

# Data Management for Transportation Performance Management Peer Exchange Washington State DOT Experience

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# WSDOT'S SYSTEM

- 18,689 state-owned lane miles of highway
- 22 ferry vessels on 9 routes carried 23.2 million passengers in FY2015
- 3,288 state-owned bridges an average of 45 years old
- 11 Amtrak Cascades trains daily served more than 744,000 passengers in 2015
- 31 public transit systems statewide carrying more than 113,200 riders in 2014
- 2,898 vanpools – largest in the nation
- \$39.6 million in bicycle and pedestrian grants and projects in 2015-17 biennium





# WASHINGTON'S LEGISLATED TRANSPORTATION POLICY GOALS

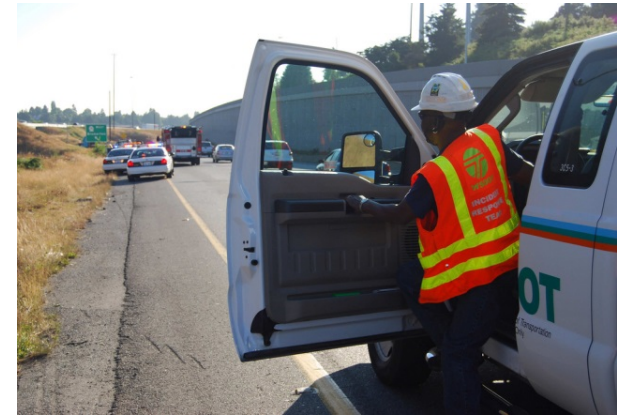
Economic vitality



Preservation



Safety



Mobility



Environment



Stewardship



# SOME OF WSDOT'S CURRENT MOBILITY INITIATIVES

- Corridor sketches with partners to design projects using Practical Solutions
- Legislative request to study speed limit raise on I-90 in eastern Washington
- Annual ***Corridor Capacity Report***
- Interactive online maps
- Connected autonomous vehicle work plan
- MAP-21 System Performance rule
- Mobility performance measure alignment with project planning
- Tolling as a traffic management tool: SR 167, SR 520 and I-405
- Downtown Seattle's Alaskan Way Viaduct work zone closure planning
- Gov. Inslee's mobility measures in Results WA performance management plan
- Results WSDOT agency strategic plan mobility strategies



# WSDOT'S MOBILITY PARTNERS

MPOs and transit partners help fill in data gaps to make Washington an overall data-rich state from a multimodal stand point



One mobility initiative for which WSDOT closely partners with MPOs, transit agencies, RTPOs, universities, etc. is the annual *Corridor Capacity Report (CCR)*



# IN PARTNERSHIP WITH...

- Ben Franklin Council of Governments
- C-Tran
- Community Transit
- Intercity Transit
- King County Metro
- Pierce Transit
- Puget Sound Regional Council
- Sound Transit
- Southwest Washington Regional Transportation Council
- Spokane Regional Transportation Council
- Spokane Transit
- Thurston Regional Planning Council
- University of Washington



# WHY DO WE NEED SYSTEM PERFORMANCE MEASUREMENT AND REPORTING?

The *Corridor Capacity Report* was created:

- To apprise the Legislature, stakeholders, educational and research institutions, the media, and the public about multimodal system conditions and how agencies and businesses can work together to reduce congestion
- To help inform city, county and state agency policy makers, planners and engineers as they examine multimodal capacity opportunities
- To support WSDOT's Practical Solutions and performance-based planning initiatives
- To continue WSDOT's accountability streak since 2001 of reporting system performance data



# RESPONSES: STRONG MEDIA INTEREST

**The Seattle Times** “More drivers, more gridlock, more delays”



**K5** “Puget Sound traffic congestion up 19% since recession”

**MYNorthwest.com** “WSDOT blames economic rebound for worsening congestion”

**The Columbian** “Traffic congestion on the rise in Clark County”

**THE NEWS TRIBUNE** “South Sound traffic congestion accelerates”

**seattlepi** “Commutes around the state generally getting worse”

Other coverage:

**PUGET SOUND BUSINESS JOURNAL**

**HeraldNet**

**The Olympian**

**GeekWire**

**THE ENUMCLAW COURIER-HERALD**

# WHAT DATA TOOLS DOES THE CCR USE TO PROCESS ITS OWN AND PARTNERS' DATA?

CCR

## Highway Segment Analysis Program

The screenshot displays a complex data table with numerous columns. Key sections include:
 

- Geographic Data:** County Name, Segment ID, Stationing (Start, End, Mid).
- Physical Characteristics:** Length (Miles), Number of Lanes, Lane Width (Feet), Median.
- Operational Data:** Speed Limit (MPH), Signalized, Interchange, etc.
- Performance Metrics:** Volume (V), Capacity (C), Delay (D), etc.
- Classification:** Highway Type, Functional Class, etc.

The screenshot shows the 'DESIGN REPORTS' configuration window. It includes the following settings:
 

- Select the Report Type:** Normal
- Select Dates to Report On:** Select Dates: 5/20
- Select Locations and Data Elements to Report On:** Select Locations: 631; Loops: 0; Speed Traps: 0; Metered Lanes: 0
- Select the Data Content of the Report(s):**
  - Volume
  - Occupancy
  - Calculated Speed
  - Estimated Vehicle Length
  - Spent
  - Vehicle Length
  - Length Classification Bin 1 (0.0' - 20.0')\*
  - Length Classification Bin 2 (20.0' - 42.0')\*
  - Length Classification Bin 3 (42.0' - 72.0')\*
  - Length Classification Bin 4 (72.0' - 115.0')\*
  - Meter Rate
  - Meter Status
  - Red-Vehicle Count
  - Peak Time
  - # Periods
  - Validity %
  - # Days in Average
- Specify the Duration of the Basic Reporting Period:** 01:00:00
- Select the Method for Summarizing the Raw Data into the Basic Reporting Periods:** Sum/Avg All, Sub-Closest Good for Bad/Suspect
- Select the Method for Averaging Individual Dates Together:** Treaty
- Select the Minimum Validity Percentage for the Daily Average:** 75.0%

## What can TRACFLOW do for you?

TRACFLOW

### Retrieve Loop, Station, and Loopgroup Data

Loops are the fundamental data source in the TRACFLOW network. Stations and Loopgroups represent logical groupings of these loops to model multi-lane conditions.

### Retrieve Speed / Volume / Congestion Data Along a Corridor

GP Corridor data is provided per 1/2 mile along the requested corridor. This data provides valuable insight into how and where traffic conditions change.

### Define an Ad-Hoc Trip and Retrieve Travel Times

Define your own trip to measure performance of GP lanes along the segment of roadway that interests you. Provides travel time and summary statistics.

©2013 TRAC. Contact: [Mike Richards](#)

# WHAT DATA TOOLS DOES THE CCR USE TO PROCESS ITS OWN AND PARTNERS' DATA?

Mobility Analysis Software

continued...

The screenshot shows the 'GP Travel Time Analysis - Microsoft Excel' window. The interface includes a menu bar (File, Home, Insert, Page Layout, Formulas, Data, Review, View, Acrobat) and a ribbon with various tool groups. The main workspace contains several instruction boxes and buttons:

- Delete Initial GP Trip Processed Data Files:** Delete old files processed using the "Process GP Trip Data macros".
- Process GP Trip Data:** Processes the GP Trip Data for one year and outputs files which will be input files for the next two macros.
- Output Data for GP Average Travel Times Table:** Takes the outputs from "Process GP Trip Data" macros processing and compiles the information for GNB GP Average TT Tables for one stop shop.
- Output Data for GP %x% Reliable Travel Times Table:** Takes the outputs from "Process GP Trip Data" macros processing and compiles the information for GNB GP percentage Reliable TT Tables for one stop shop.
- Process Cost Data:** Takes the outputs from the "Process GP Trip Data" and computes Composite Congestion Cost and outputs all metrics in a tabular form.
- Output Data for Congestion Cost:** Takes the outputs from the "Process GP Trip Data" and computes Composite Congestion Cost and outputs all metrics in a tabular form.
- Process GHG Data:** Takes the outputs from the "Process GP Trip Data" and computes GHG Emissions and outputs all metrics in a tabular form.
- Output Data for GHG Emission:** Takes the outputs from the "Process GP Trip Data" and computes GHG Emissions and outputs all metrics in a tabular form.

At the bottom, there is contact information for Sreenath Gangula, P.E., PTOE, Lead Systems Analyst at WSDOT.

Transit Data Template

The screenshot shows a 'Transit Data Template' spreadsheet. It includes a 'Common Information' section with fields for 'Common Period', 'Countdown', 'Origin', 'Destination', 'Route Length', 'Transit Route', 'Transit Mode', and 'Notes'. Below this is a 'Summary Statistics' section with a table:

Transit Mode	Year of Day	Length	Total Available	% Reliability	# of Stops	Average Delay	Percentage of trips based on average delay	Average Delay	Percentage of trips based on average delay	Notes
Transit Mode	Year of Day	Length	Total Available	% Reliability	# of Stops	Average Delay	Percentage of trips based on average delay	Average Delay	Percentage of trips based on average delay	Notes
Comments	2,400	7,275	3,000	82.0%	68	30	200,000	10-300	3.0/4.0	

The main data table has columns for 'Route', 'Stop', 'Origin Time', 'Destination Time', 'Arrival Time', 'Route Length', 'Average Delay', 'Percentage of trips based on average delay', 'Notes', 'Vehicle ID', 'Operator of Vehicle', 'Route', 'Stop', 'Origin Time', 'Destination Time', 'Arrival Time', 'Route Length', 'Average Delay', 'Percentage of trips based on average delay', 'Notes', 'Vehicle ID', 'Operator of Vehicle'.



Summary Stats Template



The screenshot shows a 'Summary Stats' spreadsheet. It includes a 'Moving Averages' section with a table:

Route	Year of Day	Length	Percent of trips based on average delay	Maximum Average Delay	Median Average Delay	95th Percentile Average Delay	99th Percentile Average Delay	Number of trips based on average delay	Cost of congestion	Notes
Route	Year of Day	Length	Percent of trips based on average delay	Maximum Average Delay	Median Average Delay	95th Percentile Average Delay	99th Percentile Average Delay	Number of trips based on average delay	Cost of congestion	Notes
Comments	2,400	7,275	3,000	82.0%	30	100	200	100	100	

The main data table has columns for 'Route', 'Year of Day', 'Length', 'Percent of trips based on average delay', 'Maximum Average Delay', 'Median Average Delay', '95th Percentile Average Delay', '99th Percentile Average Delay', 'Number of trips based on average delay', 'Cost of congestion', 'Notes'.



# DRIVE NET - NEXT GENERATION PERFORMANCE MANAGEMENT PLATFORM

continued...

The screenshot displays the DRIVE Net web application interface. At the top, the browser address bar shows 'uwdrive.net/STARLab'. The application header includes the logo 'DRIVE Net Digital Roadway Interactive Visualization and Evaluation Network' and a navigation menu with the following items: HCM Analysis, Maps & Data, Multi-modal Analysis, Travel Time Analysis, Delay & GHG Calculation, Safety Performance, Freeway Elevation Analysis, and Login/Register.

The main content area is divided into a left-hand control panel and a central map. The control panel includes sections for 'Travel Time Analysis by INRIX Data', 'Travel Time Analysis by Loop Data', and 'Travel Time Analysis by HERE Data'. It features a 'Show/Reset HERE Network' button, checkboxes for 'Choose start point from the map' and 'Choose end point from the map', input fields for 'Start street name' and 'End street name', and corresponding 'Start Node No.' and 'End Node No.' fields. A 'Date Range' section shows dates from 9/1/15 to 10/31/15, and a 'Time of Day' section is set from 12:00 am to 11:59 pm. A 'Preview customized corridors' button and a 'Travel time statistics' button are also present.

The central map shows a geographic area covering parts of British Columbia and Washington state, with major cities like Vancouver, Seattle, and Portland labeled. A complex network of purple lines is overlaid on the map, representing the DRIVE Net network. A red hatched area is visible on the map near the Seattle/Portland region. The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the time as 10:51 AM on 5/6/2016.

# WSDOT KEY SYSTEM PERFORMANCE MEASURES AND THRESHOLDS

## WSDOT state highway speed thresholds for congestion measurement

Measure	Threshold	Description
Posted speed	60 mph (typical)	Vehicles are moving through a highway segment at the posted speed, but to travel safely and allow sufficient stopping distance, drivers must maintain more space between vehicles than at slower speeds. Fewer vehicles can pass through the segment in a given amount of time and the segment is not operating at maximum efficiency.
Maximum throughput speed (optimal flow speed)	70%-85% of posted speed (about 42-51 mph)	Vehicles are moving slower than the posted speed and the number of vehicles moving through the highway segment is higher. These speed conditions enable the segment to reach its maximum productivity in terms of vehicle volume and throughput (based on the speed/volume curve). This threshold range is used for highway system
Duration of congested period (urban commute routes)	Duration of time vehicle speeds are slower than 75% of posted speeds (45 mph)	The average weekday peak time period (in minutes) when average speeds are slower than 75% of posted speeds (about 45 mph). Drivers have less than 75% of their cars, and the number of vehicles that can move through a highway segment begins to operate less efficiently under these conditions.
Percent of state highway system delayed	Less than 85% of posted speeds (51 mph)	Percent of total state highway lane miles with average speeds slower than 85% of posted speeds.
Percent of state highway system congested	Less than 70% of posted speeds (42 mph)	Percent of total state highway lane miles with average speeds slower than 70% of posted speeds.
Severe congestion	Less than 60% of posted speed (36 mph)	Speeds and spacing between vehicles continue to decline on a highway segment and highway efficiency operates well below maximum productivity.

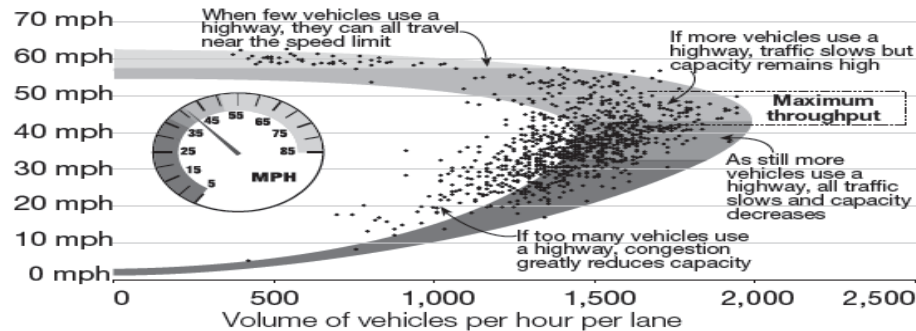
## Key congestion performance measures

All dollar values are inflation-adjusted using the Consumer Price Index (CPI).

Measure	Definition	Page
<b>Delay metrics</b>		
Per person delay (other forms of delay such as total delay)	The average total daily hours of delay per person based on the maximum throughput speed threshold (85% of posted speed) measured annually for weekdays.	8
Cost of delay	The monetary value for the vehicle hours (person hours) of delay experienced by drivers and businesses based on the increased travel time and vehicle operating costs.	8
Percent of the system delayed or congested	Percent of total state highway lane miles with average speeds slower than 85% of the posted speed limit (delayed) or 70% of posted speed (congested).	9
<b>Travel and lane miles metrics</b>		
Vehicle miles traveled (VMT) (other forms of VMT such as per person)	The number of miles traveled in Washington state annually. Also reporting VMT per person, and VMT on state highways as a subset of all public roads.	11
VMT avoided due to transit	The number of vehicle miles of travel that were not taken in personal vehicles due to the presence and use of transit services.	12, 32
Lane miles for state highways	The number of lane miles of Washington state highways. For example, one mile of a six-lane freeway equals six lane miles.	9
<b>Throughput metrics</b>		
Vehicle throughput	Measures how many vehicles move through a highway segment/spot location in an hour.	13
Person throughput	Measures how many people, on average, move through a highway segment during peak periods.	13
Lost vehicle throughput productivity	Percentage of a highway's vehicle throughput lost due to congestion when compared to the maximum 5-minute weekday flow rate observed at a particular location of the highway for that calendar year.	13
<b>Greenhouse gas emission (GHG) metrics</b>		
Commuter GHG emissions	The pounds of carbon dioxide equivalents (CO <sub>2</sub> e) emitted during peak period commutes; the per-person emissions per trip during peak periods.	15
Transit GHG emissions avoided	The emissions avoided by use of transit services.	16, 32
Ferry system emissions	Emissions from ferry vessel operations; emissions avoided by using the ferry instead of driving around the Puget Sound.	17, 37
Statewide transportation emissions	Statewide pounds of CO <sub>2</sub> e emitted by transportation, reported as percent of statewide total.	18
<b>Economic indicator metrics</b>		
State population	The number of residents in Washington state according to the national census.	19
Washington unemployment rate	The percent of the adult population who are unemployed and seeking employment.	19
Washington (real) per person income	Real per person income is the total statewide personal income divided by the state population.	19
Gasoline price per gallon	Gas prices represent yearly statewide averages for a gallon of regular unleaded gas.	19
Commuting mode split	The percent of the commuting population who primarily use one of the following modes: drive alone, carpool, public transit and bike or walk. Based on one-year estimates from the American Community Survey (ACS), commuting rates are of workers age 16 and older. WSDOT also includes the annual number of boardings for the WSDOT Ferries Division and all other public transit in the state as reported in the National Transit Database (NTD).	20
Job Impacts of highway projects	The number of direct, indirect and induced jobs supported by spending on highway projects from design through construction of the project.	20

## Understanding maximum throughput: An adaptation of the speed/volume curve

May 2010 weekday volume 6-10 a.m.; I-405 NB at 24th NE; Maximum throughput speed ranges between 70% and 85% of posted 60 mph speed limit



Data source: WSDOT Northwest Region Traffic Office.



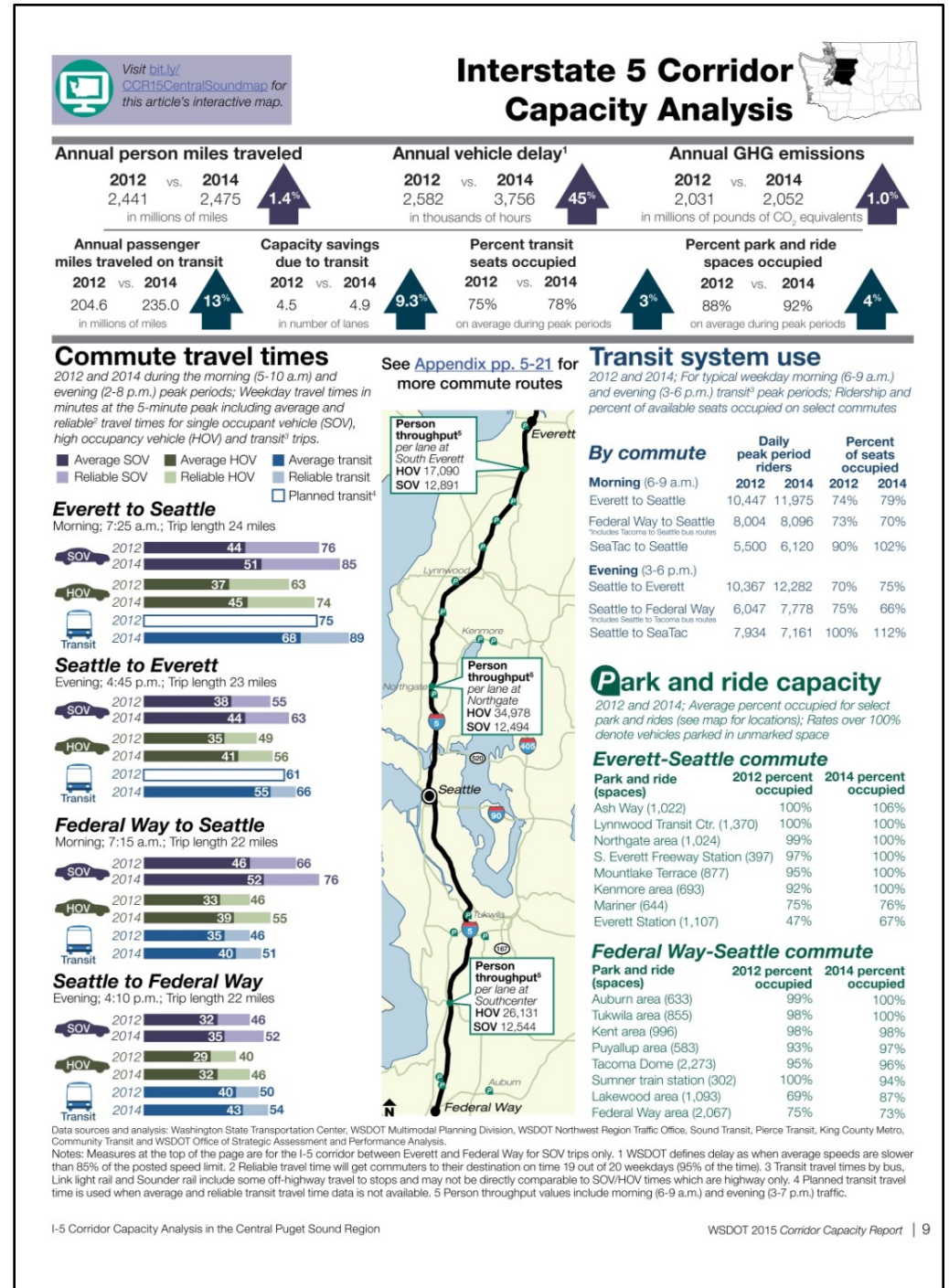
# WHAT DO WE DO WITH THIS DATA?

## Annual Banner Measures

- Miles traveled
- Delay
- GHG emissions
- Miles traveled on transit **NEW**
- Capacity savings due to transit **NEW**
- Percent of transit seats occupied **NEW**
- Percent of Park and ride spaces occupied **NEW**

## Daily Measures

- Travel times
- Person throughput (SOV & HOV)
- Routinely congested segments
- Transit ridership, capacity and utilization
- Park and ride lot location, capacity and utilization



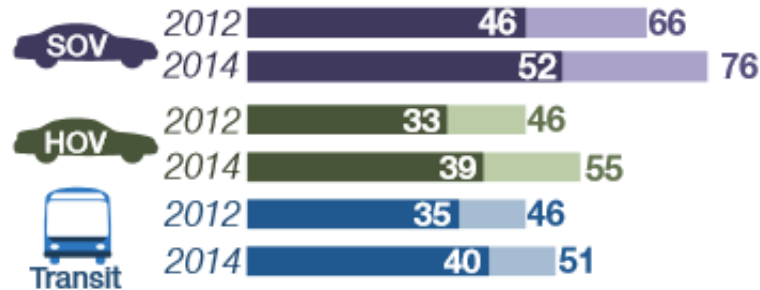


# EXAMPLE OF DAILY AM MEASURES ON I-5

## Travel times

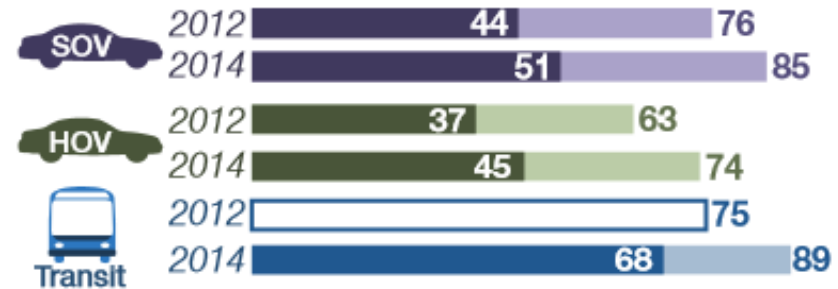
### Federal Way to Seattle

Morning; 7:15 a.m.; Trip length 22 miles



### Everett to Seattle

Morning; 7:25 a.m.; Trip length 24 miles



## Transit ridership & percent utilized

	Daily peak period riders		Percent of seats occupied	
	2012	2014	2012	2014
Federal Way to Seattle <small>*Includes Tacoma to Seattle bus routes</small>	8,004	8,096	73%	70%
SeaTac to Seattle	5,500	6,120	90%	102%

	Daily peak period riders		Percent of seats occupied	
	2012	2014	2012	2014
Everett to Seattle	10,447	11,975	74%	79%

## Park and ride facilities

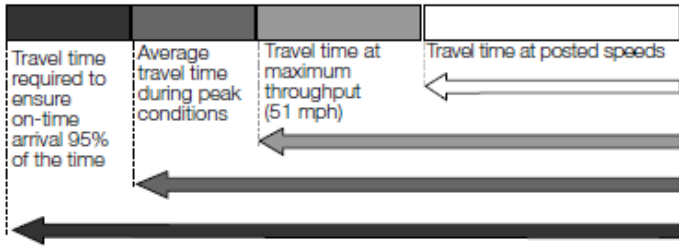
### Federal Way-Seattle commute

Park and ride (spaces)	2012 percent occupied	2014 percent occupied
Auburn area (633)	99%	100%
Tukwila area (855)	98%	100%
Kent area (996)	98%	98%
Puyallup area (583)	93%	97%
Tacoma Dome (2,273)	95%	96%
Sumner train station (302)	100%	94%
Lakewood area (1,093)	69%	87%
Federal Way area (2,067)	75%	73%

### Everett-Seattle commute

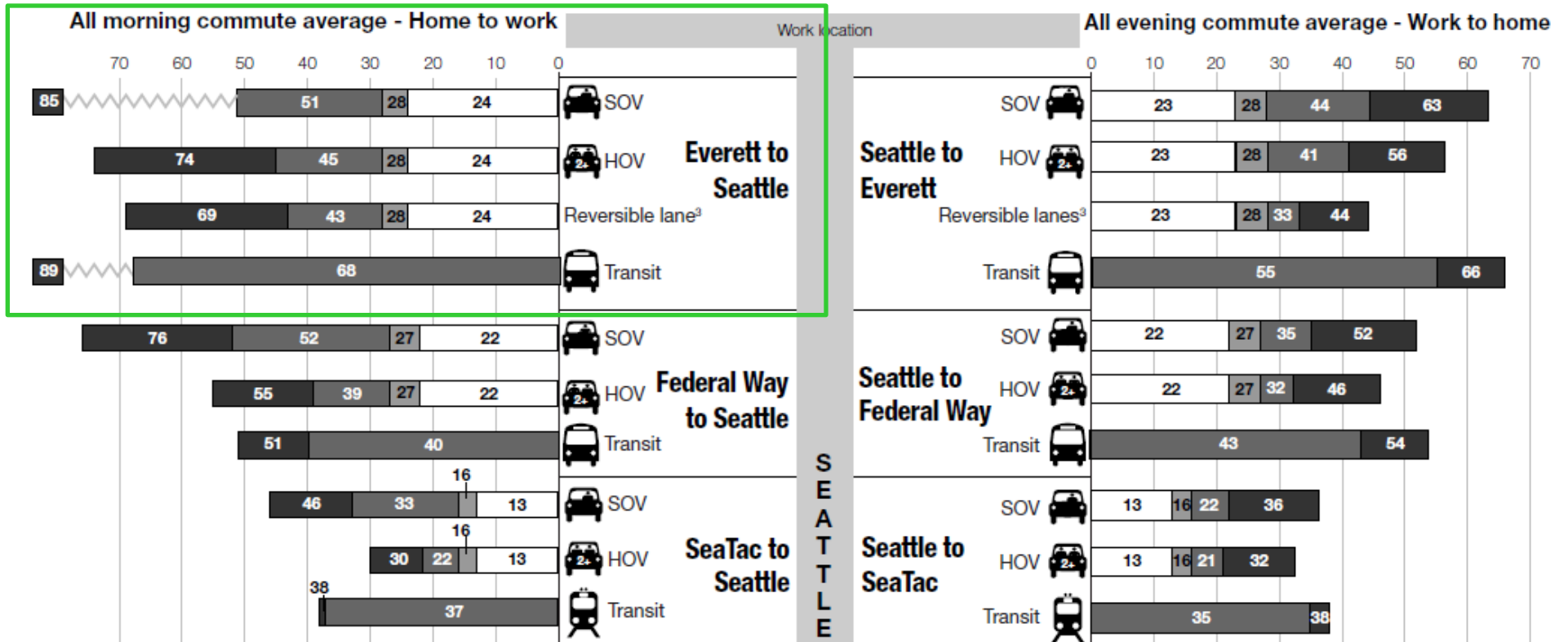
Park and ride (spaces)	2012 percent occupied	2014 percent occupied
Ash Way (1,022)	100%	106%
Lynnwood Transit Ctr. (1,370)	100%	100%
Northgate area (1,024)	99%	100%
S. Everett Freeway Station (397)	97%	100%
Mountlake Terrace (877)	95%	100%
Kenmore area (693)	92%	100%
Mariner (644)	75%	76%
Everett Station (1,107)	47%	67%

# COMPARING MODES AT A GLANCE

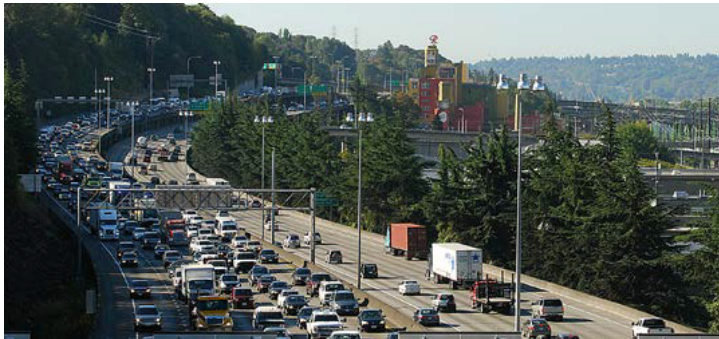


Travel times at posted speeds, maximum throughput speeds, peak travel times and 95th percentile reliable travel times

Morning and evening commutes by work location  
 2014; Single occupant vehicle (SOV), high occupancy vehicle (HOV) and public transit commutes in the central Puget Sound region; Travel times in minutes



# STATEWIDE AND REGIONAL INDICATORS



## Annual delay

### Estimated annual travel delay and cost of delay on state highways by urban area 2010 through 2014; Delay in hours; Cost of delay in millions (2014 dollars)

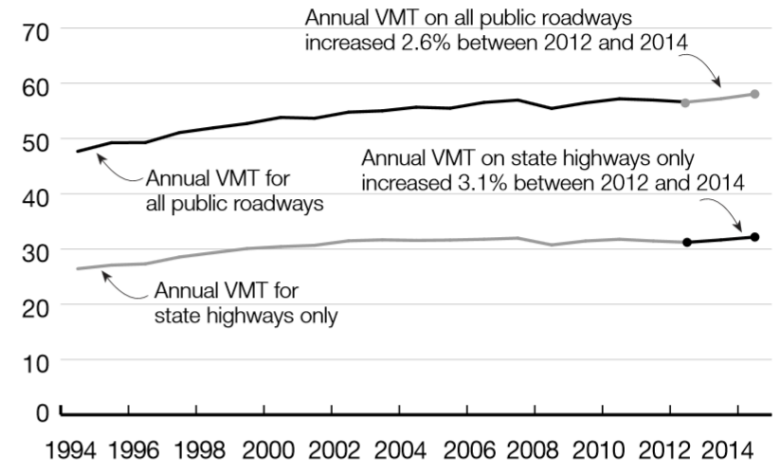
Urban area	2010	2011	2012	2013	2014	%Δ 2012 vs. 2014
Central Puget Sound (King and Snohomish counties)	28,857,500	29,662,500	28,955,000	30,235,000	29,235,000	1.0%
South Puget Sound (Pierce and Thurston counties)	1,470,000	1,080,000	795,000	1,145,000	1,627,500	104.7%
Spokane (Spokane County)	97,500	82,500	77,500	105,000	142,500	83.9%
Tri-Cities (Benton and Franklin counties)	155,000	155,000	140,000	150,000	172,500	23.2%
Vancouver (Clark County)	157,500	167,500	160,000	130,000	200,000	25.0%
Other areas	485,000	400,000	351,500	327,500	518,750	47.6%
<b>Statewide annual delay</b>	<b>31,645,000</b>	<b>31,970,000</b>	<b>30,900,000</b>	<b>32,450,000</b>	<b>32,332,500</b>	<b>4.6%</b>
<b>Annual cost of delay</b>	<b>\$791</b>	<b>\$799</b>	<b>\$773</b>	<b>\$811</b>	<b>\$808</b>	<b>4.6%</b>

Data source: WSDOT Multimodal Planning Division.

Note: Delay numbers might not match previous year's reports, as segmentation changes were made to better compare years.

## VMT

### Record high statewide vehicle miles traveled in 2014 1994 through 2014; Miles in billions



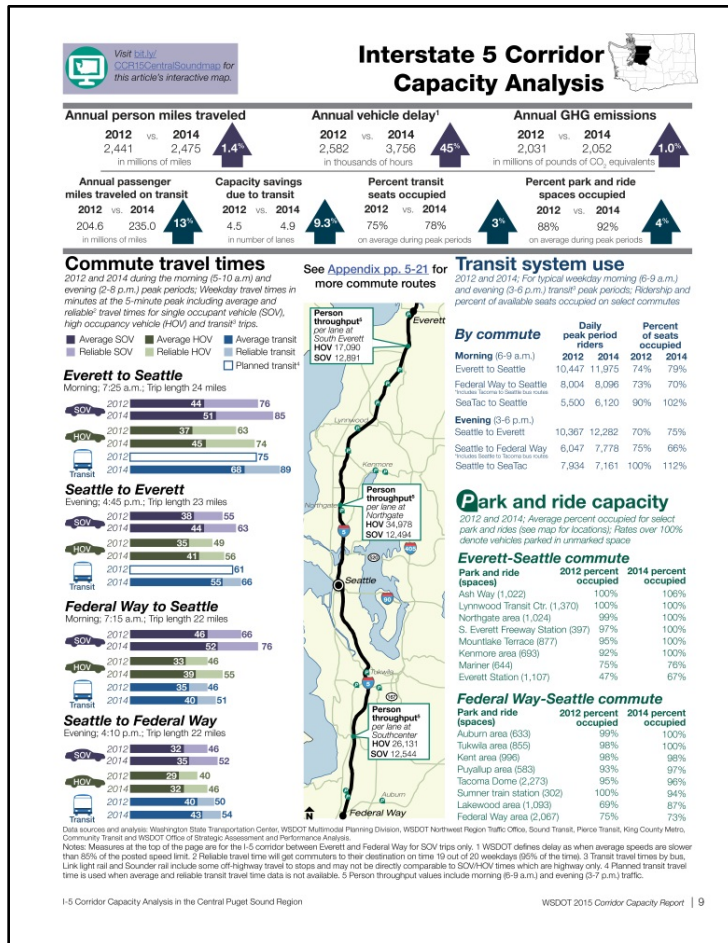
Data sources: WSDOT Multimodal Planning Division and Washington State Office of Financial Management.



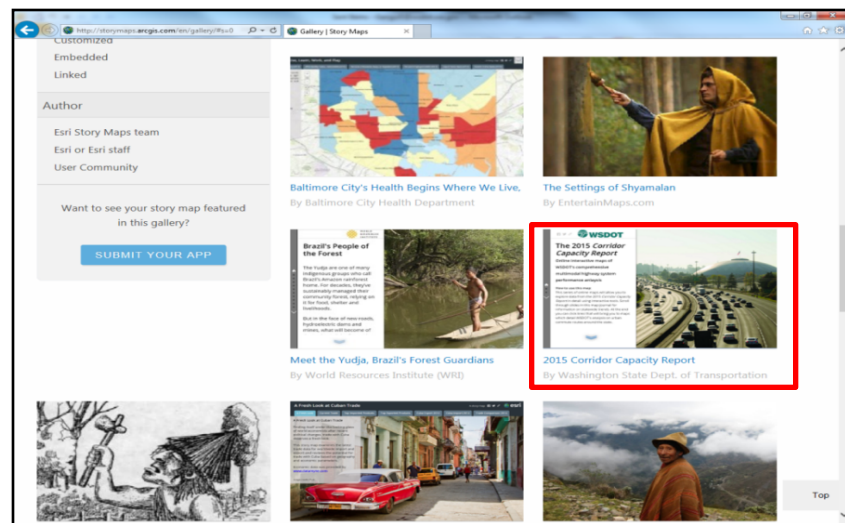
# INTERACTIVE ONLINE MAPS: WHAT ARE THE BEST WAYS TO COMMUNICATE?

## Corridor maps

## Story maps



[bit.ly/CCR15statewidemap](http://bit.ly/CCR15statewidemap)  
featured in ESRI gallery



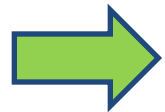
# HOW DO YOU GET TO THE STORY MAPS?

Quick links: [bit.ly/CCR15statewidemap](http://bit.ly/CCR15statewidemap)  
[bit.ly/CCR15CentralSoundmap](http://bit.ly/CCR15CentralSoundmap)

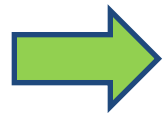
OR:

Find links throughout the report for the corresponding story maps:  
<http://wsdot.wa.gov/publications/fulltext/graynotebook/CCR15.pdf>

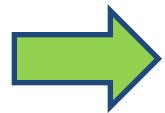
OR:



[www.wsdot.wa.gov/accountability](http://www.wsdot.wa.gov/accountability)



“Congestion Reporting and the Corridor Capacity Report”



“WSDOT’s Annual Corridor Capacity Report”



Click map image

# MULTIMODAL MEASURE EXPANSION

## Amtrak Cascades corridor

- Parallel to I-5 highway corridor
- Measures include:
  - Passenger miles traveled
  - On-time performance
  - Capacity/utilization
  - Ridership

## New transit measure

- Lane capacity savings due to transit



### Annual passenger miles traveled on transit

2012 vs. 2014

204.6      235.0

in millions of miles



### Capacity savings due to transit

2012 vs. 2014

4.5      4.9

in number of lanes



### Percent transit seats occupied

2012 vs. 2014

75%      78%

on average during peak periods



### Percent park and ride spaces occupied

2012 vs. 2014

88%      92%

on average during peak periods





# ARTERIAL CORRIDOR PERFORMANCE ANALYSIS

How do traffic signals affect congestion?

## Tri-Cities US 395 Corridor Capacity Analysis



Annual person miles traveled	Annual vehicle delay <sup>1,2</sup>	Annual GHG emissions
2012 vs. 2014 N/A vs. 79.7 in millions of miles	2012 vs. 2014 N/A vs. 1.1 in thousands of hours	2012 vs. 2014 N/A vs. N/A in millions of pounds of CO <sub>2</sub> equivalents

### Commute travel times

2012 and 2014 during the morning (6-8 a.m.) and evening (3-6 p.m.) peak periods; Weekday travel times in minutes during peak periods including average and reliable<sup>3</sup> travel times for single occupant vehicle (SOV) trips.

- Average SOV
- Reliable SOV

### Kennewick to Pasco

Morning; 6-8 a.m.; Trip length 6 miles

SOV 2014 12 17

### Pasco to Kennewick

Evening; 3-6 p.m.; Trip length 6 miles

SOV 2014 14 23

### Park and ride capacity

2014; Average percent occupied for select park and rides (see map for locations)

#### Kennewick-Pasco commute

Park and ride (spaces)	2014 percent occupied
Union Street & 27th Avenue (50)	80%
Huntington Transit (96)	61%
U.S. 395 & Yelm Street (39)	50%
Pasco - North 22nd Avenue Transit (50)	42%



- Pilot capacity analysis for signalized corridor
- Key commute and freight route with eight traffic signals
- Limited data but should expand in coming years

# WHAT OTHER ANALYSIS DOES WSDOT REPORT?

- Washington ferry corridors
  - Ridership
  - Trip reliability
  - Fuel usage
  - Capacity/utilization
  - On time performance
- Before and After project analysis
  - Wenatchee capacity expansion project analysis
- Incident Response analysis
- Future federal and state reporting requirements
  - Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21)
  - Results Washington



# CORRIDOR CAPACITY REPORT & MAP-21

- Each piece of the CCR requires extensive collaboration with other WSDOT divisions, MPOs, transit agencies, stakeholders, universities, and other partners
- These existing communication links will be crucial as the federal transportation performance reporting rules come online for Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21)

## MAP-21 BACKGROUND

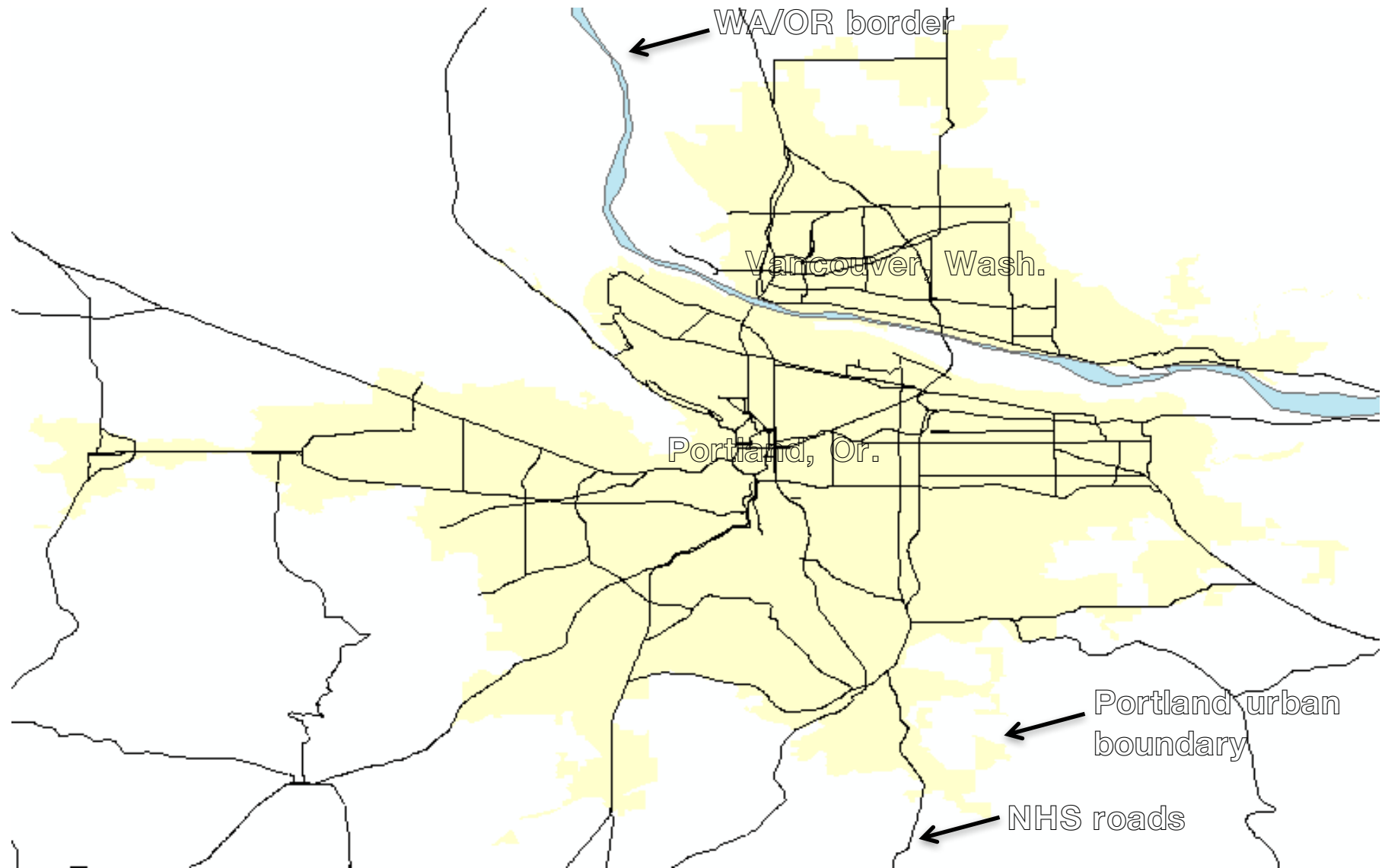
- MAP-21 is federal legislation that is intended to increase the transparency and accountability of states in their investment of taxpayer dollars in transportation infrastructure and services.



# WSDOT & MPO DATA MANAGEMENT PLANNING


- WSDOT will need an even more robust communication and data management/sharing plan with MPOs moving forward with MAP-21
  - One initiative coming together is DRIVE Net, an online transportation platform aimed at data sharing, integration, visualization and analysis
  - RITIS interactive tool (MAP-21 module) developed by CATT Lab
- DOTs and MPOs under current proposed rule will need to agree on targets for performance measures such as the percent of interstate mileage within an urbanized area where peak hour travel times meet expectations, as well as the “desired peak hour travel times” for each reporting segment within an urban area (see next slide)
  - For areas like Portland, this will involve multiple state DOTs and multiple MPOs, requiring complex coordination and communication

# PORTLAND-VANCOUVER URBAN AREA



# NEXT STEPS

- Expand partnerships with MPOs and operating agencies
  - Follow WSDOT collaboration guidelines for MAP-21
  - Expand analysis to National Highway System as defined in MAP-21
  - Incorporate the data and analysis from the report as a tool for Practical Solutions training
  - Refine our interactive online tools for wider use of system performance data and measures internally and for external partners
  - Expand analysis to include accessibility measures
- ...many more ideas, but limited resources



**Washington State**  
Department of Transportation

May 2015 – Edition 1

## MAP-21 Collaboration

Washington State

### Target setting collaborative framework for the Moving Ahead for Progress in the 21st Century Act (MAP-21)

**Target Setting Framework Group responsible for process, data and target decisions**

The Target Setting Framework Group includes WSDOT representatives and Metropolitan Planning Organization (MPO) directors. This group meets quarterly following the WSDOT/MPO/Regional Transportation Planning Organization (RTPO) Coordinating Committee meeting. The Target Setting Framework Group will address issues organized into three types of decision points: process, data and target setting.

For **process decisions**, the group will decide how early and often WSDOT and MPOs will engage each other, and the types of engagement are best for each.

The group has decided to resolve differences by:

- acknowledging the difference in viewpoints;
- discussing the impact of having the difference;
- participating in open discussions with the full group;
- clarifying positions from all sides;
- listing facts, assumptions and beliefs for each position;
- aiming for consensus;
- inviting minority reports, and
- voting on targets and other key decisions

For **data decisions**, the group will address the types of data to be used; the roles and responsibilities for data collection and analysis, and the process by which MPOs will report their established targets, performance progress, and achievements.

The group will also make advisory **target setting decisions**. Their final recommendations will be forwarded to the responsible agencies—individual MPOs as well as WSDOT's Executive Leadership Team and Secretary of Transportation Lynn Peterson. Responsible agencies may adopt or modify the proposed targets. Prior to adoption of the final targets, the Secretary may consult with the Governor's office to ensure alignment with the Governor's strategic directions.

**Purpose of collaboration**

In July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) became law. MAP-21 requires both states and Metropolitan Planning Organizations (MPOs) to set performance targets and requires collaboration among these responsible agencies. While WSDOT and Washington state MPOs each have individual responsibilities to take action to set targets, the agencies have been in the process of developing roles and responsibilities since mid-2014 to establish a framework for collaboration in the target setting process.

This folio describes the organizational structure to facilitate the collaborative process that will include the Target Setting Framework Group, Target Setting Working Group and Target Setting Technical Teams.

**Target Setting Working Group discusses policy and process issues, prepares recommendations**


The Target Setting Working Group is a small group of WSDOT staff and MPO representatives. The group meets monthly (typically via conference call). In addition to discussing policy and process issues in-depth and preparing recommendations for the Target Setting Framework Group, the Working Group collaborates on clarification and fact-finding activities to support the operation of the Target Setting Framework Group.

**Target Setting Technical Teams lend expertise to methodology and data requirements**

The Target Setting Technical Teams dig deep into Notices of Proposed Rule Making (NPRMs) methodology and data requirements in order to ensure all pertinent MAP-21 facts are understood by target setting participants, making a smoother process for transitioning into MAP-21 performance requirements.

Separate Target Setting Technical Teams will be formed around each of the MAP-21 performance target areas. Outcomes from Target Setting

*Continued on p. 2*





# RESOURCES

- WSDOT's Congestion Website: <http://www.wsdot.wa.gov/Accountability/Congestion/>
- WSDOT's Accountability Website: <http://www.wsdot.wa.gov/accountability/>
- Real Time Travel Times Website: <http://www.wsdot.wa.gov/traffic/seattle/traveltimes/>
- Plan Your Commute- 95% Reliable Travel Times Website: <http://www.wsdot.com/traffic/Seattle/traveltimes/95reliable.aspx/>
- WSDOT's quarterly performance report: the **Gray Notebook**: <http://www.wsdot.wa.gov/Accountability/GrayNotebook/navigateGNB.htm>
- Performance Measurement at WSDOT, four page folio [http://www.wsdot.wa.gov/NR/rdonlyres/91089378-E709-49EF-AE42-AE80BC44A91C/0/TRB\\_Performance\\_Folio.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/91089378-E709-49EF-AE42-AE80BC44A91C/0/TRB_Performance_Folio.pdf)
- WSDOT's Strategic Plan: <http://www.wsdot.wa.gov/Secretary/ResultsWSDOT.htm>
- **Performance Journalism**: [http://www.wsdot.wa.gov/NR/rdonlyres/F0DE7328-BA3D-45A0-95DB-641A4CE32D7B/0/2008\\_TRB\\_Performance\\_Journalism.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/F0DE7328-BA3D-45A0-95DB-641A4CE32D7B/0/2008_TRB_Performance_Journalism.pdf)
- **Making the Case for Funding: The WSDOT Experience** (2008, Transportation Research Record) [http://www.wsdot.wa.gov/NR/rdonlyres/E5D34B36-6662-4464-B4BA-1E858BBD710D/0/2007\\_TRB\\_Making\\_Case\\_Funding.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/E5D34B36-6662-4464-B4BA-1E858BBD710D/0/2007_TRB_Making_Case_Funding.pdf)
- **Maximizing Highway System Capacity: Measuring and Communicating System Performance in an Evolving Field**-(2008, Transportation Research Forum) [http://www.wsdot.wa.gov/NR/rdonlyres/5FF329ED-A840-4F8A-A798-468948BEE80B/0/Maximizing\\_Highway\\_Capacity\\_PM\\_finalvsn.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/5FF329ED-A840-4F8A-A798-468948BEE80B/0/Maximizing_Highway_Capacity_PM_finalvsn.pdf)

# QUESTIONS?

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