



CONNECTING WASHINGTON TASK FORCE

Use of Performance Measures and Benchmarking in Transportation

September 9, 2011

The Blue Ribbon Commission

In 2000, the Governor appointed the Blue Ribbon Commission to create a balanced investment plan for the state's transportation system.

- The Blue Ribbon Commission discussed at length accountability and measuring performance
- Of the 18 primary recommendations, most have been fully or partially implemented.



The Blue Ribbon **Commission on Transportation**
Final Recommendations to the Governor and Legislature
adopted November 29, 2000

The Blue Ribbon Commission

Key Blue Ribbon Commission Recommendations Implemented:

- ☑ Establish a “single point of accountability at the state level strengthening the role of the state in ensuring accountability of the statewide transportation system.”
 - 2003 Legislature created the Transportation Performance Audit Board (TPAB) to evaluate benchmarks, investment criteria and performance measures.
 - WSDOT made a cabinet agency in 2005.
 - 2007 Legislature made OFM responsible for establishing performance measures for the transportation goals, and for preparing a biennial progress report (the “Attainment Report”).
 - TPAB was then placed under the Transportation Commission. Every four years, the Commission recommends to the Legislature a 20-year statewide transportation plan.

Blue Ribbon Commission Recommendations (cont)

Other Blue Ribbon Commission Recommendations Implemented:

- ☑ “A thorough and independent performance review of WSDOT administration practices and performance levels.”
 - Several independent reviews of WSDOT since the Blue Ribbon Commission report:
 - TPAB reviews in 2005 and 2006.
 - Ongoing legislative reviews of Washington State Ferries.
 - Since 2000, over 35 different performance audits were conducted of WSDOT programs by the State Auditor’s Office and the Joint Legislative Audit and Review Committee.

- ☑ Greater efficiency in construction and project delivery, including design-build contracting, more private sector contracting and management-labor partnerships.
 - 2001 enactment of design-build contracting for large WSDOT projects and creation of environmental permit streamlining process. Increased public and private sector collaboration to reduce project costs.

The Initial Transportation Benchmarks

- In 2002, Legislature directed the Transportation Commission to develop reports based on enacted benchmarks.
- Transportation Commission and WSDOT adopted specific measures to evaluate performance against benchmarks after a series of public meetings and conversations with cities, counties and transit.
- Benchmarks included:
 - Per capita vehicle miles traveled shall be maintained at 2000 levels
 - The non-auto share of commuter trips shall be increased in urban areas
- Benchmarks proved to be too specific and rigid; didn't allow for needed adjustments for changing priorities and policy directions and funding changes
- Repealed in 2007 and replaced with higher level, statewide policy goals.



Shifting from Benchmarks to State Transportation Policy Goals

- In 2005, TPAB reviewed state transportation statutes, benchmarks, and other investment criteria with goal of simplifying state investment instructions and reporting requirements.
- Study recommended that Washington adopt a model based on system of policy goals and objectives used by Maryland to evaluate system performance.
- 2007 Legislature implemented the study's recommendations and repealed the existing nine transportation benchmarks, establishing five overall policy goals.
- In 2010, the Legislature added a sixth policy goal – economic vitality.
- Legislature directed OFM to develop objectives and performance measures for each policy goal in alignment with gubernatorial and legislative priorities and transportation revenue scenarios, and report results in the **Biennial Attainment Report**.

Achieving Goals – Communicating Results

Communicating the performance of the transportation system and the results of transportation investments through various tools :

- The Attainment Report (roll-up report)
- GMAP forums
- Reports on the local level
- Report on public transportation
- Reports on the state level
- Federal reporting



Measuring the attainment of state transportation policy goals

NEW -

- The **Attainment Report** is the key venue for communicating statewide results; it provides a high-level assessment of state's progress in achieving its transportation goals using key performance measures and data.
- Focus is on overall system performance.
- Includes all modes, jurisdictions, and transportation partners.
- Developed and published by Office of Financial Management.
- Measures and data are used to make investment and management decisions.
- Some measures are still evolving.



Attainment Report (cont)

- Measures and objectives are developed by OFM and tied directly to the state transportation policy goals.
- Jurisdictions report this information to OFM.

SUMMARY OF PROGRESS — 2010 STATUS

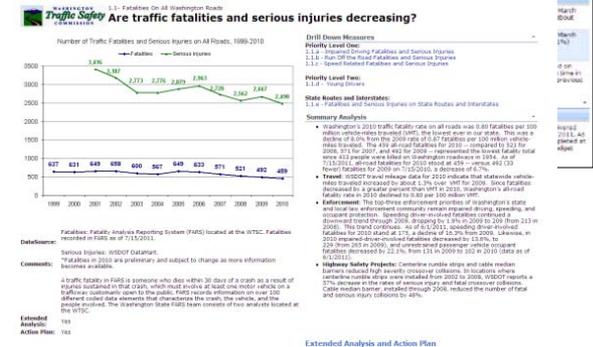
GOAL 1. SAFETY				
To provide for and improve the safety and security of transportation customers and the transportation system.				
Measures	Objective	Status	Progress	Five-Year Trend
Measure 1.1 Traffic Fatalities Number and rate of traffic fatalities per 100 million vehicle miles traveled (VMT)	Reduce fatalities	491 traffic fatalities in 2009, lowest statewide since 1955	*	
	Reduce rate of traffic fatalities per 100m VMT	0.87 rate in 2009, a 25.6 percent decrease from 2005	*	
Measure 1.2 Collision Reduction Number of collisions and percentage resulting in serious or fatal injuries	Reduce number of collisions	6.9 percent reduction in collisions from 2008 to 2009	*	
	Reduce severity of collisions	Serious injuries increased 3.6 percent from 2008 to 2009, yet decreased 7.7 percent from 2005	*	

Government Management Accountability & Performance (GMAP)

- Government Management Accountability and Performance (GMAP) is a disciplined method of performance review that leaders can use to make decisions for the purpose of achieving results.
- Governor and her senior staff **personally** and **regularly** review performance reports with agency directors.
- Agencies are accountable for **results**.
- Timely, accurate **data** inform the decisions.
- Meetings are active, real-time **problem solving** sessions.
- Action plans define **who** will do **what** by **when**.
- Participants are expected to **follow-up** and report back.

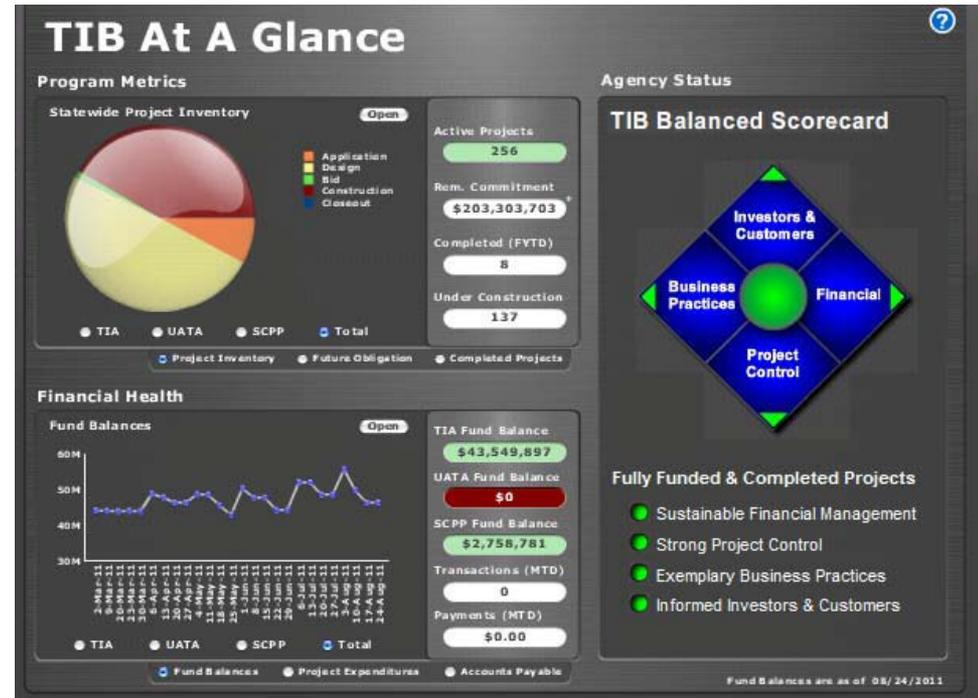
Transportation Dashboard

Measure	Target	Actual	Status	Agency	Notes
1. Safety					
1.1. Fatalities on all Washington roads					
1.1.1. Fatalities on all Washington roads	545	458	On Track	WSP, WSDOT, WSP, WSDOT, WSP	Traffic fatalities on all Washington roads decreased from 412 in 2016 to 458 in 2017, a drop of 10%. Improved driving, speeding, and seat belt use are the top three performance priorities. Target of 415 for 2018 and then by 300.
1.1.2. Fatalities on State Routes and Interstates	223	216	On Track	WSP, WSDOT, WSP, WSDOT, WSP	Traffic fatalities on state routes and interstates decreased from 215 in 2016 to 216 in 2017. Increased seat belt use and road safety improvement projects contribute to the decrease. Lower vehicle speeds for 2018 are being targeted to 20 target.
2. Transportation					
2.1. Percent of state highway investment in the better condition					
2.1.1. Percent of state highway investment in the better condition	90%	93%	On Track	WSDOT	WSDOT maintains over 84,300 miles of state highway in better condition, according to the 2017 pavement condition survey. Over 93% of all pavements were rated as good or fair compared to 84% in 2016. 2018 data was available through 2017.
2.1.2. Percent of state bridges in fair or better condition	97%	98%	On Track	WSDOT	In fiscal year 2017, 98% of WSDOT's bridges were in good or fair condition. The majority of bridges were in great condition (90%), 8% in fair. WSDOT maintains over 3,033 full-depth bridge structures over its feet in length. 2018 as of June 2017.
2.1.3. Percent of state highways in good or better condition	65%	65%	On Track	WSDOT	During 2017, 20 of 31 (65%) of the state's mainline highways were in good or better condition. The majority of highways were in good condition (60%), 5% in fair. WSDOT maintains over 1,000 miles of state highways. 2018 data was available through 2017.
3. Mobility					
3.1. Percent reduction in travel time between major cities					
3.1.1. Percent reduction in travel time between major cities	10%	10%	On Track	WSDOT	Traffic times completed 2016 and 2017 on key routes. WSDOT maintains more than a 100-hour of travel time a day, a 10% improvement. If more additional projects are under review, data available Dec 2017.
3.1.2. Average time to clear incidents on major highways	135 min	132 min	On Track	WSDOT	In the last quarter of 2017, 75 major incidents occurred on a key route. The average duration of 132 minutes is down from 135 minutes. Average clearance time of 132 minutes. The annual average clearance time for data available by 10/1/2017.
3.1.3. Number of complete trips	42000	28227	On Track	WSDOT	WSDOT includes key state trip reduction programs focused on reducing drive times through the Commute Trip Reduction and the Growth and Transportation Efficiency Center grant. Data based on survey and collected as of 6/30/2017.
4. Ferries					



Reporting on the local level

- Many local jurisdictions use performance data to organize and develop strategic, business and capital investment plans.
- In 2010, Legislature directed OFM and the Washington State Association of Counties (WSAC) to develop and implement transportation performance measures. King County has already begun implementing performance measures.



Transportation Improvement Board (TIB) has a financial performance dashboard that provides a snapshot of project delivery status.

Reporting on the local level (cont')

- Ongoing performance measurement and assessment by counties contributed to a December 2010 Report by WSAC and Washington State Association of County Engineers that identified maintenance and preservation needs and funding gaps.
- The County Road Administration Board (CRAB) reviews compliance with Standards of Good Practice
- Cities must adopt comprehensive six-year transportation plans under the Growth Management Act.

Asset Management: Bridge Assessment Annual Report

Local Agency Bridges

WSDOT, through its Highways and Local Programs division, manages the Federal Aid Highway Bridge program for local agencies. The program follows policy guidance found in federal statute, Washington state legislation, and the Washington Transportation Plan.

Local agencies' bridges are inspected at least once every two years. WSDOT conducts field reviews and provides training and technical assistance for municipalities that must inspect bridges along city streets and county roads. WSDOT and local governments closely follow federal guidelines in their bridge inspection and maintenance procedures.

Local bridge conditions

The Federal Highway Administration (FHWA) requires all states to report annual state, city, and county data concerning the structural condition and adequacy of all bridges statewide. A structurally deficient (SD) bridge is safe as long as all restrictions are obeyed, but may be need of costly repairs or replacement in order to carry current legal loads.

Additionally, following a thorough review, bridges are assigned sufficiency rating number between 0 and 100. The rating takes into account some 75 factors reviewed during an inspection and

Structural condition summary of Washington's locally managed bridges (Spring 2011)

	County owned		City owned		Total	
	% of bridges	% of deck area	% of bridges	% of deck area	% of bridges	% of deck area
Good	83%	85%	76%	76%	80%	81%
Fair	12%	11%	17%	12%	13%	11%
Poor	4%	4%	7%	12%	5%	8%
Percentage of Good + Fair bridges					95%	92%

Data source: WSDOT Highways and Local Programs Office.

Detailed conditions of Washington's locally managed bridges (Spring 2011)

Condition	Number of bridges	Deck area (Sq. Ft.)	Number of bridges funded	Deck area funded (Sq. Ft.)	Percent of bridges funded	Percent of deck area funded
Sufficiency rating less than 80 and 80	75	680,360	43	304,660	57%	52%
Sufficiency rating less than 50 and 80	164	1,029,800	56	200,230	36%	32%
Sufficiency rating less than 50	375	1,216,750	81	341,800	22%	18%
Sufficiency rating less than 50 and weight restricted or load posted	112	670,030	27	96,000	24%	14%
Weight restricted or load posted	109	947,600	27	96,000	14%	10%
Total inventory	3,950	14,500,000	65	350,000	2%	2%

Data source: WSDOT Highways and Local Programs Office.

also considers a bridge's age, length, and width, and the average amount of traffic the bridge handles. Currently, 95% of Washington's locally owned bridges are considered in good or fair structural condition.

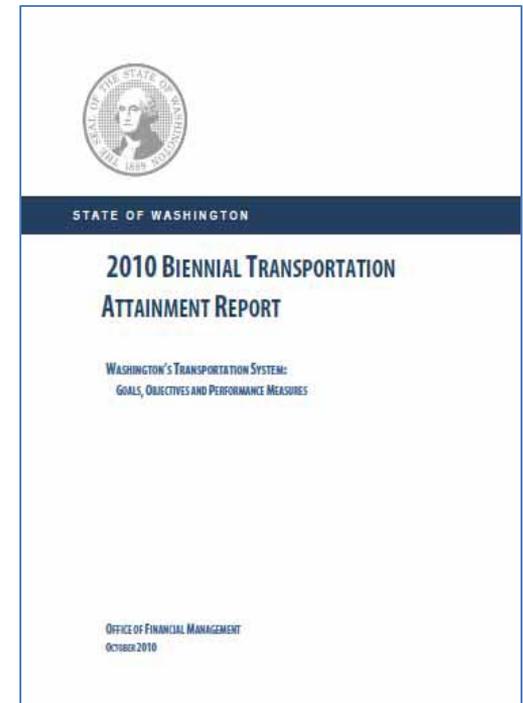
Top five challenges for locally managed bridges in Washington

- **Age and deterioration** - A number of bridges in the state, constructed before the 1950s and 1960s, need major repair or replacement. Usually built in last 75 years, about 30% of locally owned bridges are more than 50 years old.
- **Congestion** - Some of Washington's bridges have become bottlenecks for both freight and general traffic, particularly at interchanges and major river crossings.
- **Construction costs** - The dollars available for bridges are buying less in the marketplace, as construction costs have risen including the price of steel, asphalt, concrete, and earthwork. Replacing smaller bridges can mean construction of new larger bridges in order to repair impacts to streams and rivers and ensure today's environmental standards are met.
- **Maintaining bridge safety** - Cities and counties face funding shortages which limit their ability to conduct the kind of ongoing preventive maintenance, rehabilitation, seismic strengthening, and replacement that would keep bridges sound indefinitely.
- **Regionally significant bridge replacement needs** - The costs of new bridges and their related interconnections prevent many cities and counties from making larger bridge improvements that are needed to address congestion and serve economic growth. High costs for bridges often exceed the available resources.

GNB Edition 42, August 2011: Example of local bridge condition performance information

Reporting on public transportation

- WSDOT is required to prepare an annual summary of local public transportation data. Includes ten measures used to compare like-size transit system.
- Federal reporting standards and measures include vehicle standards of life and measures that determine funding allocation.
- The 2010 transportation budget requires OFM to study data on statewide transit, bicycle and pedestrian trips and recommend additional performance measures. The new measures will be reported in the Attainment Report.



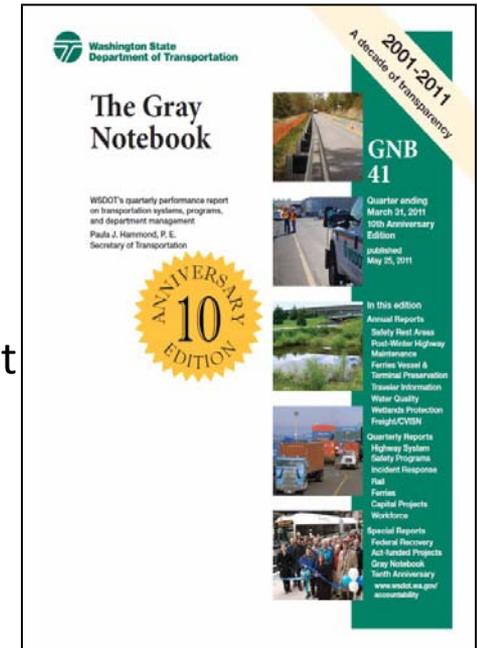
Reporting on the state level

WSDOT's Strategic Approach - *adopted in 2001*

1. Accountability and transparency
2. Comprehensive performance analysis and reporting for all programs
3. Adaptive and dynamic performance measurement to meet changing needs
4. WSDOT reports performance of the total system, the investment benefits and WSDOT's work in WSDOT's quarterly performance report – **The *Gray Notebook***

Moving Washington is WSDOT's approach to delivering projects and services and the framework for agency investment and business strategies.

WSDOT's Strategic Plan - Implements agency's actions. Commits to transparency and accountability and implements actions and strategies to reach desired goals and outcomes.



The Gray Notebook, WSDOT's quarterly performance report.

Results of Performance management and performance based investment decisions: Examples

On the state-owned system, WSDOT reports

1. Condition of our system
2. Investments state makes and the benefits that result
3. How agency performs in delivering those investments

Examples of this type of reporting

Safety

Crashes are down: Before and after studies of 25 safety improvement projects show **22% fewer fatal and serious injury crashes** annually.

Low cost safety enhancements with high returns

- **Cable median barrier** –180 miles of cable median barrier installed since 1995, **reducing crossover collisions by 58%**.
- **Rumble strips** – Evaluations of 518 miles in place for six months or longer indicate fatal and serious injuries are **down 43%**.

Collision rates after cable barrier installation

1995-2008

	Before	After	Percent change
Annual serious injury median collisions	16.8	7.0	-59%
Annual fatal median collisions	8.0	6.0	-25%
Serious injury median collision rate (per 100 million vehicle miles)	0.58	0.21	-64%
Fatal median collision rate (per 100 million vehicle miles)	0.27	0.15	-44%

Source: WSDOT Design Office.

Results of Performance management and performance based investment decisions: Examples (Cont')

Examples of this type of reporting (Cont')

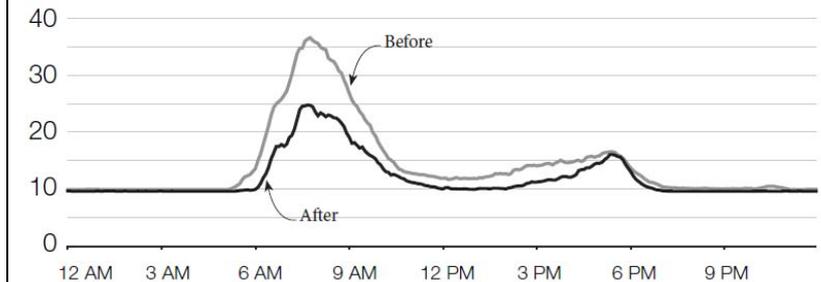
Mobility

- Statewide travel delay declined by **9%** (comparing 2008 to 2010).
- **Average peak travel time improved** on 18 of 40 high-demand commute routes (comparing 2008 to 2010) .
- 15 completed Nickel and TPA projects studied statewide showed morning and evening **average speeds increased 23%** and peak **travel times reduced 15%**.
- Since expansion in 2002, Incident Response has **responded to 582%** more incidents and **decreased overall clearance time by 272%** (average of 12.1 minutes).
- **On-time Ferry system performance** is at **96.2%** (90% being the goal).
- WSDOT's Growth and Transportation Efficiency Center (GTEC) program has **reduced drive alone commute rates** in 6 major urban areas by **22%** through targeted commute trip reduction strategies.

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

Weekday data for March - April 2007 & 2011

Travel time in minutes



Data source: WSDOT Northwest Region Traffic Office.

I-405 – South Bellevue Widening project -

Northbound peak travel time between Tukwila and Bellevue was greatly reduced in January 2009 when the this project opened an auxiliary lane between 112th Ave SE and I-90. The morning peak travel time was reduced from 35 minutes to 25 minutes.

