Between January 26 and February 10, 2008, Snoqualmie Pass was closed 145 hours in the eastbound direction and 147 hours in the westbound direction, compared to 75 hours for the entire previous winter.

In 2009, Spokane experienced the fourth highest January snowfall in the city's history. The overall winter snowfall of 63 inches was Spokane's seventh highest on record.

WSDOT Maintenance Accountability Process Performance
2004-2008

Target	2004	2005	2006	2007	2008
Movable and floating bridges					
Signal systems					
Snow and ice					
Keller Ferry					
Urban tunnels					
Structural bridge					
Regulatory signs					
Slope repair					
ITS					
Catch basins					
Pavement repair and crack seal					
Bridge decks					
Guardrail					
Striping					
Raised/recessed markers					
Vegetation obstructions					
Crack sealing					
Rest areas					
Sweeping					
Ditches					
Hwy lighting					
Guideposts					
Safety patrol					
Culverts					
Permits					
Pavement marking					
Noxious weeds					
Shoulder maintenance					
Guide signs					
Detention basins					
Bridge cleaning					
Nuisance weeds					
Landscape					
Litter					
Targets missed	1	1	5	15	16

 Target missed

PRESERVATION

Measure 2.5 Ferry Vessels and Terminals

Percent of state ferry terminals in fair condition or better

In 2008, 84 percent of state ferry terminals were in fair or better condition, compared to 87 percent in 2007.

Ferries are a critical part of the state transportation system. WSDOT manages a state ferry system with 20 vessels, 20 terminals and a repair facility. It is the largest operating auto fleet in the country, carrying 10 million vehicles and 23.3 million passengers each year.

Fewer terminal systems are in fair or better condition than last year. In 2008, 84 percent of key terminal system facilities are in fair or better condition, while 11 percent are in poor and 4 percent in substandard condition. In 2007, 87 percent of key terminal facilities were in fair or better condition. Facilities in poor condition show signs of deterioration or distress (rotting timbers, cracking concrete), while substandard facilities show advanced deterioration (broken pilings, severe anchor chain erosion).

2008 Structural Condition Rating for Terminal Systems

Type of Facility or System	# of facilities or systems	Condition by percentage			
		Good	Fair	Poor	Sub-Standard
Landing Aids	176	53%	19%	16%	11%
Vehicle Transfer Spans	210	27%	59%	13%	1%
Overhead Loading Systems	66	55%	42%	3%	0%
Trestle & Bulkheads	72	24%	69%	7%	0%
Pavement	73	58%	33%	5%	4%
Total Average	597	41%	43%	11%	4%

"Landing aids" includes wingwalls and dolphins; buildings and passenger-only facilities are not rated.
Source: WSDOT 2009

A condition rating system for vessels is under development.

Vessels receive inspections by the U.S. Coast Guard quarterly and annually, and are dry-docked for detailed hull examinations twice every five years. More than half of all ferry vessels were built more than 30 years ago. In general, vessels are expected to be replaced in 60 years, assuming one major refurbishment. Many older vessels have undergone significant rehabilitation since original construction.

What's been happening?

Cedar River Associates completed a comprehensive study on a number of issues, including vessels and terminals. The Transportation Commission completed a customer survey and launched a finance study.

What's the focus now?

A new 64-car Island Home Class vessel is expected to be in service by mid-2010.

What's next?

Governor and Legislature will take action on a single long-term plan. Two are under consideration. Both require additional funding: Plan A requires \$3.3 billion and Plan B \$1.3 billion.

- Plan A assumes 23 vessels, including replacement of 11 vessels that are scheduled to be retired in the next 22 years.
- Plan B assumes a total of 17 vessels with only 5 vessels being

Age of WSDOT Ferry Vessels

Vessel Class/Vessel	Year Built	Year Rebuilt	Expected Retirement	Vessel Class/Vessel	Year Built	Year Rebuilt	Expected Retirement
Evergreen State				Issaquah			
Evergreen State	1954	1988	2010-15	Issaquah	1979	ongoing	2037-42
Klahowya	1958	1995	2023-28	Kitsap	1980	ongoing	2038-43
Tillikum	1959	1994	2022-27	Kittitas	1980	ongoing	2038-43
Super				Cathlamet	1981	ongoing	2039-44
Elwha	1967	1991	2025-30	Chelan	1981	ongoing	2039-44
Hyak	1967	-	2010-15	Sealth	1982	ongoing	2040-45
Kaleetan	1967	1999	2027-32	Jumbo Mark II			
Yakima	1967	1999	2028-33	Tacoma	1997	2027	2055-60
Jumbo Mark I				Puyallup	1998	2028	2056-61
Spokane	1972	2004	2032-37	Wenatchee	1998	2028	2056-61
Walla Walla	1973	2003	2031-36	Miscellaneous			
				Hiyu	1967	-	2008-13
				Rhododendron	1947	1991	2011

Source: WSDOT 2009

MOBILITY

(Addressing Congestion)

The statewide mobility goal is to improve the predictable movement of goods and people throughout the state.

The focus is on addressing congestion, primarily on highways and roads in urban areas. Highway congestion is a condition characterized by an increase in the number of hours of delay (Measure 3.1), longer travel times (Measure 3.2) and longer 95 percent reliable travel times (Measure 3.3).

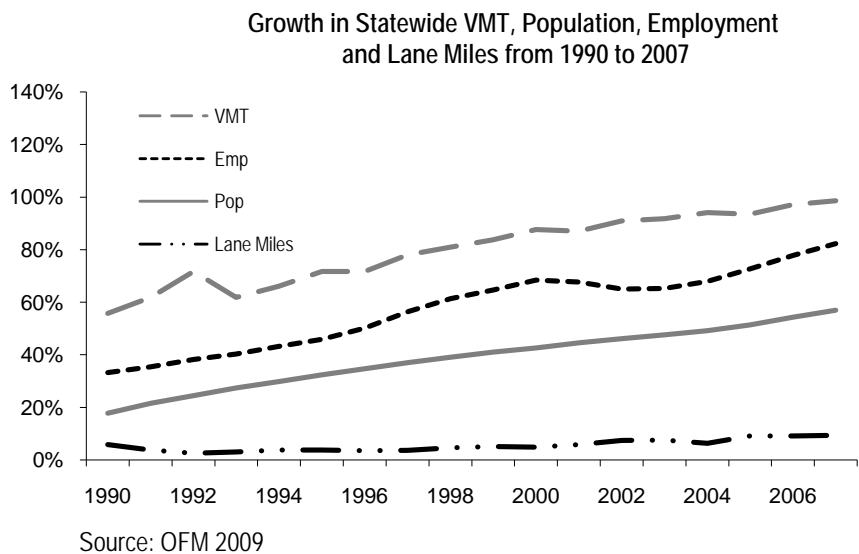
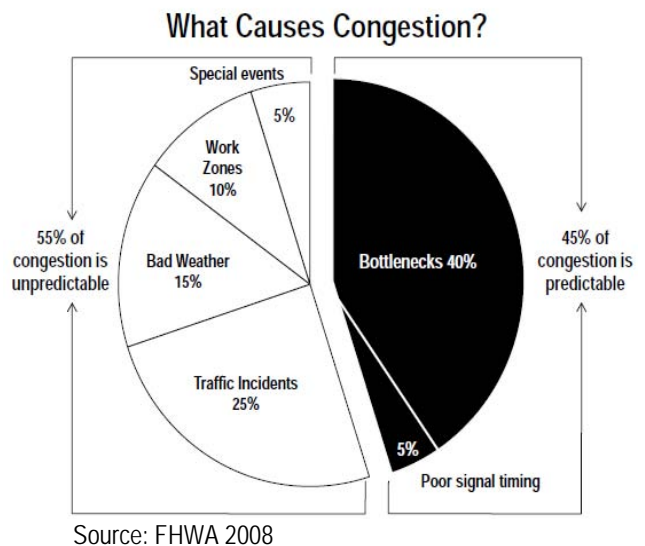
Growth in the state’s population, employment and vehicle miles traveled contribute to more traffic and congestion.

Of 6.4 million in population in 2007, 4.8 million are licensed to drive. The number of vehicle miles traveled (VMT) in Washington has more than doubled since 1980, to nearly 57 billion miles in 2007. In contrast, the number of lane miles in Washington has increased by 10 percent during that same time period.

Most factors that cause congestion are unpredictable. Non-recurrent congestion accounts for 55 percent of all delays in our system. Traffic collisions alone are responsible for at least 25 percent of all congestion. Bottlenecks, where heavy traffic causes backups, are more predictable and account for 40 percent.

Congestion affects our economy and quality of life, and is closely related to traffic safety. Congestion’s effects are excess fuel consumed while idling and delays to commuters, which translates to lost productivity.

Congestion in the Puget Sound region is consistent with other urban areas nationwide. In fact, the central Puget Sound region’s rank relative to urban areas across the country has been improving. Forbes Magazine recently identified Seattle as having one of America’s 10 most improved commutes. This is attributed in part to expanded highway lanes and increased use of public transit.



MOBILITY

(Addressing Congestion)

The state has three key strategies to address congestion:

1. **Provide options.** Choices such as HOV lanes, commute trip reduction programs, transit, rail, bicycling and sidewalks reduce demand on highways and roads. Performance measures such as the percentage of commuters who drive alone and travel times for HOV lanes illustrate effectiveness.
2. **Operate efficiently.** By using tools such as ramp meters, synchronized traffic signals, variable message signs, Web-based travel information and incident response trucks, the system can be made more efficient. Performance measures such as the average amount of time to clear incidents illustrate effectiveness.
3. **Strategically add capacity.** The state is adding capacity by relieving choke points and reducing collisions that cause congestion. Examples of such projects funded by the 2003 and 2005 revenue packages include the Everett HOV project on I-5, widening I-405 near Tukwila, and widening SR 16 between I-5 and the Tacoma Narrows Bridge.

What's been happening?

By June 30, 2011: 92 percent of the 151 Nickel projects and 82 percent of the 240 TPA projects will either be under construction or operational.

What's the focus now?

The state will continue with large capital construction projects that relieve congestion and improve safety, including the Alaskan Way Viaduct, SR 520 and I-405 in Tukwila, which has become one of the most congested areas in the state.

What's next?

During the next 5 years, tolling is likely to come to the central Puget Sound region as a way of paying for megaprojects and managing congestion.

When combined, these strategies can provide more “bang for the buck.”



One example is the I-5 corridor from Tukwila to the Pierce County line:

- Currently 372 vanpools carry roughly 3,124 commuters each day on this corridor. Eight Sound Transit Express trains carried 2,161,021 commuters during the first 10 months of 2008. King County Metro buses make 276 vehicle trips that transport 7,440 commuters each day. In addition, 66 Commute Trip Reduction sites provide incentives to use alternatives to driving alone in this area where 31,000 are employed.
- Completion of the ramp metering network with eight proposed ramp meters between Tukwila and Federal Way will help maximize efficiency.
- Adding 29.8 miles of HOV lanes in each direction will provide more capacity.

MOBILITY

(Addressing Congestion)

Measure 3.1 Hours of Delay

Hours of delay on the most-congested state highways

Statewide, drivers were delayed about 101,960 hours daily in 2007, compared to 99,400 in 2005, a 2.6 percent increase. In the Puget Sound region, drivers were delayed about 23,185 hours daily in 2007, compared to 20,791 in 2005, an 11.5 percent increase.

Delays are increasing. Delay is the extra period of time it takes a driver to get to a destination when the driver is slowed by congestion. Sometimes it is due to vehicles using the system at the same time, as during the morning or evening commute. Delays also occur due to a traffic incident, inclement weather, road construction or special event such as a football game.

Hours of delay have increased over the past four years, but are leveling off. In 2007, there were 101,960 hours of delay statewide, compared to 99,400 in 2005, a 2.6 percent increase.

Most of the delay is concentrated in the central Puget Sound region, primarily on I-5 and I-405. On the major freeway corridors in the central Puget Sound region, there was an 11.5 percent increase in the overall hours of delay between 2005 and 2007, far less dramatic than the 35 percent increase between 2004 and 2006. Corridors had increases in delay ranging from 3 percent and 28 percent relative to maximum throughput speeds. For example, on I-5, there were 7,920 hours of delay in 2004, compared to 10,284 in 2007, a 30 percent increase. (This is based on “peak efficiency” or “maximum throughput,” usually around 51 mph.)

Numbers of Hours of Delay Per day
(Based on Peak Efficiency Speed of 51 MPH)

Hours of Delay	2004	2005	2006	2007
I-5	7,920	9,478	10,490	10,284
I-90	470	795	870	817
SR 167	770	957	970	1,223
I-405	6,310	7,753	8,730	8,841
SR 520	1,850	1,808	2,270	2,020

Source: WSDOT 2008

Nickel and TPA projects will provide improved safety and more capacity. When all projects in the 2003 (Nickel) and 2005 (Transportation Partnership Act or TPA) funding packages are complete, WSDOT estimates a total annual time savings of nearly 15 million hours, or about five hours per family member every year.

I-5/Salmon Creek to I-205 – widening reduces congestion, improves mobility. Completed in October 2006, this \$44 million project widened two miles of I-5 in Clark County to six through lanes, plus an additional lane in each direction between interchanges. In addition, the N.E. 129th Street overpass and the Salmon Creek/N.E. 117th Street bridges were replaced with structures that meet current design, safety and seismic standards. This project was one of several aimed at improving traffic flow in the I-5 corridor between the Main Street interchange in Vancouver and the I-205 junction. Result: Travel speeds have improved 19 percent, from 42 mph to 50 mph.

MOBILITY

(Addressing Congestion)

Measure 3.2 Travel Times

Travel times on the most-congested state highways

In the central Puget Sound region between 2005 and 2007, 10 commutes had travel times improve (shorten), 12 commutes remained unchanged and 30 had travel times worsen. This is an improvement over the prior two-year period.

Travel times on major central Puget Sound corridors have generally increased since 2001, but the rate of increase has started to level off. “Travel time” refers to how long it takes to get to a destination during congested periods. This performance measure shows the trend in travel times for key central Puget Sound corridors. Peak efficiency is about 51 mph.

Changes in average travel times for 13 selected routes
Travel times for morning peak direction commute: 2001-2007, in minutes

	Travel time at peak efficiency	Travel time at posted speed	Performance 2001-2007 ¹	Average travel times at peak periods						
				2001	2002	2003	2004	2005	2006	2007
Everett to Seattle	28	24		43	44	47	45	46	50	47
SeaTac to Seattle	15	13		24	23	23	23	25	27	27
Lynnwood to Bellevue	19	16		20 ²	29	35	38	41	41	39
Tukwilla to Bellevue	16	13		31	32	31	35	38	42	42
Auburn to Renton	12	10		16	15	16	16	17	17	18
Issaquah to Seattle	18	15		23	23	23	22	26	26	25
Redmond to Seattle	17	15		22	22	22	22	22	22	22
Bellevue to Seattle via SR 520	12	10		17	17	18	19	18	18	18
Bellevue to Seattle via I-90	13	11		16	15	15	14	16	16	17
Redmond to Bellevue	8	7		9	10	10	9	9	8	9
Issaquah to Bellevue	11	9		16	17	17	17	19	18	17
Federal Way to Seattle	26	22		Data not Available		40	40	43	46	47
Everett to Bellevue	28	23					47	51	51	49

¹ Performance graphs based on scale of 0 to 60 minutes.

² Route length in 2001 was 12.4 miles; route length was 16 miles for 2002-2007.

³ Peak efficiency is travel at 51 mph.

Source: WSDOT Traffic Office

North to south commutes

Commuters from Everett and Lynnwood to Seattle and Bellevue have seen increases in their travel times over the past seven years, particularly from Lynnwood to Bellevue.

South to north commutes

Commuters from Auburn, Federal Way, SeaTac and Tukwila have experienced some of the largest changes in the Puget Sound region. The commute on I-405 between Tukwila and Bellevue has experienced an 11-minute increase since 2001.

East to west commutes

Commuters from Issaquah and Redmond have experienced little to no change in travel times since 2001.

West to east commutes

The next Progress Report will include commute routes originating in Seattle to Bellevue and Redmond.

Traffic volumes fell during the first six months of 2008, in large measure due to high fuel prices. In June 2008, the national average price for a gallon of gas was \$4.33, 33 percent higher than in June 2007. Like those across the country, drivers in the Puget Sound region drove less, particularly during non-peak periods and weekends.

MOBILITY

(Addressing Congestion)

Measure 3.3 Trip Reliability

Reliable travel times on the most-congested state highways

In the central Puget Sound region between 2005 and 2007, 13 commutes had 95 percent reliable travel times improve (shorten), seven commutes remained unchanged and 32 had increases. This is consistent with the increases in the prior two-year period.

Commuters want to reach their destination on time. Average travel times during peak congestion are good indicators of how long it will take to get somewhere. But some days are better than others, and incidents and inclement weather can make a commute take longer than the average travel time. The “95 percent reliable travel time” is how long that trip takes 19 out of 20 times.

Reliable travel times in the Puget Sound region have been increasing steadily over the past five years. This is generally a result of travel times increasing during peak congestion.

The table below shows changes in reliable travel times for selected morning commutes. For example, for the Everett to Seattle morning commute, at peak efficiency, it takes 28 minutes to complete the 23.7 mile commute. In 2007, during peak congestion, the average travel time during peak congestion was 47 minutes. However, in order to make the commute reliably 95 percent of the time, a driver needed to allow 76 minutes. This was a 12 percent increase over the 95 percent reliable travel time in 2005.

	Travel Time at Peak Efficiency ¹	Travel Time at Posted Speed	Average Travel Time at Peak Period	95% Reliable Travel Time (minutes)						
				2001	2002	2003	2004	2005	2006	2007
Everett to Seattle	28	24	47	62	66	70	73	68	81	76
SeaTac to Seattle	15	13	27	31	28	29	31	40	37	36
Lynnwood to Bellevue ²	19	16	39	27	47	61	64	64	67	62
Tukwila to Bellevue	16	13	42	43	51	42	52	54	63	58
Auburn to Renton	12	10	18	24	22	24	24	25	30	30
Issaquah to Seattle*	18	15	25	31	31	32	30	37	38	37
Redmond to Seattle*	17	15	22	30	30	29	32	33	32	31
Bellevue to Seattle via SR 520	12	10	18	21	24	24	26	26	26	23
Bellevue to Seattle via I-90	13	11	17	23	21	23	22	24	27	29
Redmond to Bellevue	8	7	9	12	11	12	12	10	9	10
Issaquah to Bellevue	11	9	17	23	25	24	25	26	27	26
Federal Way to Seattle	26	22	47	Data Not Available		54	56	59	66	65
Everett to Bellevue	28	23	49	Data Not Available			74	79	83	78

¹ Route length in 2001 was 12.4 miles; route length was 16 miles for 2002-07.

² Peak efficiency is travel at 51 mph.

Source: WSDOT 2008

MOBILITY

(Addressing Congestion)

Measure 3.4 High Occupancy Vehicle (HOV) and High Occupancy Toll (HOT) Lanes

Potential new measures:

- HOV/HOT lane reliability
- HOV/HOT travel times
- HOV/HOT person throughput

High Occupancy Vehicle (HOV) lanes are an important part of the state’s strategy for addressing congestion. The HOV system is carrying an increasing share of traffic on state highways.

The state has planned 300 miles of HOV lanes. By the end of 2006, the state spent \$1.5 billion to construct 195 HOV lane miles. Washington monitors and evaluates HOV speed, travel time reliability and person throughput on an annual basis.

HOV lanes continue to have better travel times than general purpose lanes. While congestion has increased on HOV lanes in recent years, HOV lanes continue to offer substantial time savings when compared to general purpose lanes. The table below displays this information for several commutes. For example, it takes 18-20 minutes longer to complete a commute using general purpose lanes during the three morning commutes on I-405.

What’s been happening?

The state recently completed 29.8 miles of HOV lanes on I-5 between Tukwila and the Pierce County line.

What’s the focus now?

In the next two years, WSDOT will extend the HOV lanes on I-5 from King County south to the Port of Tacoma.

What’s next?

Over the next eight years, WSDOT will add 78 HOV lane miles on I-5, SR 16 and SR 167 in Pierce County. Based on the results of the four-year SR 167 HOT Pilot Program, some HOV lanes may be converted to HOT lanes.

Comparing HOV Lane Travel Times to General Purpose Lanes on Commutes to Bellevue

Commute	Peak Congestion Time	HOV Lanes	General Purpose Lanes	HOV Lane Time Savings (Minutes)
I-405 Everett to Bellevue	7:25 a.m.	30	49	19
I-405 Lynnwood to Bellevue	7:35 a.m.	21	39	18
I-405 Tukwila to Bellevue	7:45 a.m.	22	42	20
I-90 Seattle to Bellevue, HOV & General Purpose Lanes	8:45 a.m.	14	15	1
SR 520 Seattle to Bellevue	8:35 a.m.	23	23	0
I-90 Issaquah to Bellevue	7:45 a.m.	12	17	5
SR 520 Redmond to Bellevue	7:50 a.m.	9	9	0

Source: WSDOT 2008

HOT lanes are providing options for single occupant vehicles. The four-year HOT lanes pilot project to provide single occupant vehicles the option of paying to use HOV lanes started in May 2008. Between May and December 2008, HOT lane users paid an average toll of \$1.25 for an average time savings of nine minutes northbound and five minutes southbound.

MOBILITY

(Addressing Congestion)

Measure 3.5 Commute Modes

Percentage of commute trips taken while driving alone

In 2007, 73.1 percent of Washington commuters drove alone, compared to 72.8 percent in 2006.

Reducing the number of commuter trips taken in single-occupancy vehicles helps reduce congestion, air pollution and fuel consumption. In 2007, commute trip reduction programs eliminated about 26,000 vehicles on state highways each weekday morning. This reduced gas consumption by about 7.9 million gallons, saving commuters about \$23.7 million. It also reduced air pollutants by nearly 4,000 tons and emissions of carbon dioxide-equivalent gases by nearly 85,000 tons.

The percentage of Washington commuters who drive alone is lower than the national average. State, regional and local jurisdictions work to provide commuting alternatives for workers, including carpools, vanpools, walking, bicycling, public transit and telecommuting. The number of Washington commuters who drove alone in 2007 was 73.1 percent, up slightly from the 2006 level of 72.8 percent.

What's been happening?

Sound Transit's Sounder commuter rail provides service from Everett to Tacoma, with a new station added in Mukilteo in 2008.

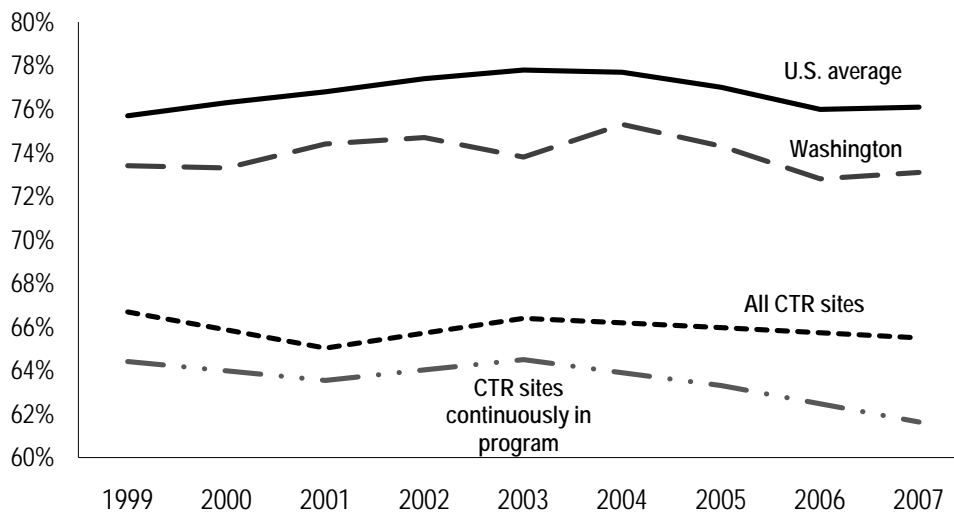
What's the focus now?

Sound Transit's Link Light Rail from Seattle to SeaTac opens in 2009.

What's next?

Sounder service from Tacoma to Lakewood begins in 2012.

Percent of commuters who drive alone: U.S., WA and Commute Trip Reduction (CTR) work sites



Source: U.S. Census, 2009

The state's Commute Trip Reduction (CTR) program is effective at reducing drive-alone commute trips. The state works with local jurisdictions and major employers (those with more than 100 employees) in the state's nine most-congested counties to provide commuter choices. In 2008, about 570,000 workers had access to CTR programs at nearly 1,200 work sites. About half of eligible workers at these sites used some of the available commute alternatives.

Vanpool, bus and commuter train ridership is increasing. Washington has the nation's largest vanpool program. Nearly 2,800 vanpools are in operation. In 2007, 7.2 million passenger trips were on vanpools, up from 6.7 million in 2006. In 2006, ridership for the 28 public transit agencies for all modes, including vanpools and commuter rail, exceeded 180 million passenger trips. More than 56 percent of these trips were provided by King County Metro. The 2006 ridership data reflects four years of ridership growth. Sound Transit, in particular, is seeing growth in ridership on buses and trains — 14 million passengers in 2007 and 16 million in 2008.

MOBILITY

(Addressing Congestion)

Measure 3.6 Incident Response Times

Average length to clear major incidents lasting more than 90 minutes on key highway segments

As of September 2008, the average clearance time for major incidents lasting longer than 90 minutes was 154 minutes, compared to 161 minutes in 2007.

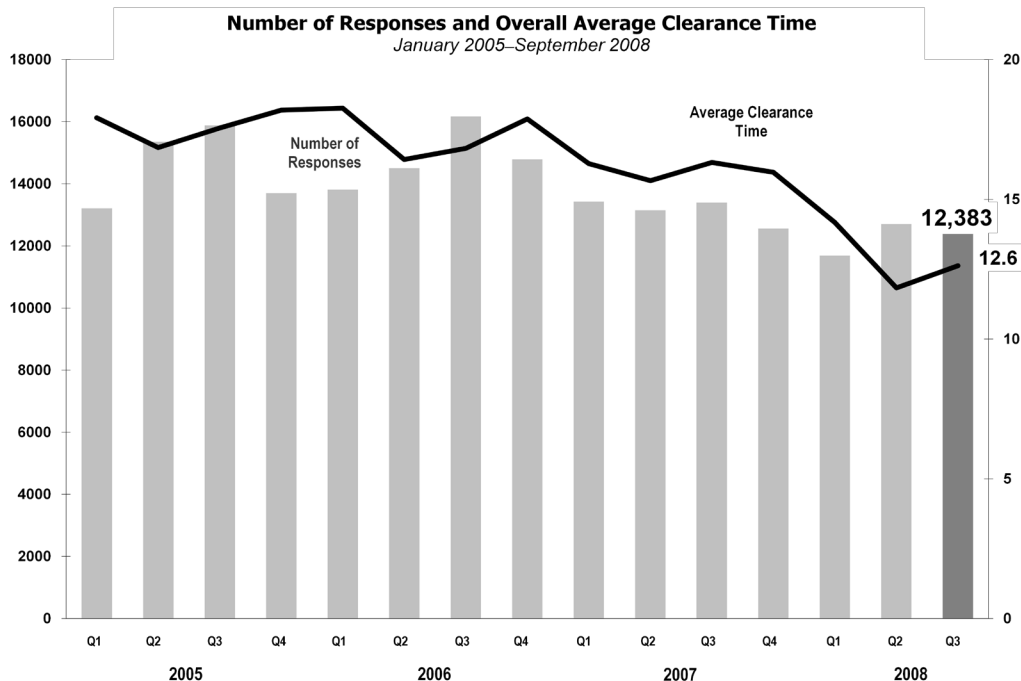
Improved incident response increases travel reliability. Highway incidents such as collisions and vehicle breakdowns can increase congestion and reduce motorist safety. The Federal Highway Administration estimates 25 percent of congestion is caused by collisions and other highway incidents. The Washington State Patrol (WSP), WSDOT and local responders work together to clear highways as quickly as possible.

All incidents. Average clearance time for all incidents decreased from 33 minutes in 2001 to 12.6 minutes in the third quarter of 2008, a reduction of more than 50 percent. In 2007, WSDOT responded to more than 52,500 incidents.

What's been happening?
Improved coordination with counties on clearing fatal collisions.

What's the focus now?
Clearing large truck incidents more quickly.

What's next?
Expansion of the incident response program across the state.



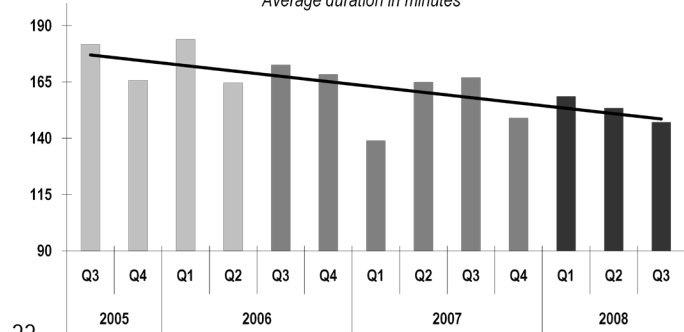
Source: Incident Response Tracking System, WSDOT Traffic Office

Note: Program-wide data is available since January 2002. Prior to Q3 of 2003, the number of responses by IRT are shown. From Q3 2003 to Q2 2007, responses by Registered Tow Truck Operators and WSP Cadets have been reported in the total. From Q1 2002 to Q4 2007, Average Clearance Time do not include "Unable-to-Locate" (UTL) responses into calculation. Average number of responses does include UTLs, because this represents work performed on behalf of the Incident Response Program. 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.

Major incidents. WSP and WSDOT are focusing on reducing the length of major incidents lasting more than 90 minutes, such as fatality collisions or collisions involving large trucks. As of Sept. 30, 2008, the annualized average clearance time has been reduced to 154 minutes, below the target of 155 minutes.

Average clearance time for "90 Minute and Longer" incidents (on key highway segments)

July 2005 - June 2008
Average duration in minutes



Source: Washington State Patrol and WSDOT Traffic Office

MOBILITY

(Addressing Congestion)

Measure 3.7 Freight

Placeholder – still being developed

Placeholder – still being developed

Across all modes and systems, freight volumes are projected to grow.

According to the Federal Highway Administration, in 2002 more than 477 million tons of freight worth more than \$371 billion was moved to, from and in Washington. By 2035, this is expected to increase to 975 million tons of freight worth \$1.3 trillion.

Freight Shipments To, From and Within Washington

	Tons (millions)				Value (billions \$)			
	2002	2010	2020	2035	2002	2010	2020	2035
State Total	477	612	727	976	371	534	709	1,239
By Mode								
Air	<1	<1	<1	<1	10	18	23	50
Highway	283	369	437	581	238	355	473	812
Rail	46	51	61	86	14	14	15	20
Water	48	72	91	124	4	6	8	11
Pipeline & Unknown	98	115	132	176	67	81	109	190
Intermodal (a)	4	5	6	10	38	60	81	156
By Destination / Market								
Domestic	416	526	628	846	306	414	535	902
International	61	85	99	130	66	121	174	337

Note: Modal numbers may not add to totals due to rounding.

^aIncludes truck and rail and other intermodal.

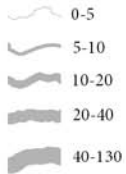
Source: Compiled by WSDOT Rail Office based on data from FHWA – FAF2 Database, January 2009

Trucks carry most of the freight, with the largest volumes (annual tonnage) along the I-5 corridor. WSDOT collects data on truck volumes at selected mileposts on I-5, I-90, SR 18, US 97 and US 395. At most locations, truck volumes increased from 2004 to 2006. For example, on I-90 near North Bend (MP 33), the average daily volume of trucks increased 14 percent, from about 5,890 trucks per day in 2005 to 6,694 trucks per day in 2006.

Truck volumes and tonnage on state highways

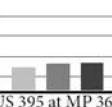
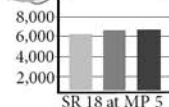
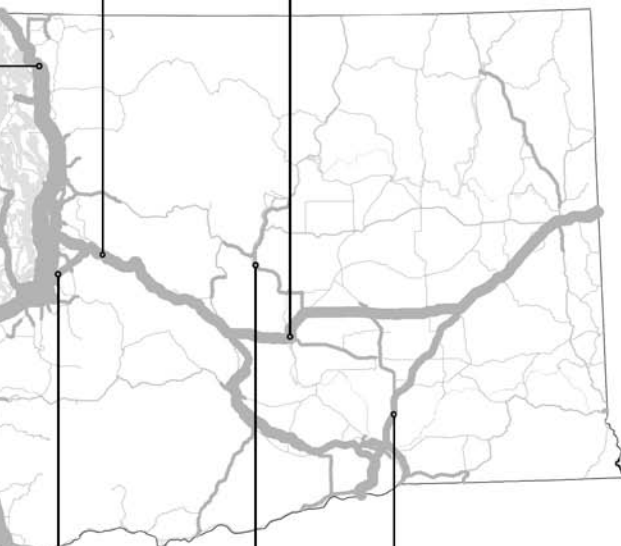
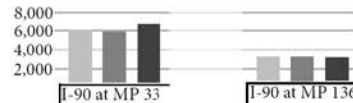
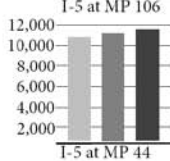
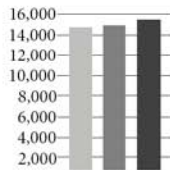
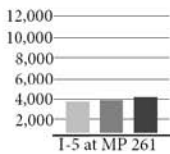
Average daily truck volumes at select highway mile posts and annual truck freight tonnage on state highways

Annual tonnage (2004)
In millions of tons



Average daily truck volumes (2004-2006):

2004 ■ 2005 ■ 2006 ■



Data Sources: Transportation Data Office (truck volumes); Freight and Goods Transportation System, 2005 (annual truck tonnage)

MOBILITY

(Addressing Congestion)

Measure 3.8 State Ferries On-time Performance

Percent of trips on time and ridership

On average, more than 90 percent of state ferry trips were on time in FY 2008, the same as in FY 2007. Ridership on state ferries was 23.3 million in FY 2008, a decrease from 24.0 million in FY 2007.

Washington has the largest ferry system in the nation. Washington State Ferries (WSF) has 20 ferry vessels, 12 ferry routes and about 160,000 sailings annually. In addition, King, Pierce, Skagit, Whatcom and Wahkiakum counties operate car and/or passenger-only ferries.

State ferries on-time performance is excellent. During the past five years, state ferry on-time trip departures have consistently averaged around 92 percent. Summer season performance averaged 86 percent during this time period, while performance during the other three seasons averaged between 93 percent and 95 percent. Greater traffic volumes and number of trips in the summer make on-time performance more difficult to achieve.

What's been happening?

The removal of the Steel Electric Class vessels in November 2007 has reduced service on some routes.

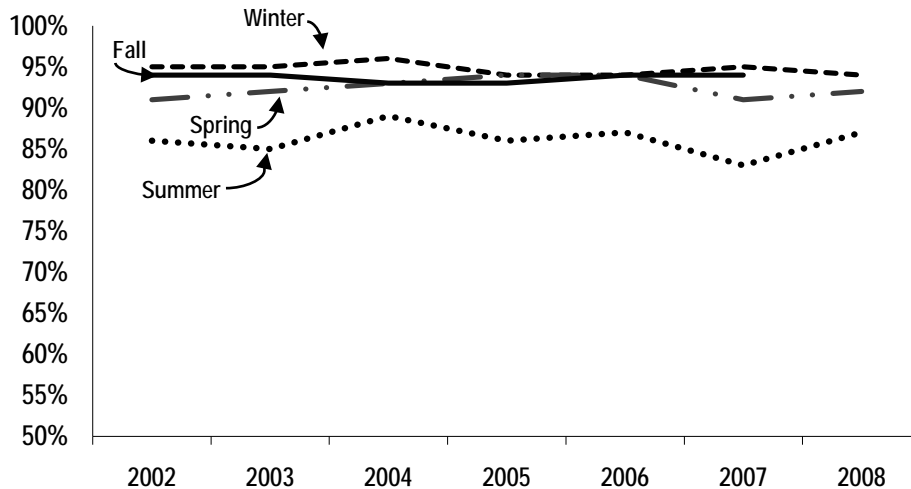
What's the focus now?

A new 64-car Island Home Class vessel is expected to be in service by mid-2010.

What's next?

Determining how many new and replacement vessels are needed. Subsequent reports will include data for county ferries and ridership-to-capacity data.

State Ferries On-Time Performance Improves for Summer Sailings

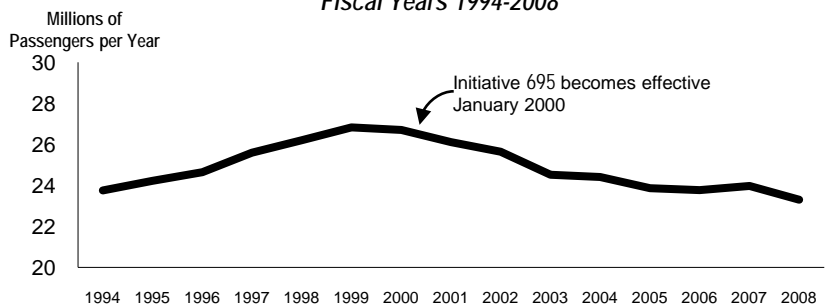


Source: WSDOT 2009

Ridership on state ferries has declined.

Ridership on state ferries was 24 million in 2007 and 23.3 million in 2008. Some of the decline can be attributed to higher fuel prices for travelers, who have reduced discretionary travel in western Washington. Both in-state and out-of-state holiday travelers are an important portion of ridership, particularly in the late spring.

WSDOT Ferry System Passenger Ridership
Fiscal Years 1994-2008



Source: WSDOT Gray Notebook March 31, 2008, page 79

MOBILITY

(Addressing Congestion)

Measure 3.9 Passenger Rail

Ridership and percent of trips on time on state-supported Amtrak Cascades

Ridership increased to 521,493 in 2008 from 457,498 in 2007. On-time trips increased to 64 percent in 2008 from 60 percent in 2007.

Washington is one of 13 states that provide operating funds to Amtrak for intercity passenger rail service. Amtrak Cascades service is jointly funded by Amtrak, Washington (through WSDOT) and Oregon, and runs from Eugene, Oregon, to Vancouver, B.C. WSDOT provides funding to cover capital costs (rail line construction, train equipment and station improvements) and operating costs for four of five Amtrak Cascades round-trips.

Amtrak ridership is growing. Since state funding began in 1993, ridership on Washington-sponsored routes has grown substantially, from 72,000 in 1994 to 457,000 in 2007. Ridership increased to 521,493 in 2008 from 457,498 in 2007, a 14 percent increase.

What's been happening?

WSDOT and Amtrak developed a long-range plan for Amtrak Cascades service and ridership.

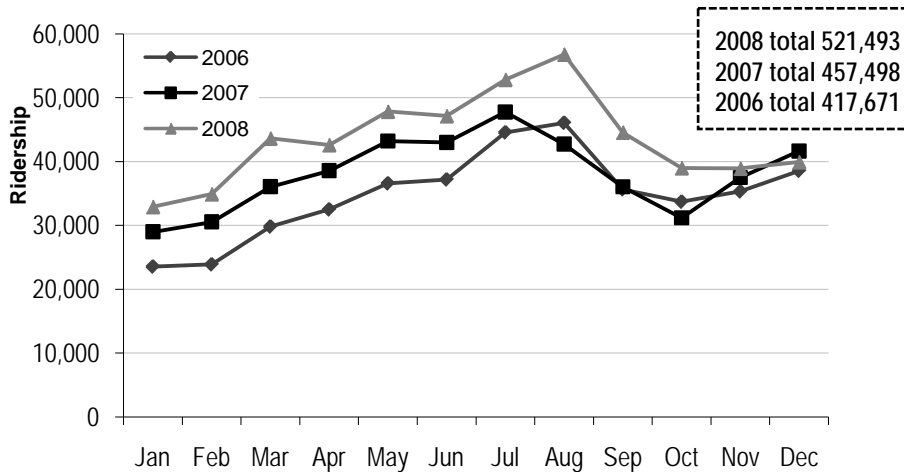
What's the focus now?

Implementation of WSDOT's mid-range plan to increase reliability, increase ridership and, eventually, add four to six train trips.

What's next?

WSDOT is working to resolve border crossing issues for more trips to Vancouver, B.C., for the 2010 Olympics.

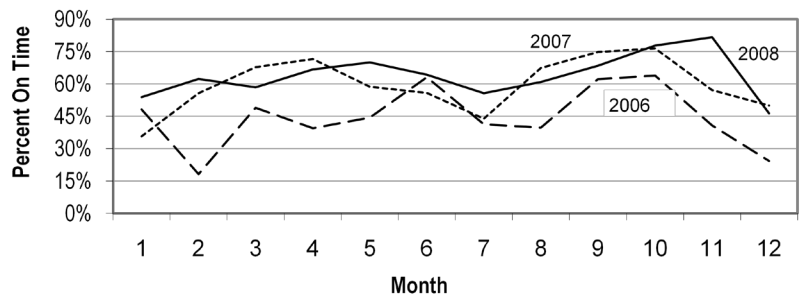
State-Supported Amtrak Cascades Monthly Ridership



Source: WSDOT 2009

Amtrak on-time performance is improving. On-time performance increased from 60 percent for 2007 to 64 percent for 2008. The November 2008 on-time performance of 81.7 percent was the best ever. Trains can be delayed for a number of reasons, including freight train interference due to limited rail line capacity (the main cause of delay), landslides, slower train speeds through railroad construction areas, delays at the international border crossing and mechanical equipment problems.

State-Supported Amtrak Cascades On Time Performance



Source: WSDOT State Rail and Marine Office, 2009

MOBILITY

(Addressing Congestion)

Measure 3.10 Transportation-Efficient Land Use

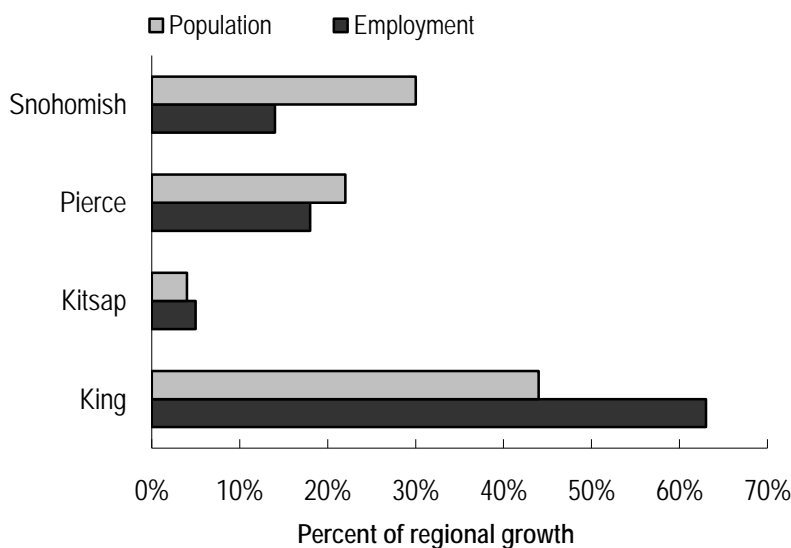
Placeholder – still being developed

Placeholder – still being developed

When people live close to work, they can save time commuting, reduce vehicle miles driven and lessen environmental impacts. The balance among population, jobs and housing has a significant effect on mobility. Transportation-efficient land use promotes walking, biking, carpooling, transit use and other means of efficient transportation. State, regional and local governments play a role in encouraging and supporting such practices.

There is an imbalance between employment and population growth in the central Puget Sound region. As shown below, population growth in Snohomish County has exceeded employment growth, indicating that people live there but commute to work elsewhere. Conversely, King County has seen more growth in employment than in population. More people are commuting to King County for work than in other counties.

Job and population growth among central Puget Sound counties 1995–2005



Source: OFM 2008

Housing growth is primarily in urban growth areas. The Puget Sound Regional Council recently reported that the region has successfully directed shares of permitted new residential development to its designated urban growth areas, up from 77 percent in 1995 to 88 percent in 2006.

By targeting development within established urban growth areas to the urban cores, there is less need for new transportation infrastructure. Of new residential expansion that occurred in the urban growth area since 1995, roughly half was absorbed by communities in the region's urban core. However, a sizeable share of new growth occurred in the region's outlying areas that are less easily served by public infrastructure. (Puget Sound Trends [No. D5, April 2008])

What's been happening?

The Transportation Improvement Board's Urban Corridor Program targets projects for funding that provide capacity and supports urban density.

What's the focus now?

WSDOT's Regional Mobility Grant Program focuses on improving connectivity among jurisdictions, and increasing integration of public transportation and the highway system.

What's next?

The Puget Sound Regional Council is developing a long-range transportation plan built around four areas: better commute choices, system efficiency improvements, tolling and strategic investments.

ENVIRONMENT

Measure 4.1 Fish Passage

Number of culverts fixed and miles of stream habitat opened up

In 2008, eight culverts were fixed or removed, compared to 12 culverts in 2007. The 2008 projects opened up an estimated 13 linear miles of stream habitat, compared to 50 linear miles in 2007.

Fixing or removing culverts under state highways that block fish from accessing upstream habitat is a priority for the state. WSDOT works with the Washington Department of Fish and Wildlife to conduct habitat studies and to inventory, prioritize, fix or remove fish passage barriers.

Priority projects are often “stand-alone” projects. WSDOT fixes culverts as part of larger highway projects, as stand-alone projects or as part of highway maintenance projects. Prioritization is important because not all culverts are equally important to restoring fish habitat. Correcting the top 40 percent of culverts statewide is estimated to yield more than 80 percent of the habitat gain.

Stand-alone fish barrier corrections are prioritized to provide the largest habitat gains for the greatest number of “at-risk” fish species, for the best value. The number of stand-alone projects built in any one year is driven by legislatively mandated project lists, construction schedules, funding, technical complexity and regulatory approval processes.

Projects are yielding results. From 1991 through 2008, WSDOT has fixed 225 fish passage barriers that have gained an estimated 754 miles of potential habitat:

- 72 were stand-alone projects built with dedicated funding that gained an estimated 383 miles of habitat.
- 153 were completed as part of highway projects that gained an estimated 371 miles of habitat.

What's been happening?

Statewide inventory of culverts in the 7,000-mile state highway system, 1,440 of which have potentially significant upstream habitat gain.

What's the focus now?

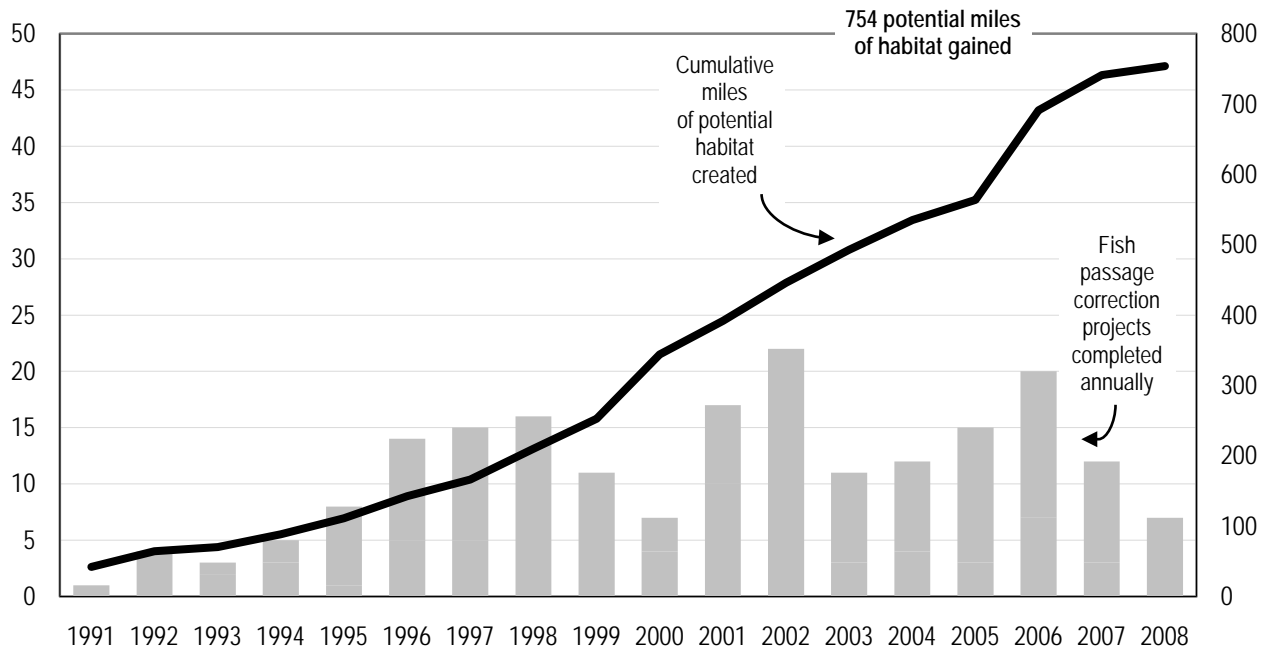
Prioritization of culverts to be fixed or removed, with emphasis on “stand-alone” projects.

What's next?

Future reports will include local results.

Projected lineal miles of habitat gained and completed fish passage correction projects

*Number of projects completed per year
Lineal habitat gain is projected cumulative total (in miles)*



Source: WSDOT 2007

ENVIRONMENT

Measure 4.2 Stormwater Runoff Quality

Number of WSDOT stormwater treatment facilities constructed*

In 2008, 92 stormwater treatment facilities were constructed statewide, a decrease from 129 facilities in 2007.

Managing stormwater effectively cuts down on pollutants entering streams and rivers, contributes to Puget Sound and salmon recovery, and reduces flooding and erosion. Stormwater is a particular concern in Western Washington.

Federal regulations and permits govern stormwater runoff. The state and a number of local governments are governed by federal Clean Water Act and National Pollution Discharge Elimination System permits for municipal stormwater discharges to surface waters.

Originally, federal stormwater permits included only the cities of Seattle and Tacoma; King, Pierce, Snohomish, and Clark counties; and the ports of Seattle and Tacoma. In 2007, the permit program was expanded to include approximately 100 urbanized areas across the state. Permits are also required for public entities within specified geographic areas that own or operate a separate storm sewer system, such as ports.

WSDOT has projects statewide to manage stormwater runoff. Under federal permits, WSDOT constructs facilities, such as catch basins, culverts, vaults and filters, to control and remove pollutants from stormwater. The permits also require maintenance and operation of these facilities, as well as vegetation management.

WSDOT has constructed 1,964 stormwater treatment facilities statewide since 1996, including 866 in King, Snohomish, Pierce and Clark counties. The number of stormwater treatment facilities built in any one year is driven by legislatively mandated project lists, construction schedules, funding, technical complexity and regulatory approval processes.

What's been happening?

The state is minimizing the effects of stormwater runoff on WSDOT highways and facilities, which cover more than 40,000 acres with impermeable surface.

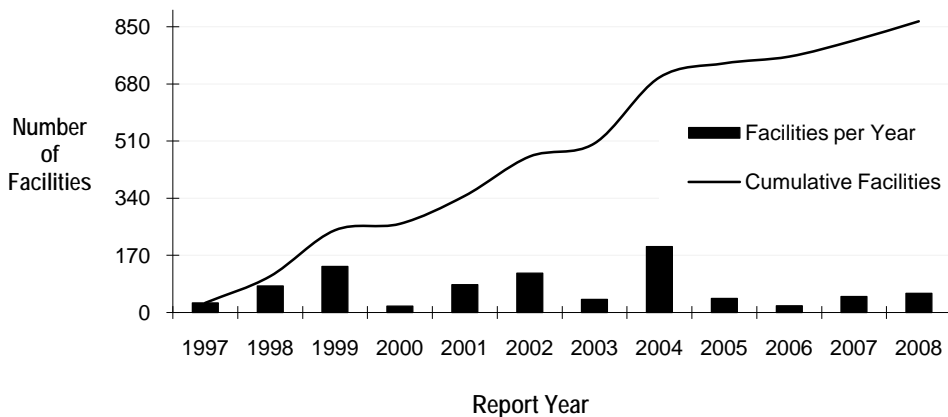
What's the focus now?

While new highway projects are designed to manage stormwater appropriately, older highways and facilities need to be retrofitted. For example, only about 12 percent of state highway miles in the four permit counties have stormwater treatment facilities.

What's next?

The State Department of Ecology will issue a new stormwater permit in early 2009. In addition to constructing new stormwater facilities, transportation agencies will be required to inventory stormwater drainage networks and associated facilities, increase inspection and maintenance, and retrofit priority highway segments, when possible.

Number of WSDOT Stormwater Facilities Built in King, Pierce, Snohomish and Clark Counties



Source: WSDOT 2008

* The installation of stormwater treatment facilities is an important measure of water quality improvement. The Department of Ecology presumes that by using "best management practices" and proven treatment technologies, stormwater is being treated to meet water quality standards. This approach avoids the need for costly measurement at each discharge point. Expanded monitoring and reporting will be required under the new federal permit.

ENVIRONMENT

Measure 4.3 Air Quality

Tons of greenhouse gases produced statewide

As of 2005, 95 million metric tons CO² equivalent were produced statewide (2020 target is 88 million metric tons CO² equivalent). New data will be available in 2010 and then every two years.

Reducing greenhouse gas and airborne emissions will bring benefits to the environment and our citizens' health. Emissions from cars, trucks, construction equipment, buses, cargo vessels, ferries and trains are the state's largest source of greenhouse gases (GHG) and air pollution. Transportation-related emissions produced almost 47 percent of the GHG emissions in the state in 2005, and 57 percent of the toxic fine particles from diesel exhaust in 2005.

Greenhouse gases levels are decreasing. These gases are substances such as carbon dioxide (CO²) which trap the sun's heat as it is released from the earth and prevent it from escaping back into space, thus contributing to the global warming effect. The level of GHG in the state decreased from 105 million metric tons CO² equivalent (MMTCO²e or CO²e) in 2000, to 95 MMTCO²e in 2005. Statute commits the state to reduce GHG emissions to 1990 levels (88 MMTCO²e) by 2020.

What's been happening?

Climate Action Team issued its report and recommendations on reduction of GHG emissions across all sectors of the state, including transportation.

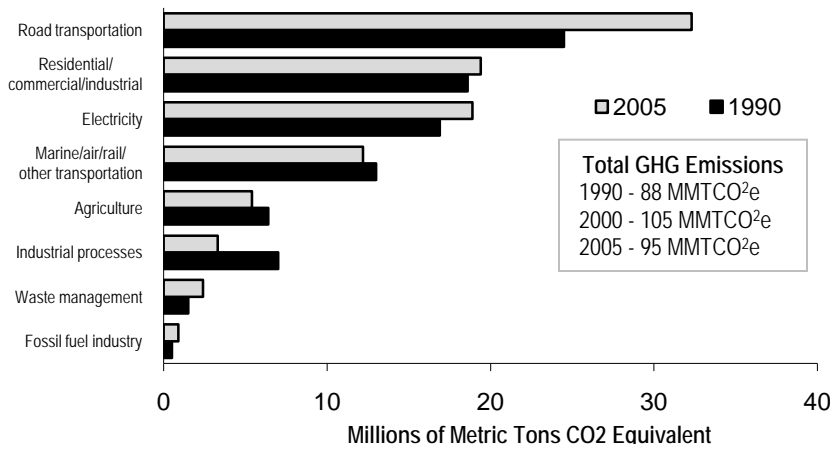
What's the focus now?

Reducing air pollution during construction, reducing congestion, conserving fuel, using cleaner fuels on the state ferry system, using hybrid vehicles, increasing use of renewable energy, increasing energy efficiency, and reducing port, rail and highway diesel emissions.

What's next?

Development of measures such as vehicle miles traveled and carbon emissions as tools to evaluate progress in reducing GHG and air pollution.

Washington State Greenhouse Gas Emissions, 1990 and 2005



Source: Ecology and CTED 2007 Washington State Greenhouse Gas Inventory and Reference Case Projections, 1990-20 (prepared by OFM 2007)

Air pollution is decreasing, but diesel emissions remain a concern. Stricter federal standards for emissions from vehicles have contributed to the decrease of key airborne pollutants such as carbon monoxide since 1980. However, despite those decreases, toxic fine particles from diesel exhaust remain a key concern. These are known to have significant adverse health effects. The state has been working to reduce diesel emissions from school buses and local transit fleets. Additional emphasis is needed for state and private sector fleets, as well as trains, ships and construction equipment, which also emit toxic fine particles from diesel exhaust.

STEWARDSHIP

Measure 5.1 Capital Project Delivery

Percent of 2003 and 2005 revenue package highway capital projects completed on time and within budget

As of December 2008, 79 percent of the 185 completed revenue package projects were on time and within budget.

WSDOT is in the process of delivering the largest capital construction program in state history. Funded by revenue increases in 2003 (Nickel) and 2005 (Transportation Partnership Act or TPA), the revenue packages include road, rail and other types of projects, valued in excess of \$15 billion. The highway project portion, with a total value of \$11 billion, comprises 391 projects focused on safety, preservation and congestion relief.

What's been happening?

Declining fuel tax revenues and substantial increases in the cost of construction material pose a financial challenge for all transportation agencies.

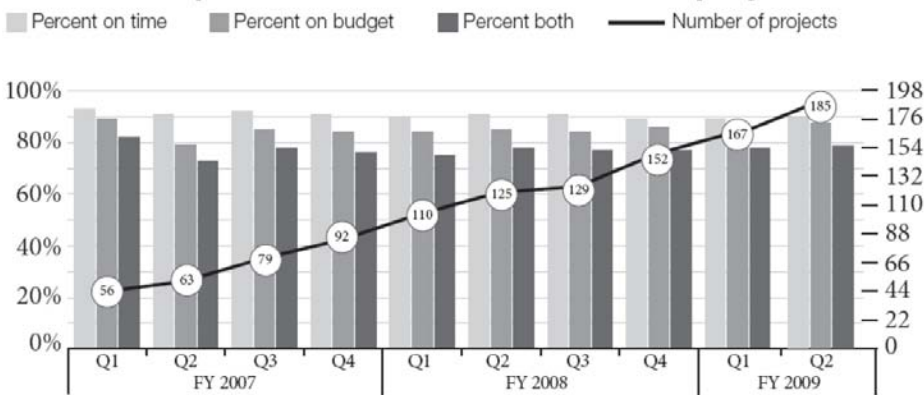
What's the focus now?

The Governor's 2009-11 proposed budget includes a 6-year balanced plan. Due to inflation increases on construction and declining gas tax revenues, some projects are being delayed.

What's next?

With the state and federal economic recovery bills under consideration, the drive is to begin as many "shovel-ready" projects as possible to create jobs.

Cumulative performance of Nickel and TPA projects



Data Source: WSDOT Project Control and Reporting

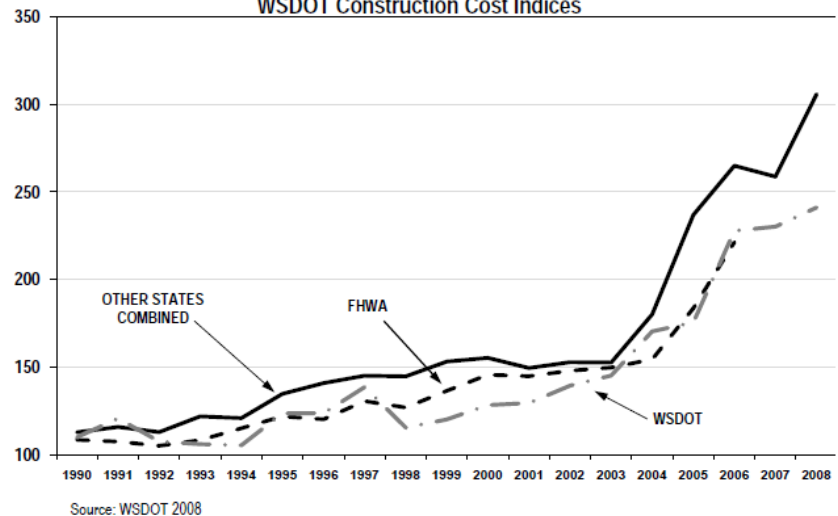
Construction costs have soared since 2003. Between 2003 and 2007, the cost of key construction materials increased by nearly 60 percent, and subsequently has increased 22 percent in the first three quarters of 2008. One reason was rapidly changing fuel prices during the summer of 2008, driven by the price of a barrel of oil, which topped out at \$147.27 per barrel. Beginning in late 2008, prices began to drop.

Extent of Bid Price Increases Compared to General Inflation Rates

Percentage Increase Experienced Since 2003	
WSDOT CCI	66%
Concrete Pavement (WSDOT)	169%
Steel Reinforcing Bar (WSDOT)	166%
Structural Steel (WSDOT)	161%
Roadway Excavation (WSDOT)	121%
Hot Mix Asphalt (WSDOT)	85%
Structural Concrete (WSDOT)	55%
Crushed Surfacing (WSDOT)	33%
CPI-U General Inflation (USBLS)	17%
2.5%/Year x 6 Years Inflation Rate	15%

Source: WSDOT 2008

WSDOT Construction Cost Indices



Source: WSDOT 2008

Taxpayers demand accountability for toll revenue. In order to be transparent about the collection and use of toll revenues, we are reporting on tolling measures for the first time.

Two types of tolling. Currently, two types of tolling are used: tolling on the new Tacoma Narrows Bridge and the four-year High Occupancy Toll lanes pilot project on SR 167 between Auburn and Renton. Tolling on the Tacoma Narrows Bridge is used to pay only for the cost to construct, maintain, preserve and operate the facility. “Variable price tolling” is used on SR 167 to test whether tolls can help maximize the number of vehicles able to use our highways.

Tacoma Narrows Bridge – uses of toll collections. On the Tacoma Narrows Bridge, drivers with transponders pay a \$2.75 toll (\$4.00 to manually pay the toll) to go east in Tacoma. Tolls are used to pay the debt service on the bridge as well as to help pay for bridge maintenance, preservation and operation. The table below shows how toll revenue supports these activities.

Use of variable tolls on the HOT lanes on SR 167 improves the efficiency of the transportation system. These tolls are variable: When general purpose lanes are congested, drivers who drive by themselves have the option of paying a toll based on how congested traffic is. Tolls have ranged from \$0.50 to \$9.00, depending on how congested the highway is and 7.3 percent of all traffic in the SR 167 HOV lanes has been HOT lane users.

What’s been happening?

In 2008, the Legislature passed a broad framework on how tolls can be imposed on roads and bridges, and what the tolls can be used for (Chapter 122, Laws of 2008).

What’s the focus now?

The Legislature is exploring how tolling can be used on megaprojects such as the Alaskan Way Viaduct, SR 520 floating bridge and other projects to address funding shortfalls and make the transportation system work more efficiently.

What’s next?

WSDOT is moving to make all tolling on SR 520 electronic to keep traffic moving and eliminate congestion associated with tolling plazas.

**Use of Tolling Revenue on the Tacoma Narrows Bridge
(July 2007–October 2008)**

	Biennium \$	Percentage
WSP Enforcement	\$633,000	0.9%
WSDOT Administration of Toll Operations	2,960,000	4.2%
Credit Card Fees Paid by WSDOT	1,253,000	1.8%
WSDOT Maintenance of New Bridge	1,486,000	2.1%
WSDOT Preservation of New Bridge	477,000	0.7%
Insurance	4,020,000	5.7%
Toll Systems Operations (TransCore Contract)	17,403,000	24.9%
Subtotal of Operations and Maintenance Expenses	28,322,000	40.3%
Debt Service	42,010,000	59.7%
Total	\$70,332,000	100%

Source: WSDOT 2008

Appendix

Key Terms

Goals: Goals are high-level statements of a desired direction, policy or outcomes. Transportation goals have been set by the Legislature in RCW 47.01.012.

Objectives: Objectives break goals into smaller, more specific pieces. They describe the measurable results an agency or program is expected to accomplish within a given time period.

Performance measures: Performance measures are based on data, and tell a story about whether an agency or activity is achieving its objectives and if progress is being made toward attaining policy goals.

State Transportation-Related Agencies

County Road Administration Board
Department of Ecology
Department of Licensing
Freight Mobility Strategic Investment Board
Joint Legislative Transportation Committee
Pilotage Commissioners, Board of
Transportation Improvement Board
Utilities and Transportation Commission
Washington State Department of Transportation
Washington State Patrol
Washington State Transportation Commission
Washington Traffic Safety Commission

References

- Agency-specific activities, performance measures and strategic plans
<http://www.ofm.wa.gov/performance/default.asp>
- Climate change
<http://www.ecy.wa.gov/climatechange/index.htm>
- Government Management Accountability & Performance (GMAP)
<http://www.accountability.wa.gov/>
- Key facts
<http://www.wsdot.wa.gov/publications/manuals/fulltext/M0000/keyfacts.pdf>
- Priorities of Government (POG)
<http://www.ofm.wa.gov/budget/pog/>
- WSDOT's Gray Notebook
<http://www.wsdot.wa.gov/Accountability/GrayNotebook>
- For topic-specific information, see:
<http://www.wsdot.wa.gov/Accountability/GrayNotebook/SubjectIndex.htm>
- Washington Strategic Highway Safety Plan: Target Zero
<http://www.wsdot.wa.gov/NR/rdonlyres/BC9C8BDB-A735-4948-850A-47B72696E4D9/0/SHSP.pdf>
- Washington Transportation Plan
<http://www.wsdot.wa.gov/planning/wtp/>

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