

## Bicycling and Walking in the Central Puget Sound Region

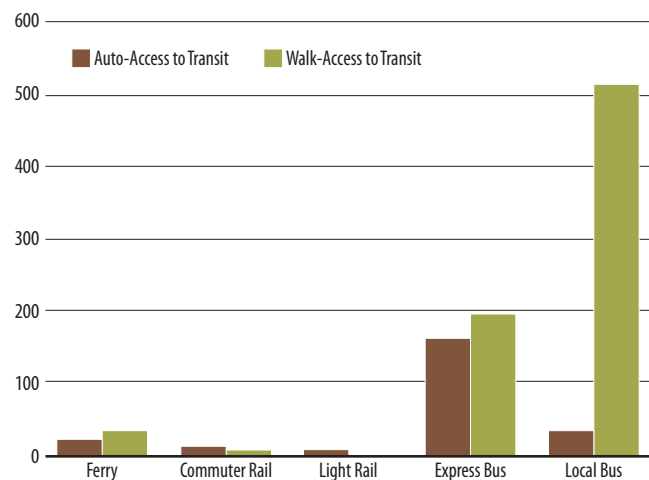
Results from PSRC’s regional household activity surveys in 1999 and 2006 show an increase in the number of trips made by bicycling and walking. Survey results also show significantly more people access transit service on foot than by car, adding to the number of walking trips made in the region. Depending on where trips start and end, bicycle and walk mode share percentages vary across the region. More bicyclists are entering and exiting downtown Seattle during the morning commute period, based on the city’s 1992, 1995, 2000, and 2007 counts. A survey conducted in the fall of 2007 provides insight on people’s attitudes about bicycling and walking.

### Mode of Travel

PSRC’s regional household activity survey in 2006 showed walking and bicycling accounted for 10% of all trips made in the region. Of that percentage, 9% were walk trips and 1% bicycle trips. This is a 37% increase from 1999. There was an increase in the absolute number of bicycling trips, although as a percentage of all trips, bicycling trips remained relatively flat. Compared to results from the 1999 survey, slightly more people bicycled to work and significantly more people walked for non-work trips.

Of the total number of auto- and walk-access to transit trips made in 1999, 85% were on foot, decreasing to 76% in 2006. Since the 1999 regional household activity survey was conducted, commuter rail, light rail, and expanded express bus service began operating. Much of that transit service is supported by investments in major park-and-ride lots located along highways, which may be contributing to the decrease in walk-access transit trips. In 2006, more than three times as many people accessed transit by walking instead of by personal vehicle, mostly local and express bus service, as shown in Figure 1.

**Figure 1. Walk versus Auto Access to Transit**  
In Thousands of Trips. All Trips Made Based on Linked Trips



Source: PSRC 2006 Household Activity Survey

Note: Trips are classified as walk access based on the home end of the trip. The percent of trips that are walk trips at the destination end is much higher due to the limited opportunities to drive from transit at the destination end of the trip.

## Mode of Travel Within and Between Regional Growth Centers

VISION 2040, the regional growth strategy, encourages more growth to be directed to cities that contain one or more regionally designated growth centers. Relatively small in area, centers are characterized by compact, pedestrian-oriented development with a mix of uses and served by high-capacity transit and other transportation services. These are places that are more supportive of bicycling and walking.

The 2006 regional household activity survey showed the highest mode share percentage for walk trips to work; 21%, occurred when household and place of employment were located within a regional growth center. For short trips within geographically small areas, walking is likely a more efficient travel choice for more people. The highest mode share percentage for bicycle trips to work, 4%, occurred when a household was located outside a regional growth center and place of employment was located inside a regional growth center. Most of the region's housing is found outside regional growth centers, so this higher mode share percentage might be reflecting the "bicycle-shed" distance of three miles

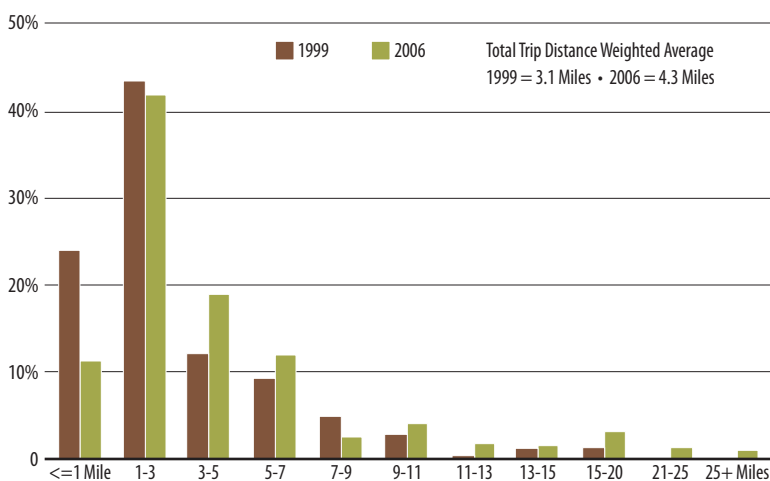
(the distance most people are willing to bicycle before looking to other travel options). Data from a recent study conducted in Portland, Oregon supports this bit of conventional wisdom. Researchers there found that for many short trips (three miles or less) the bicycle was time-competitive with the automobile. In the Puget Sound region we may be pushing that boundary of 3 miles upward; from 1999 to 2006 bicycle trip distances increased overall from 3.1 miles to 4.3 miles, as shown in Figure 2.

Looking at downtown Seattle provides further detail on bicycling trips. More than 4% of Seattle residents commute by bicycle.<sup>1</sup> Since 1992, the city has been conducting counts of bicyclists entering and leaving downtown. Between 1992 and 2000, the total number of bicyclists entering and leaving downtown during the morning peak travel period increased by 57%. During that time the gender split between male and female bicyclists did not change. The latest count was conducted in 2007 and results show a 31% increase over 2000, while the city's population increased 3%. For the first time, survey results showed an increase in the number of women bicycling, 28%. Results from the 2006 regional household activity survey also show an increase in the number of female bicyclists, as shown in Figure 3.

The highest number of bicyclists counted was at the intersection of Dexter Avenue and 7th Avenue, with a 192% increase since 1992. Dexter Avenue is the primary bicycle route between downtown Seattle and points north. Other areas of downtown where high

**Figure 2. Bike Trip Distances in Miles**

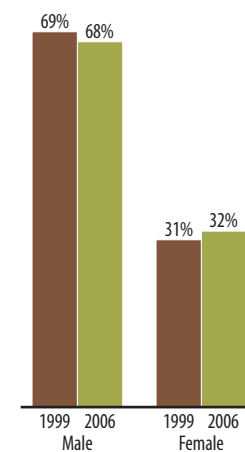
Percent of Total Bike Trips, 1999 and 2006



Source: PSRC 1999 & 2006 Household Activity Survey

Total Trip Distance Weighted Average  
1999 = 3.1 Miles • 2006 = 4.3 Miles

**Figure 3. Reported Gender of Bicyclists in 1999 and 2006**



Source: PSRC 1999 and 2006 Household Activity Survey

<sup>1</sup> City of Seattle. 2007 Downtown Bicycle Counts. <http://www.seattle.gov/transportation/bikeinfo.htm>

numbers of bicyclists were counted included the Elliott Bay Trail, Alaskan Way, and the downtown Seattle ferry terminal as shown in Figure 4.<sup>2</sup> As in years past, of the 29 locations surveyed, those with the highest numbers of bicyclists passing through are supported by bicycle infrastructure, such as bicycle lanes or shared use paths.

## Public Attitudes about Bicycling and Walking

In the fall of 2007, PSRC conducted a telephone survey of 403 Puget Sound region residents to inform the refinement of the nonmotorized component of Transportation 2040 as part of the plan update process. Developed for WSDOT to support the update of the Statewide Bicycle Facilities and Pedestrian Walkways Plan, the survey was designed to determine public attitudes about bicycling and walking. Key findings include the following:

- 67% of respondents walked and 30% bicycled to get from place to place in the past (survey) year.
- Respondents who had not walked at all during the past year were more likely to say they had health limitations.
- Respondents who had not bicycled at all during the past year said they *didn't know how to ride a bicycle or had no bicycle*.
- Six of eight respondents who had not walked for the past year and said it was somewhat or very difficult to walk in their communities named *no sidewalks* as a reason.
- Nine of 24 respondents who had not bicycled for the past year and said it was somewhat or very difficult to bicycle in their communities named *no bike lanes/roads too narrow/no shoulder* as a reason.
- Respondents who had not walked for the past year most often suggested more pedestrian facilities would make it easier for them to walk more.
- Respondents who had not bicycled for the past year most often suggested more bicycle facilities would make it easier for them to bicycle more.
- Females more than males gave higher importance ratings to building safe places to bicycle and walk.

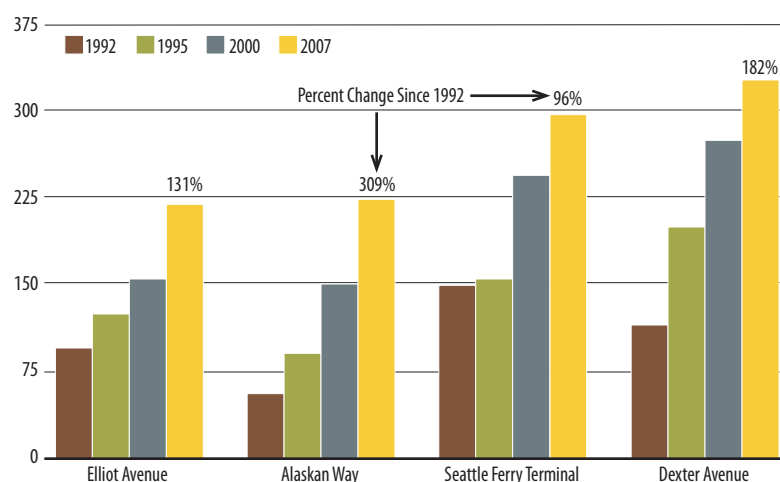
## Summary

Overall, the region has experienced an increase in walk and bicycle trips. The mode share for walking is highest when a trip begins and ends within a center, and for bicycling it is highest when a trip begins outside a center and ends within a center. A significant number of people continue to access transit service on foot. While most bicyclists are men, more women appear to be choosing bicycling as a travel choice. Some of the most highly traveled locations for bicyclists are supported by bicycle infrastructure.

Other regions report increased bicycle ridership over the past 15 years; however, quantitative data is limited to the City of Portland.<sup>3</sup> A paper presented at the 2006 Transportation Research Board Annual Meeting detailed Portland's phi-

Figure 4. City of Seattle Bicycle Counts

Number of Cyclists per Year



Source: City of Seattle

<sup>2</sup> The City of Seattle. 2007 Downtown Bicycle Counts. <http://www.seattle.gov/transportation/bikeinfo.htm>

<sup>3</sup> Metro. "A Profile of the Regional Bicycle System in the Portland Metropolitan Region." 2007

losophy toward bicycle facility construction. Over a little more than a decade, \$12 million dollars of investments and an increase in the city's bikeway network from 83 to 260 miles resulted in a doubling of citywide bicycle commute trips from the 1990 to 2000 census. During the 1990s, annual counts conducted by the city across the four major bridges showed a greater increase in bike traffic (78%) than in motor vehicle traffic (8%). The authors state their belief that two key factors quantity of facilities (completeness of network) and quality of facilities, have led to these increases. Findings from the Portland study were affirmed at the national level in a study that evaluated data from 35 large cities across the U.S. and found that cities with higher levels of bicycle infrastructure saw higher levels of bicycle commuting.<sup>4</sup>

More recent data from the Portland Office of Transportation shows significant increases in bicycle ridership across the city, noting an increasing number of female cyclists. Overall, women represented 32% of all riders counted, up from 25% in 2000. Nationally, women represent about 25% of bikers.

People appear to be increasingly aware of the environmental and health impacts of their travel choices which may also, in part, explain this trend. Even more people might walk and bicycle if there were more facilities in their communities on which to do so safely and easily, in tandem with education and encouragement programs.

Kirste Johnson, who is no longer with PSRC, was the primary author of this *Trend*. For more information regarding the bicycle/pedestrian program at PSRC, contact Robin Mayhew at 206-464-7537, [rmayhew@psrc.org](mailto:rmayhew@psrc.org). For information regarding data from the PSRC Household Survey, contact Neil Kilgren at 206-971-3602, [nkilgren@psrc.org](mailto:nkilgren@psrc.org). Copies of this *Trend* are available online at [psrc.org](http://psrc.org) or from the Information Center at 206-464-7532, [info@psrc.org](mailto:info@psrc.org).

<sup>4</sup> Dill, Jennifer and Carr, Theresa. "Bicycle Commuting and Facilities in Major U.S. Cities: If you Build Them, Commuters Will Use Them." Transportation Research Board, 2003