

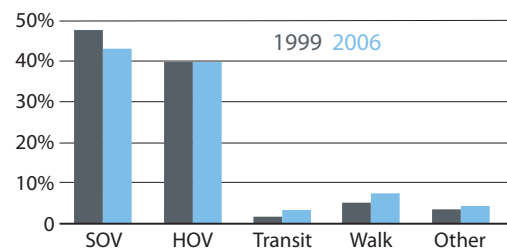
Mode of Travel

Results from PSRC's Regional Household Activity Surveys in 1999 and 2006 show an increase in the number of trips made by transit and walking has corresponded with a decrease in the number of trips made by car, as shown in Figure 1. Trips made by transit increased 71 percent (270,000 to 460,000 daily trips) from 1999 to 2006, while walking increased by 34 percent (610,000 to 820,000 daily trips).

Other forms of transportation provided a constant 4 percent of mode share in both survey years. Overall trip-making increased 7 percent during this time. The shift from auto to transit and walking is due primarily to increased transit service, but there is evidence that increases in gas prices, congestion, and awareness of environmental and health factors also played a role.

Single-occupant vehicles remained the dominant mode of region-wide transportation from 1999 to 2006, accounting for 48 percent and 44 percent of trips made in 1999 and 2006, respectively. This represents a reduction of 2 percent SOV trips (5.3 million to 5.2 million) from 1999 to 2006. A significant number of trips also occurred in vehicles with one or more passengers. Together, SOV and HOV travel accounted for 84 percent of the trips made in 2006. Due to a slight drop in the SOV share, this figure represents a decrease from 1999 levels when 88 percent of all trips were made by single- and high-occupancy vehicles.

Figure 1: Mode Shares for All Trips



Looking at the region as a set of six subareas, as shown in Figure 2, the general pattern of reduced SOV and HOV mode share is also evident. All areas experienced an overall decrease in the share of trips made by SOVs, while HOV trips increased everywhere except south King County. Concurrently, transit mode share increased in each subregion. Kitsap, Pierce, and south King counties doubled their respective 1999 transit shares in 2006. Increases in walk mode share occurred in all sub-regions except Kitsap County.

About the PSRC Household Travel Survey

In 1999 and 2006, the Puget Sound Regional Council (PSRC) conducted travel surveys of approximately 10,750 households residing within the four-county region. Each survey participant completed a diary listing detailed characteristics about each trip made over the course of two days. Data about household demographics and attitudes was also collected in the survey, and was paired with the travel diary records to create a rich database from which to explore the travel behavior of people and families living in the Puget Sound region.

Based on data gathered by these surveys, this article examines the differences between 1999 and 2006 with respect to one aspect of household travel behavior — mode of travel. Mode categories included in the analysis are: single-occupant vehicles (SOV), high-occupancy vehicles (HOV), transit (including bus, ferry, monorail, paratransit, and light rail), walking, and other modes (including taxi, bike, dial-a-ride, flexcar, rail, school bus, and other non-motorized transport).

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Figure 2: Mode Shares for All Trips by Sub-Region

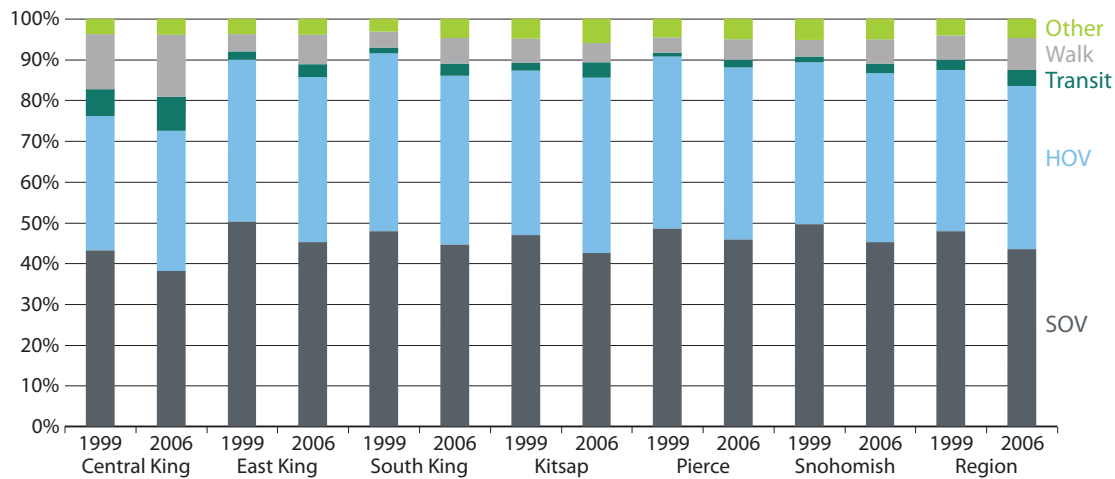


Figure 3 shows the average number of household trips made per day, categorized by mode and eight distinct life-cycle categories: household with child(ren) under age 6; household with child(ren) age 6-18; household with a single adult under age 35; household with a single adult age 35-64; household with a single adult age 65 and older; household with 2 or more adults: oldest under 35; household with 2 or more adults: oldest age 35-64; and household with 2 or more adults: oldest age 65 or older.

Figure 3: Average Daily Household Trips by Mode and Life-Cycle Stage

	Young Child Present	School Child Present	Young Single Adult	Mid-Single Adult	Older Single Adult	Young 2+ Adults	Mid 2+ Adults	Older 2+ Adults	All Households
Total Trips									
1999	10.86	14	4	4	3.6	7.5	7.8	7.1	8.2
2006	14.6	14.8	3.9	3.8	3	7	7.9	6.5	8.7
SOV									
1999	3.6	5.2	2.3	3	2.4	4	5.1	3.6	4.2
2006	3.4	5.5	2.2	2.3	1.9	3.3	5	3.1	3.8
HOV									
1999	5.9	6.8	0.4	0.4	0.7	2	2.1	3.1	2.9
2006	9.1	6.6	0.5	0.5	0.5	2.1	1.9	2.8	3.5
Transit									
1999	0.2	0.2	0.4	0.2	0.2	0.5	0.2	0.1	0.2
2006	0.3	0.3	0.5	0.4	0.2	0.6	0.4	0.2	0.3
Walk									
1999	0.7	0.8	0.6	0.4	0.3	0.8	0.4	0.2	0.5
2006	1.1	1	0.7	0.5	0.3	0.7	0.5	0.4	0.7
Other									
1999	0.5	1	0.2	0.1	0	0.2	0.1	0.1	0.1
2006	0.7	1.3	0	0.1	0.1	0.2	0.1	0.1	0.4

Consistent with the mode share trends, the average number of SOV trips per household for all households showed a decrease between 1999 and 2006. Only households with at least one school-aged child present showed an increase in the household SOV rate between 1999 and 2006. Household HOV rates remained steady or dropped in all life-cycle categories except for single, older adult households. With the exception of those households comprised of a single older adult, household transit trip rates showed an increase between 1999 and 2006. Walk trips per household either increased or remained steady in all but one of the life-cycle categories — households comprised of a single young adult.

Mode Shares for Work Trips

Personal vehicles (SOV and HOV) represent the bulk of the mode share for work trips in 1999 and 2006 (see Figure 4), with SOV travel providing the overwhelming majority of this share. In 1999, SOV travel accounted for 79 percent of all work trips. Although its share decreased between survey years, 76 percent of all work trips were made by SOV in 2006. The reduction in SOV share from 1999 to 2006 appears to have been taken up by transit modes. Transit added 2 percent to its mode share from 1999 to 2006. Nearly 10 percent of work trips were provided by transit in 2006. The share of walking and other modal trips remained stable between the survey years.

Mode Shares for Non-Work Trips

Non-work trips accounted for 82 percent of all trips made in 2006, down slightly from 1999, when 84 percent of trips were non-work trips. Figure 5 shows the 1999 and 2006 mode share for non-work trips throughout the region. The trends seen in the mode share for non-work trips echo many of the trends seen for all trips. Similar to work trips, a majority of non-work trips are carried out in personal vehicles. In contrast, however, non-work trips made in private vehicles are more evenly divided between SOV and HOV modes, with HOV trips accounting for the largest share — nearly half — of non-work trips in 1999 and 2006.

While HOV share remained relatively stable, SOV travel lost approximately 5 percent of mode share for non-work trips between 1999 and 2006, with transit, walking, and other forms of transportation picking up its share. The increases in mode share for walking and transit trips do not present the largest changes in overall mode share, but compared to their respective shares from 1999, they have grown significantly. Transit gained over 1 percent of overall mode share from 1999 to 2006 — an 85 percent increase in trips over its 1999 share. The mode share of walk trips increased 3 percent from 1999 to 2006, representing a 37 percent increase in trips. Walking is more prevalent as a mode for non-work trips than for work trips.

Summary

Overall, the region has experienced an increase in walk and transit trips, and a corresponding decrease in car travel. There are several reasons for these observed trends. Transit service in the region has increased significantly from 1999 to 2006, including the beginning of Sound Transit bus service in 1999. Transit increased 19 percent from 1999 to 2005 on the six regional transit agencies' networks combined, with major increases in revenue hours on systems that offer more commuter/express routes and light rail. Rural and suburban operators showed sizable increases in service hours from 1999 to 2005.

Public awareness of how one's mode choice may impact the environment or personal health may also explain a portion of this trend. In the 2006 survey, respondents generally agreed that transit could help the environment, and 28 percent of these replied that they would switch to a different mode to help the environment, while a majority of respondents (51 percent) were undecided. The 2006 survey also indicated a pro-walking mindset among survey participants.

Figure 4: Mode Shares for Work Trips

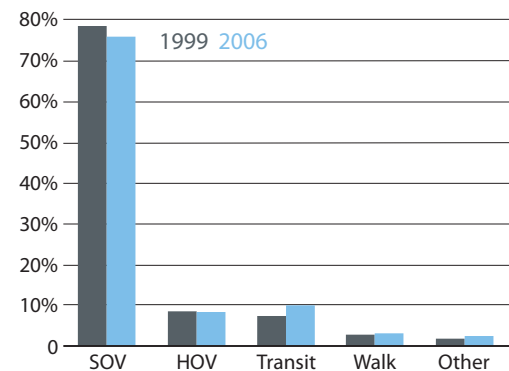
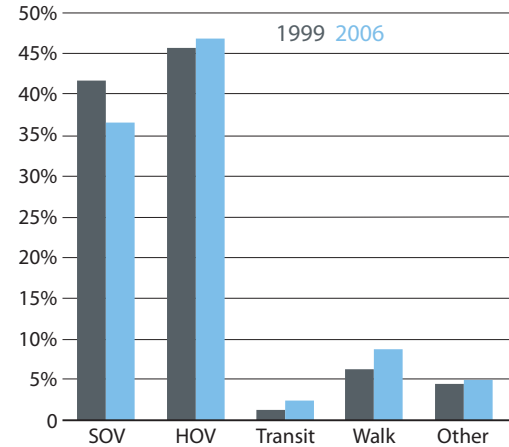


Figure 5: Mode Shares for Non-Work Trips



Increasing traffic congestion on the region's road network may have also contributed by pushing frustrated drivers and their passengers to modes that are not affected by congestion. Attitudinal data from the 1999 survey showed that respondents "strongly agreed" that peak period congestion "seemed to be getting longer." Similarly, the more recent rise in gas prices could have caused auto travelers to switch modes. Seventy-two percent of 1999 survey respondents noted concern over how quickly gas prices change.

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