

# Travel Time Trends Semi-Annual Report

Excerpt from the June 30, 2009  
Gray Notebook

## Travel Times Continue to Improve on Major Central Puget Sound Freeways

### Travel Trends 2008-2009

#### January-June 2008:

- ◆ Due in part to high fuel prices, 13 of 18 trips had lower travel times by at least one minute, and no trips showed increasing trip times compared to the first half of 2007.
- ◆ Peak period volumes grew despite high fuel costs; discretionary travel and daily volumes declined.

#### July-December 2008:

- ◆ Economic conditions deteriorate in the central Puget Sound.
- ◆ Travel times improved between 1 and 7 minutes on 15 of 18 key commutes, with 3 unchanged compared to the second half of 2007.
- ◆ Peak period volumes declined; discretionary travel continued to drop.

#### January-June 2009:

- ◆ Compared to the same time period in 2008, travel times continued to improve on 13 of 18 surveyed commutes.
- ◆ Tukwila to Bellevue morning commute improved by 12 minutes in part due to the completion of new WSDOT auxiliary lane on I-405.
- ◆ Changes to peak period and daily volumes mixed—some up and some down.

This analysis is performed twice a year to provide up-to-date information on the nature of travel trends in the central Puget Sound during a time of changing regional economic conditions as well as ongoing congestion relief strategies and projects under WSDOT's *Moving Washington* program to fight congestion. Specifically, this analysis focuses on a sample of 18 key commute routes across the central Puget Sound. These results supplement the annual Congestion Report, which takes a more comprehensive look at congestion trends in the central Puget Sound and around the state; the next annual Congestion Report will be published as part of the September 30, 2009 *Gray Notebook*.

This travel trends analysis compares traffic conditions in the first six months of 2009 to the same time period in 2008. These two time periods represent distinctly different economic conditions and trends in the Seattle area. The first six months of 2008 saw continuing regional economic growth coupled with excessively high gas prices, but with signs of economic changes at both the regional, state, and national levels. The second half of 2008 saw major changes in the regional economic picture as economic conditions worsened; these conditions continued into the first half of 2009.

### Average travel times down consistently between January and June 2009

During the first half of 2009, travel times for the major Puget Sound commute routes examined in this study improved for most trips compared to the same time period in 2008, but by a smaller amount than in the previous year's comparison (2008 vs. 2007). The year-over-year results showed that seven of the 18 trips had a travel time reduction of one minute or more in the first half of 2009, and six additional trips had small improvements of less than a minute. Travel times for four trips increased by less than one minute, and one trip (*Seattle-Bellevue via I-90 PM*) increased by more than one minute. This increase may be due in part to the effects of ongoing I-90 construction activities on Mercer Island and the Homer Hadley Floating bridge (please see pp. 18-19 for more information on this project).

The most recent data shows a continuation of the general trend towards reduced travel times. That said, the 2008 to 2009 year-on-year changes are less pronounced than those of 2007 to the first six months of 2008, when travel times for 13 of 18 trips were shorter by at least one minute and none increased in duration.

Over a two-year period (first half of 2009 vs. first half of 2007), every trip analyzed showed an overall drop in travel times, with 12 of the 18 trips quicker by two or more minutes. Of the trips analyzed, the trips via I-90 and SR 520 across Lake Washington had the smallest changes in travel times over the two-year period. It is unclear why these routes are less affected by the economic and operational factors impacting the other corridors.

### WSDOT *Moving Washington* project helps improve travel times on I-405 by 12 minutes

During the first six months of 2009, the trips from *Federal Way to Seattle via I-5 (AM)*, and from *Tukwila to Bellevue via I-405 (AM)* showed the most improvement in travel times, with the Federal Way trip seven minutes shorter than in the first half of 2008—a continuation of the pattern seen in the latter half of 2008 vs. 2007. The Tukwila to Bellevue trip showed sustained year-over-year average travel time savings of 12 minutes during the AM peak period. Data suggest that a contributing factor to this improvement was the completion of an auxiliary lane near the I-90 interchange that opened in January 2009. Preliminary results from shortly after the opening of the new lane showed immediate travel time changes; those trip time savings have been largely sustained for the nearly six months following that lane opening.

## Travel times improved on 13 of 18 commute routes during January-June 2009

Comparing changes in average travel times and volumes during peak periods: January-June 2007-2008-2009<sup>1</sup>

		Average travel time in minutes				Peak volume change		Daily volume change		
		2007	2008	2009	2009 vs. 2007	2009 vs. 2008	2008 vs. 2007	2009 vs. 2008	2008 vs. 2007	2009 vs. 2008
<b>Peak direction – Morning commutes</b>										
I-5	Federal Way – Seattle	42.6	38.7	<b>31.4</b>	-11.2	-7.3	+2.1%	+4.6%	+1.2%	+1.0%
I-5	Everett – Seattle	40.5	35.5	<b>35.2</b>	-5.3	-0.3	+5.3%	-0.1%	+0.3%	+3.4%
I-405	Everett – Bellevue	40.8	36.4	<b>35.3</b>	-5.5	-1.0	+1.7%	-2.7%	-0.8%	-2.2%
I-405	Tukwila – Bellevue	34.8	34.3	<b>22.0</b>	-12.8	-12.3	-2.4%	+28.9%	-0.6%	+6.3%
SR 167	Auburn – Renton <sup>2</sup>	16.5	15.2	<b>13.8</b>	-2.7	-1.4	+2.0%	+8.2%	+2.1%	+3.8%
I-90	Bellevue – Seattle	14.7	11.3	<b>12.1</b>	-2.6	+0.8	-2.4%	+2.0%	-1.8%	+1.2%
SR 520	Bellevue – Seattle	15.0	13.6	<b>13.5</b>	-1.5	-0.1	+0.2%	-1.9%	-0.3%	-1.4%
I-90	Seattle – Bellevue	14.6	13.9	<b>14.0</b>	-0.6	+0.1	+0.4%	-7.5%	-1.3%	-2.0%
SR 520	Seattle – Bellevue	16.9	16.1	<b>15.2</b>	-1.8	-0.9	+0.5%	-2.4%	-0.1%	-1.7%
<b>Peak direction – Evening commutes</b>										
I-5	Seattle- Federal Way	32.0	29.7	<b>28.9</b>	-3.2	-0.9	+3.9%	+0.9%	+1.9%	+0.2%
I-5	Seattle - Everett	37.1	33.8	<b>34.4</b>	-2.7	+0.7	-0.1%	-2.1%	-1.2%	-1.2%
I-405	Bellevue - Everett	37.8	34.9	<b>33.5</b>	-4.3	-1.4	+4.3%	+4.2%	-0.1%	+0.8%
I-405	Bellevue - Tukwila	30.0	29.0	<b>27.1</b>	-2.9	-1.9	+2.1%	+0.7%	+1.1%	-0.4%
SR 167	Renton - Auburn <sup>2</sup>	16.0	14.1	<b>12.6</b>	-3.4	-1.5	+2.3%	+1.5%	0%	-2.3%
I-90	Bellevue - Seattle	22.0	16.9	<b>17.3</b>	-4.8	+0.4	+1.3%	-1.6%	-1.8%	+1.2%
SR 520	Bellevue - Seattle	23.0	21.7	<b>21.6</b>	-1.4	-0.1	+1.7%	-0.6%	-0.3%	-1.4%
I-90	Seattle - Bellevue	14.3	12.7	<b>14.2</b>	-0.2	+1.4	+0.2%	+1.4%	-1.3%	-2.0%
SR 520	Seattle - Bellevue	16.4	15.9	<b>15.6</b>	-0.8	-0.4	+1.0%	-0.6%	-0.1%	-1.7%

Source: Washington State Transportation Center (TRAC).

<sup>1</sup> Travel time and volume data for weekdays only; peak periods are 6-9 AM and 3-7 PM.

<sup>2</sup> General purpose lane volumes only, HOT lane volumes not included.

### Peak period volumes mixed during first half of 2009

While volume trends can vary based on the specific location chosen, the overall pattern of year-over-year changes in peak period vehicle volumes appears to have shifted slightly from the trend observed throughout 2008. The first six months of 2008 saw a general trend toward higher volumes compared with the first six months of 2007, with 12 of 18 locations showing volume growth of between 0.5% to 5.5%. This trend was reversed in the second half of the year, with 12 of 18 sampled locations showing volume reductions ranging from -0.5% to -5.0% compared to the second half of 2007. This corresponds with the time period when significant changes were occurring in the national and regional economy. The first half of 2009 shows that the volume trend observed in the second half of 2008 appears to have moderated somewhat, with half of the 18 locations showing a drop in peak period volume, and the other half showing higher volumes, compared to the first half of 2008.

While results were evenly split between locations with higher volumes and those with lower volumes, there were some notable individual examples. The most significant change in volume was observed at a location on I-405 between Tukwila and Bellevue (northbound AM), which showed a nearly 29% growth in peak period vehicle volumes year over year. These changes were primarily due to improved throughput efficiency related to the completion of the auxiliary lane on I-405 discussed earlier.

Three other locations have shown moderate growth in the first half of 2009; they include a location on the Auburn to Renton northbound AM route on SR 167, which saw over 8.2% growth in volume (excluding HOT lane volumes), and locations on the route from *Federal Way to Seattle via I-5* (AM), and the route from *Bellevue to Everett via I-405/I-5* (PM), with growth of +4.6% and +4.2% respectively. The most notable drop in vehicle volumes (-7.5%) was on I-90 eastbound from Seattle to Bellevue (AM), a continuation of a pattern seen in the second half of

## Driving Forces and Other Travel Trends: January-June 2009

2008. It is possible that some of this volume change could be associated with ongoing I-90 construction activities, which might have caused some travelers to change trip routes or travel modes.

### Daily volumes also mixed during the first half of 2009

The pattern of change of year-over-year daily vehicle volumes during the first six months of 2009 was consistent with that of peak period volumes. In the first six months of 2009, daily volumes rebounded somewhat, with half of the locations showing volume growth ranging from 0.2% to just over 6%. By comparison, an analysis of the first half of 2008 showed a mixed trend toward slightly lower daily vehicle volumes, followed by almost universally lower volumes in the second half of the year.

An analysis of daily volumes during the first six months of 2009 suggests that the trend is shifting toward volume growth at half the locations. As with the peak period, the most significant volume growth occurred at locations on *Tukwila to Bellevue via I-405 (AM)*, and on the *Auburn to Renton AM route on SR 167 (GP + HOT volumes)*. The I-405 volume was influenced by the capacity expansion project near I-90, while the SR 167 spot location has seen a consistent pattern of volume growth during the past year.

### Driving forces: economic conditions continue to affect travel demand in the Seattle area

In mid-2008, the average unemployment rate in the Seattle-Everett-Bellevue area began a sharp rise that continued during the second half of the year, reaching 6.0% by December 2008. This trend continued into the first half of 2009, with the rate now at 9.1% as of June 2009. During the first half of 2008 unemployment was relatively low, hovering around 4% (varying from 3.5% to 4.3%). It is possible that increasing unemployment during the second half of 2008 and the first half of 2009 has contributed to decreased travel demand particularly during peak periods.

Coupled with rising unemployment has been a sharp decrease in consumer confidence. A number of national consumer confidence indicators show a sharp deterioration in consumers' views of the economy. An ongoing weekly national survey suggests that consumer confidence has dropped significantly in the past year. The survey asks respondents three questions regarding the state of the national economy as well as their own personal finances. At the beginning of 2007, survey results were at a near neutral level (roughly half the respondents held negative, half positive, views of the economy). By January 2009, consumer confidence reached an all-time low for the survey (equivalent to a 77% overall negative view toward the economy, which translates into an index score of -54). During the first half of 2009, consumer confidence has

### Unemployment on the rise as consumer confidence declines

January 2007-June 2009

Percent of people unemployed

Consumer Comfort Index<sup>1</sup>



Data Sources: Washington State Employment Security Department and ABC News-Washington Post Consumer Comfort Survey.

<sup>1</sup> Consumer comfort index ranges from +100 (100% of survey respondents with a positive view of the economy) to -100 (100% of survey respondents with a negative view of the economy).

leveled off, varying from a 72% to 75% overall negative view of the economy (index scores of between -45 and -51). A possible effect of the decrease in consumer confidence is reduced spending, which leads to less discretionary travel, and less freight travel to restock inventories or make deliveries.

### Fuel prices lower during the first half of 2009 as compared to the same time period last year

During the first half of 2008, average gas prices saw an acceleration of a multi-year upward trend, rising from \$3.18 per gallon of regular gas in January 2008 to a high of \$4.35 a gallon in mid-2008. The second half of 2008 saw a significant drop to \$1.77 a gallon as of December 2008, a level not seen since early 2004. During the first half of 2009, prices have resumed a general upward pattern (though not as dramatically as the previous year), rising to \$2.82 a gallon as of mid-2009. Considering the drop in fuel prices since mid-2008, it appears reasonable that gas prices are no longer influencing driver behavior as they did in the first six months of 2008.

### Moving Washington: WSDOT's balanced program to fight congestion

Effective transportation is critical to maintaining our economy, environment, and quality of life. Moving Washington is the WSDOT's vision of investments and priorities for the next 10 years. It includes a balanced strategy that integrates new capacity, efficiencies, and commute options to address congestion and improve the performance of our state's transportation system.

