

Acoustics Expert Review Panel Recommendations Update



Photo taken by Dr. Ulf Sandberg



Overview

- List of Expert Review Panel (ERP) participants
- Objectives
- Topics discussed
- Zone-specific strategies
- Next steps

List Of ERP Participants

Name	Affiliation
Dr. Paul Donovan	Illingworth & Rodkin, CA
Dr. Judy Rochat	US DOT / Volpe Center, CA
Rob Greene	Parsons Brinckerhoff, CA
John Stout	HDR Decision Economics, CA
Dr. Robert Rasmussen	The Transtec Group, TX
Gary Fromm	Jacobs, AZ
Dr. Steve Muench	University of Washington
Dr. Ulf Sandberg	Swedish National Road and Transport Institute
Mike Oliver	BC Ministry of Transportation and Highways
Leonard Sielecki	BC Ministry of Transportation and Highways
Clair Wakefield	Wakefield Acoustics, BC

Objectives

- Develop recommendations of noise reduction strategies for the SR 520 Corridor Program.
- Develop noise reducing strategies for each section of the corridor.



Possible Noise Reduction Strategies:

- Noise Barriers
- Structures
- Arterials
- Quieter pavement
- Modeling
- Perception



WSDOT

Possible Noise Reduction Strategies:

- Studded tires
- Vehicle Sources
- Operation
- Lids and tunnels
- Roadway design



Spokesman Review File Photo

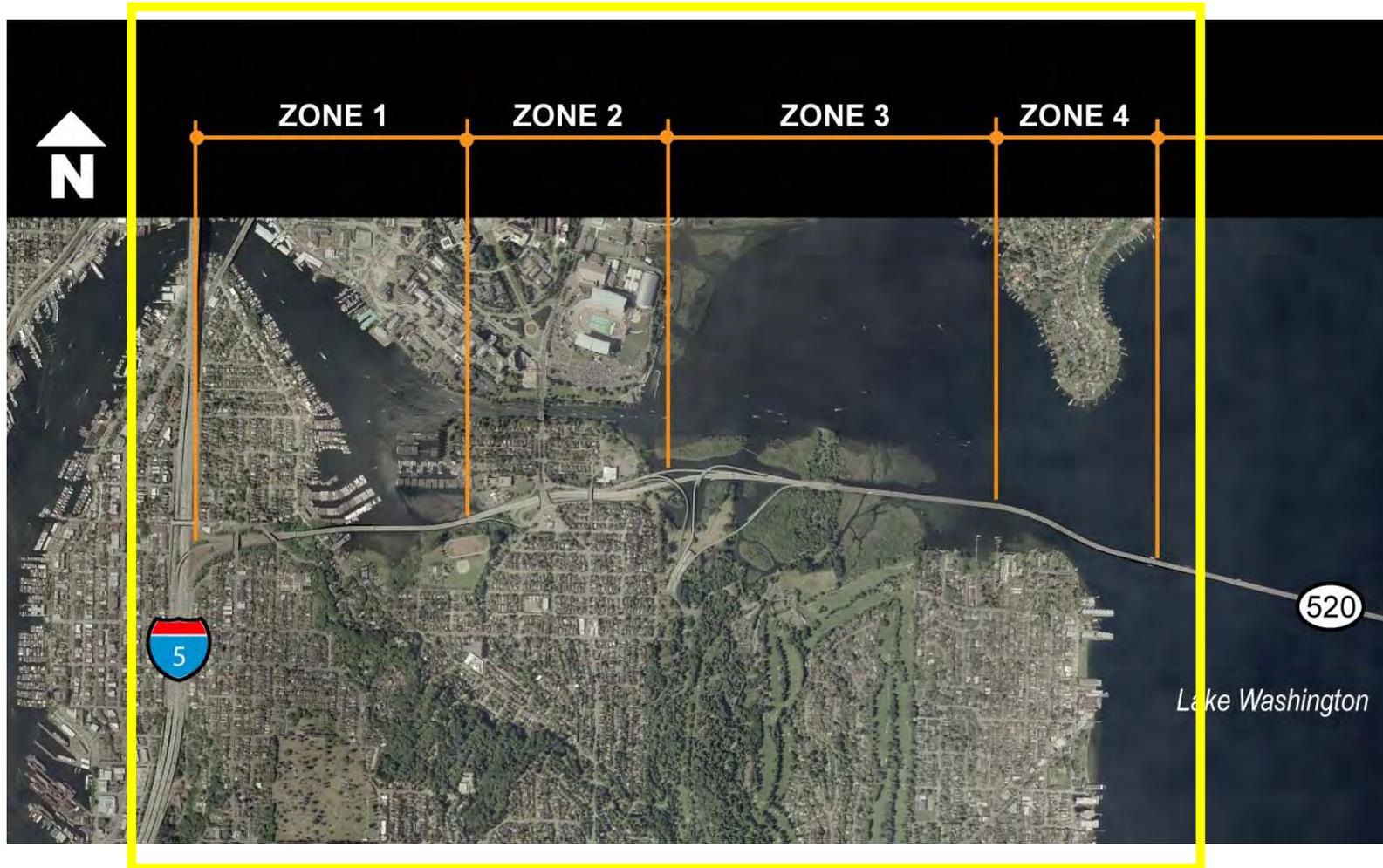


Photo taken by Dr. Ulf Sandberg

Zone Breakdown Of The Corridor



West Side Zone Breakdown



General West Side Strategies

- Quieter expansion joints.
- Quieter pavement.
- Absorptive treatment on retaining walls, safety barriers, and inside lids.
- Gentle grades and higher roadway.
- Noise barriers.
- Parallel noise barriers or shorter opaque barriers to protect views.

Floating Bridge and Eastside Zone Breakdown



Zone 5 – Floating Bridge Section



Zone 6 – East High Rise



Zone 7 - Eastside



Next Steps

- Finalize ERP recommendations.
- Life cycle cost-benefit analysis.
- Update noise modeling.
- Evaluate strategies for early implementation.

Questions?



Photo taken by Dr. Ulf Sandberg

Transportation Demand Management

State of Washington programs and projects

Brian Lagerberg

Deputy Director

Public Transportation Division

Paula Hammond

Secretary of Transportation

Dave Dye

Deputy Secretary

Steve Reinmuth

Chief of Staff

Seattle

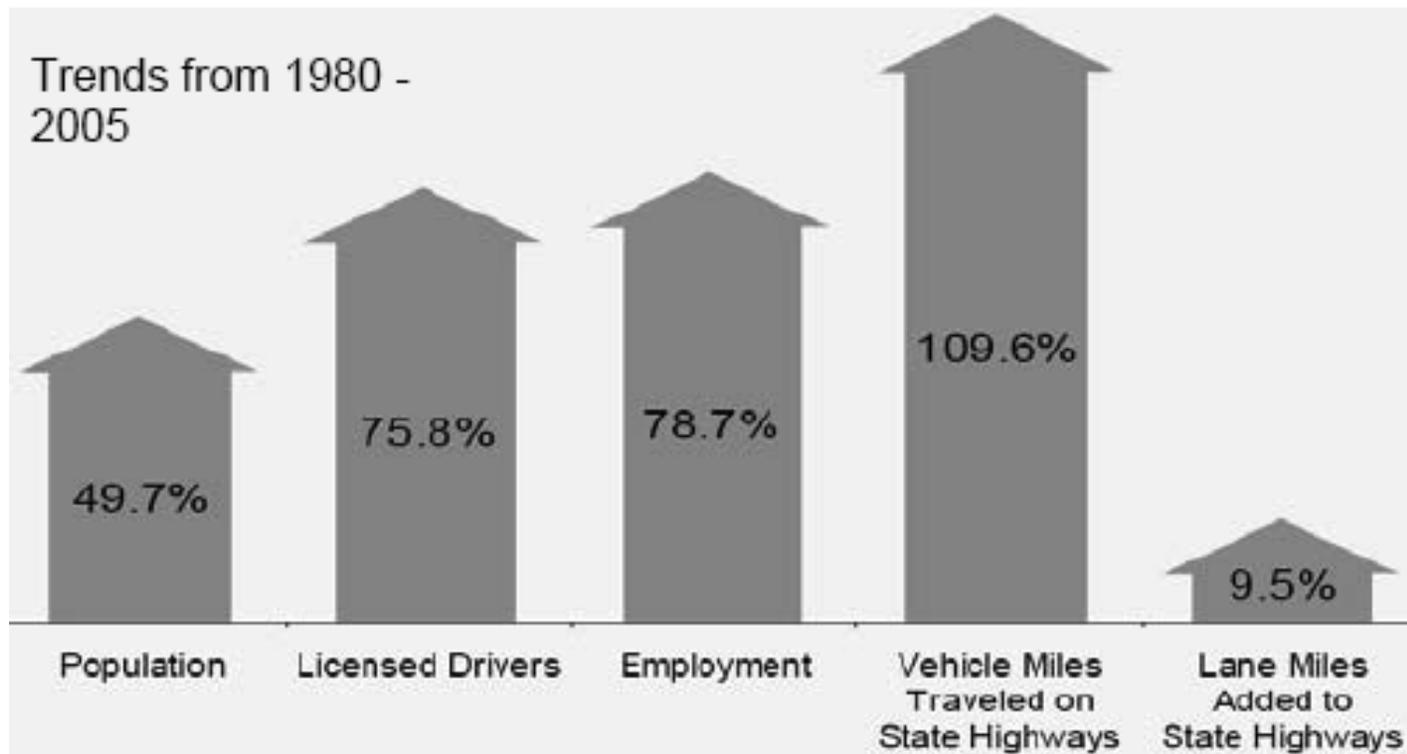
October 21, 2008



Washington State
Department of Transportation

What's driving demand management?

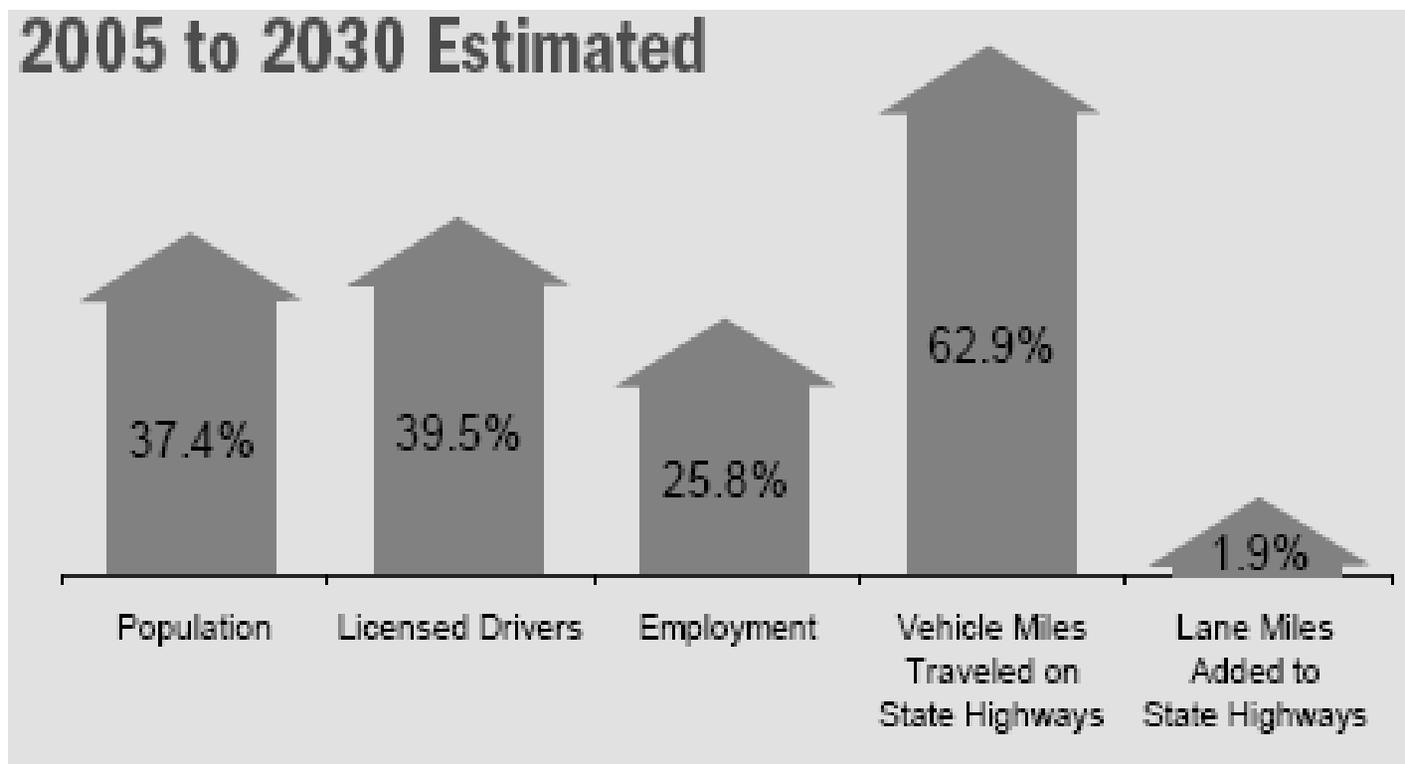
Congestion and growth



Washington State
Department of Transportation

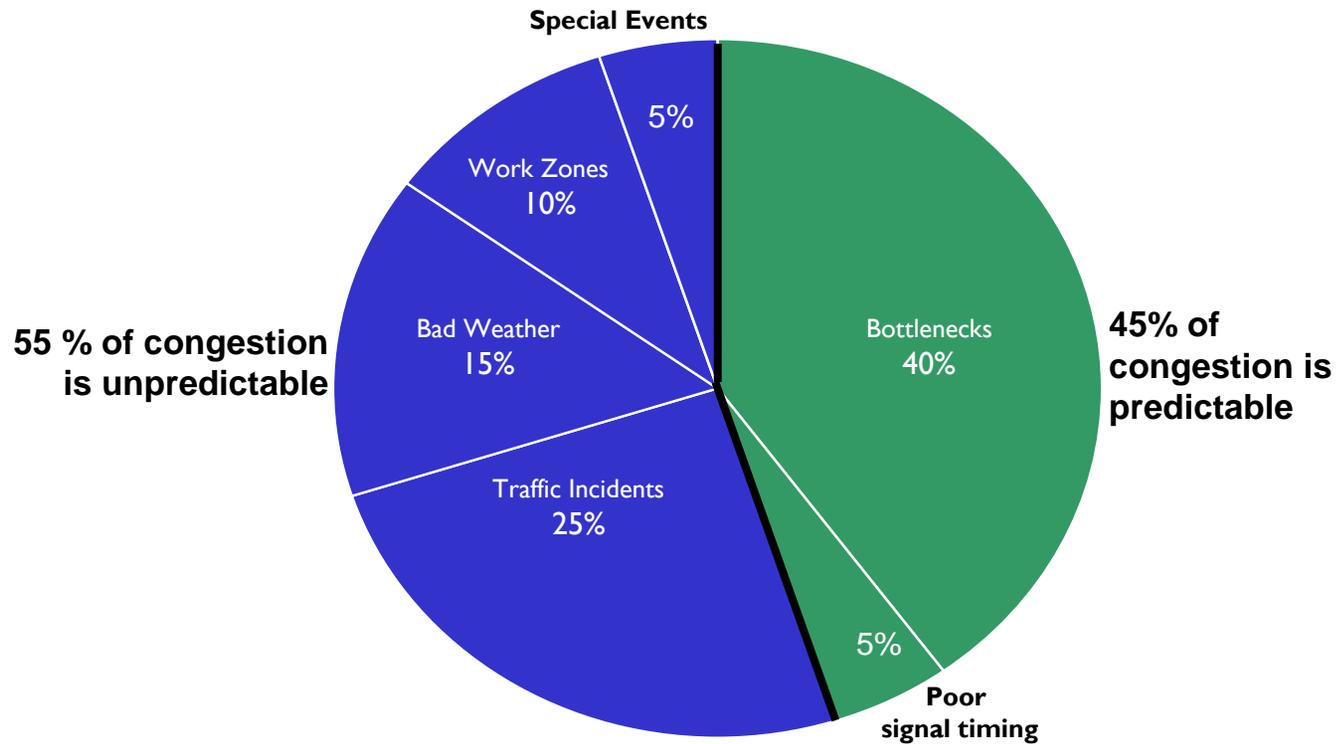
What's driving demand management?

Congestion and growth



What's driving demand management?

Causes of congestion



Source: FHWA, 2004. Data reflects national estimate

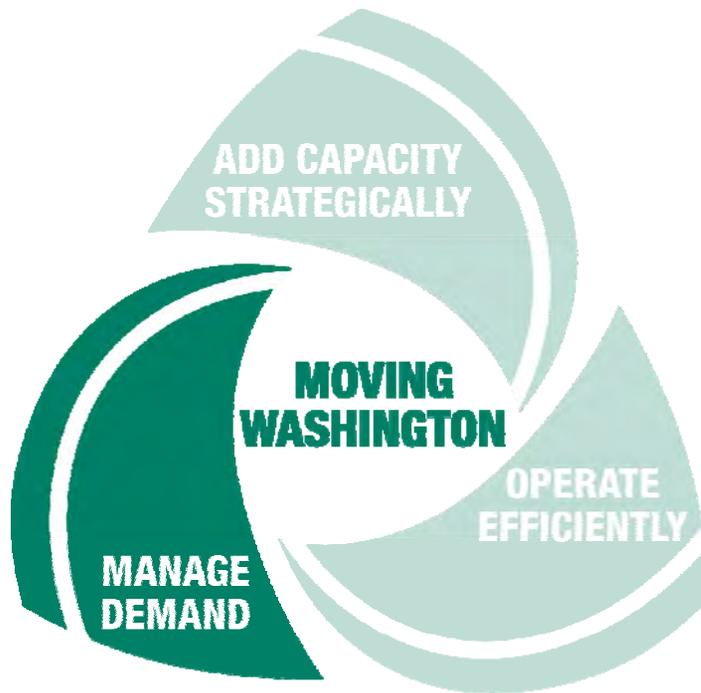
What's driving demand management?

Increasing appeal of transit, carpools, vanpools, etc.

- congestion delays
- parking prices
- gas prices
- household budget squeeze
- tolls
- more transit service
- transit & HOV reliability
- improved infrastructure
- climate change
- priority parking
- subsidized bus passes
- financial incentives
- guaranteed ride home
- flexible work schedules
- teleworking
- air quality
- employer needs and support
- demand management projects can be flexible, fast and cost-effective

How are we supporting demand management?

Moving Washington



Managing Demand

By providing people choices WSDOT and local governments can reduce demand on the transportation system.

- WSDOT's demand management strategies are focused on providing people choices – mode, time, route, cost. One size does not fit all. Demand management is successful when it is designed to meet the needs of a variety of people.
- We provide funding, technical support and coordination.
- We work in partnership with local governments, employers, transit agencies and others.

How are we supporting demand management?

Urban Partnership

- the 4th T = telecommuting/transportation demand management
- build ridership for transit investments
- reduce trips and vehicle miles traveled using existing programs
- shift single occupant vehicle trips to other modes
- promote HOV 3 discount program
- support SR 520 variable tolling
- measurement and evaluation



How are we supporting demand management?

Commute Trip Reduction

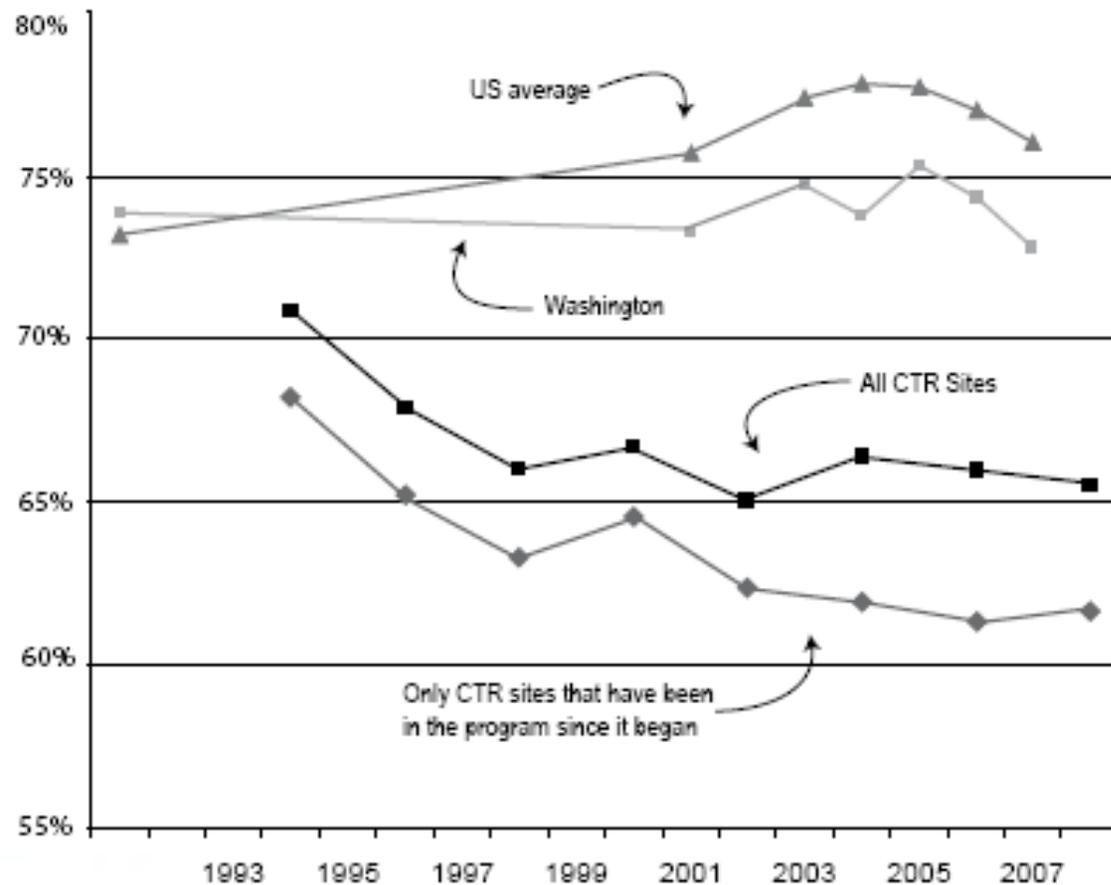
- Targets biggest employers. Approximately 570,000 employees statewide commute to about 1,200 CTR worksites daily.
- If program participants returned to driving alone to work at the same time they travel today, the Puget Sound region would experience an increase in delay of approximately 18 percent each morning.
- CTR measures changes in how people get to work and provides useful data for transportation analysis and decision-making.
- Employers are key to CTR success:
 - > employer CTR investment: \$49 million (2005)
 - > state CTR investment: \$5.5 million (2007-2009)



How are we supporting demand management? Commuter Trip Reduction

Drive Alone Comparison

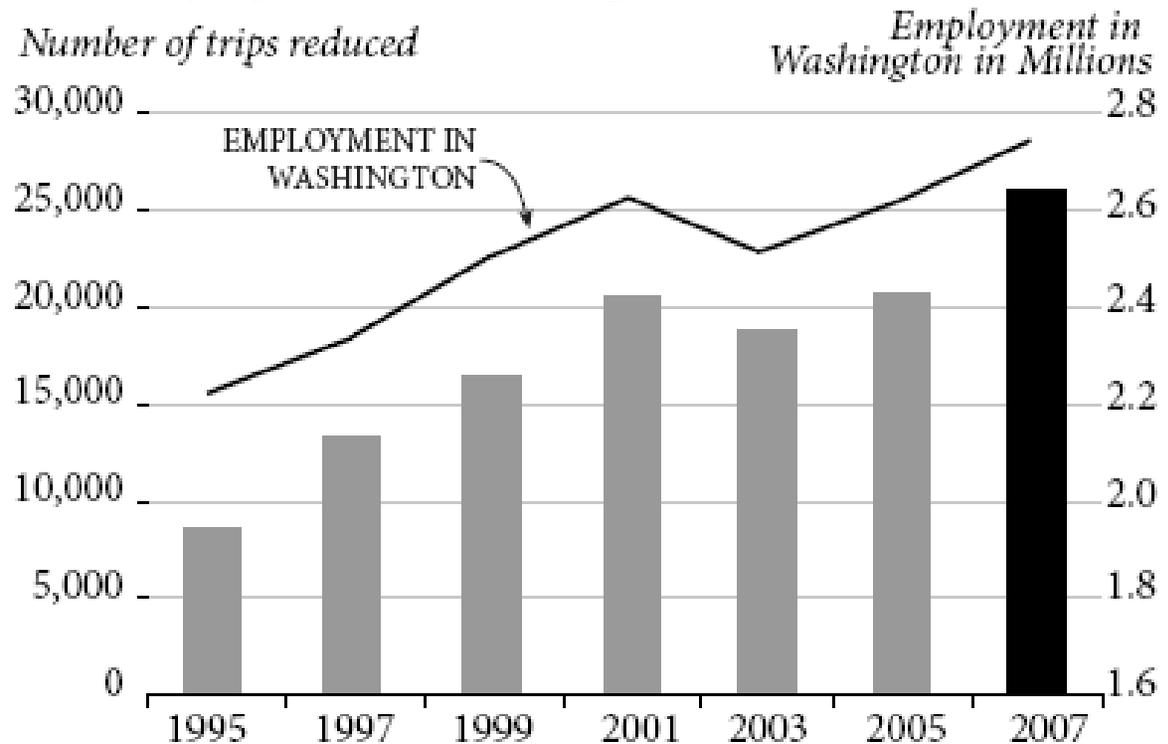
CTR Worksites, Washington state, and the United States, 1990 to 2007
percentage of commute trips taken by driving alone



How are we supporting demand management?

Commute Trip Reduction

**Number of Vehicle Trips Reduced at CTR sites
And Employment in Washington**



Data Source: CTR Survey Database. One way trips reduced per average day.
Represents all sites with measurement surveys in the cycle indicated.
Employment Data Source: U.S. Census Bureau

How are we supporting demand management?

2006 Commute Trip Reduction Efficiency Act

- Focused the program on Urban Growth Areas and congested corridors
- Requires local jurisdictions to set goals for reducing drive-alone trips and vehicle miles traveled per employee and implement plans to meet the goals
- Created a role for PSRC and other RTPOs to provide regional coordination and support
- Targets:
 - > 10 percent reduction in drive-alone commute trips by 2011
 - > 13 percent reduction in vehicle miles traveled per employee by 2011



How are we supporting demand management?

Growth and Transportation Efficiency Centers

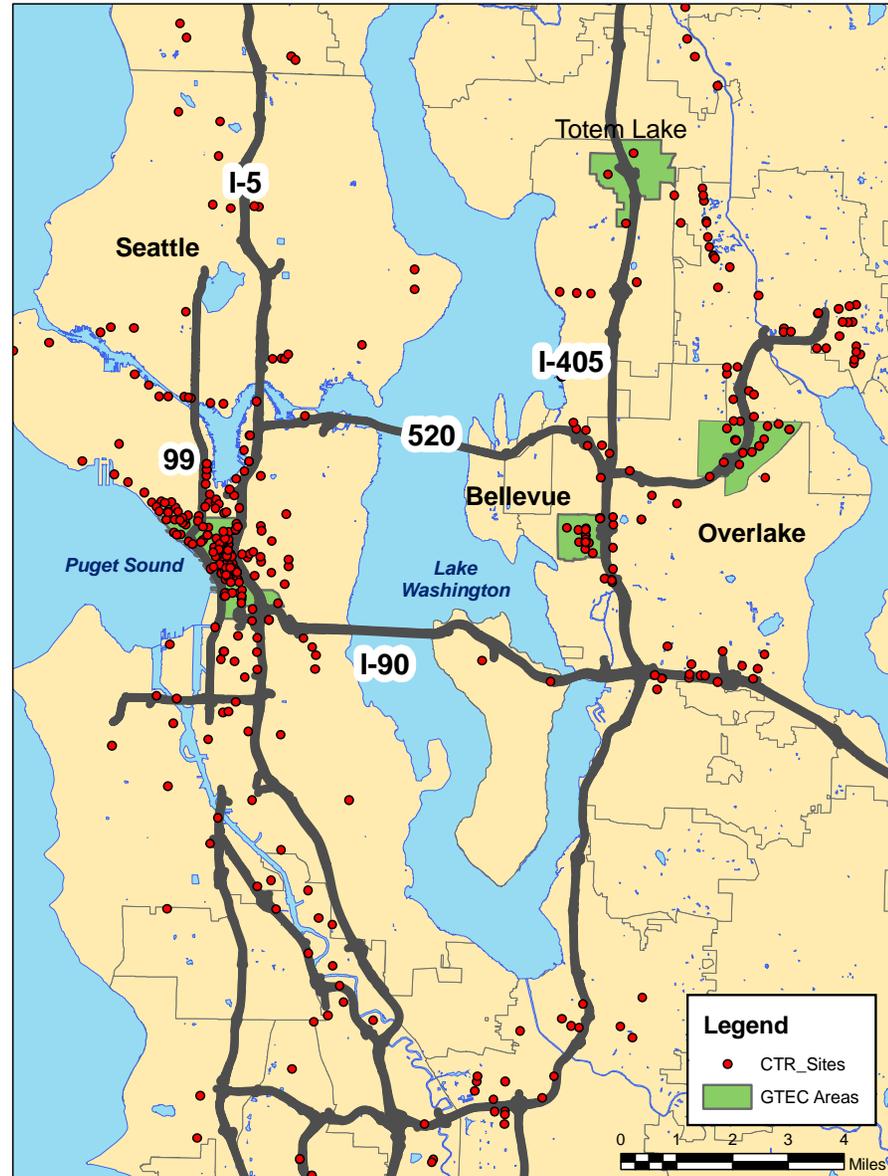
- New pilot program that targets all travel in some of Washington's most urban centers
- Works with approximately 235,000 additional travelers that do not commute to CTR worksites
- Programs are based on strong partnerships: local governments, business communities and transit agencies
- Total of 10 GTECs implementing plans in 2007-2009
- Seven are state-funded (with local match): Bellevue, Redmond, Seattle, Tacoma, Olympia, Spokane, Vancouver
- Three are moving forward without state funding: Kirkland, Tukwila, Puyallup
- Important new tool for corridor management



How are we supporting demand management?

SR 520, CTR and GTECs

- 579 participating SR 520 employers; 2,000 employers in King County
- 337,773 participating employees
- Four GTECs:
 - > Seattle Central Business District
 - > Overlake
 - > Bellevue Central Business District
 - > Kirkland/Totem Lake



How are we supporting demand management?

Trip Reduction Performance Program

- Created by the Legislature in 2003 as a market-driven approach to trip reduction.
- WSDOT takes bids from organizations to implement cost-effective strategies to reduce drive-alone commute trips. Project awards are paid based on measured performance.
- City of Redmond's Employer Commuter Club was very successful in the 2005-07 program, with 2,815 daily drive-alone commute trips reduced.
- Program model can be scaled up or down to focus on specific project, corridor, or regional needs

How are we supporting demand management?

Vanpool Investment Program

- Ten-year, \$30 million capital program
- Goal: double vanpooling to about 3,200 operating vans by 2013
As of July 2008, about 2,650 operating vehicles statewide, 67 percent increase from 2003. Statewide growth averaged about nine percent annually since 2003.
- Vanpools and *VanShares* carry approximately 22,580 riders daily, a 77 percent increase from 2003
- Central Puget Sound contributes 2,127 vehicles and approximately 17,800 daily riders
- Is most popular for longer, cross-jurisdictional trips

How are we supporting demand management?

Regional Mobility Grants

Competitively selected projects that help cities, counties and transit agencies deliver transit mobility projects focused on:

- inter-jurisdictional service and modal connections – projects that improve connectivity between counties and regional population centers and modes
- improve efficiency on the most congested corridors - improved transit service, park and ride lots and other projects

performance measured largely by reduction in vehicle trips and vehicle miles traveled

\$20 million in 2005-2007, 14 projects

\$40 million in 2007-2009, 16 projects

How are we supporting demand management?

Construction traffic management

What we do now:

- Coordinating construction schedules
- Narrowing rather than closing lanes
- Choosing less disruptive construction methods
- Scheduling construction closures for nights or weekends
- Bolstering incident response and traffic enforcement
- Choosing to complete construction more quickly with faster, more intense construction closures
- Providing contractor incentives and penalties
- Providing alternate routes and designated truck and transit lanes
- Increasing system capacity temporarily (maintenance of traffic and TDM)
- Reducing system demand temporarily (TDM)
- Traffic management
- Providing public information

How are we supporting demand management?

Construction traffic management

On the horizon:

- Additional and earlier traffic analysis of construction schedules and impacts
- More intensive intra- and inter-agency coordination and systems to facilitate better construction schedule information sharing
- Efforts to address construction traffic impacts on a systemic rather than individual project basis (cumulative impacts)
- More intensive efforts to enlist local partners to keep people and goods moving (TDM) during construction
- Improved traveler information
- Enhanced traffic management and active traffic management



How are we supporting demand management?

Park and ride program development

- The Legislature has directed WSDOT to develop a park and ride program
- WSDOT is updating the statewide park and ride lot inventory and is working with churches to provide temporary park and pool lots where existing park and rides are full
- Next steps include developing a statewide condition and needs assessment, developing guiding policies to clarify roles, and proposing a long-range plan

WSDOT's approach to Climate Change



WSDOT is a state leader in developing measurable, balanced, and strategic emission reduction strategies.

- Secretary Hammond is member of Governor's Climate Action Team (CAT)
- WSDOT is co-chairing the Transportation Implementation Work Group and working with 30 representatives statewide to develop strategies and measurement tools for reducing Vehicle Miles Traveled (VMT).
- 2008 House Bill 2815 legislation state to reduce per person VMT
 - 18% by 2020
 - 30% by 2035
 - 50% by 2050
- VMT is one of many approaches to reduce greenhouse gas emissions. WSDOT is reviewing what we are doing now, what can we do, what we should do both as an agency and for the statewide transportation system.