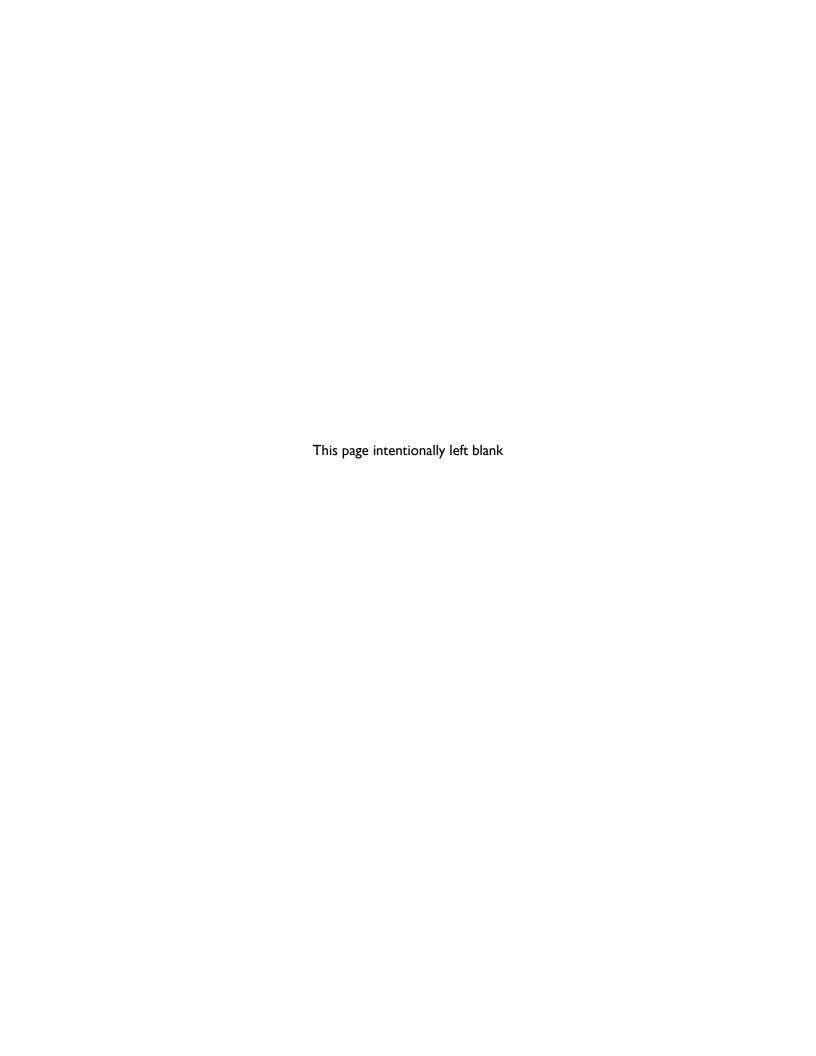


2011 Bicycle and Pedestrian Count Report



Department of Public Works

Transportation Services Division



Summary

Starting in 2009, the City of Redmond Public Works Department has overseen annual counts of bicyclists and pedestrians at selected sites across Redmond. These counts help the City track progress toward its goal of expanding travel choices, and they give planners feedback on the impact of investments in transportation infrastructure and programs.

Bicycle volumes are down 60% and pedestrian volumes are down 23% in 2011 compared to 2010. However, these results do not amount to a trend. Bicycling and walking were up between 2009 and 2010, and external factors like weather and travelway maintenance activities probably affected count totals in 2011—especially given the low absolute numbers of cyclists and pedestrians at individual count sites and the fact that the counts take place on a single day. Several more years of data will be needed to determine whether active travel is increasing, decreasing, or is stable in the City of Redmond.

Methodology

Redmond participates in the National Bicycle and Pedestrian Documentation project (NBPD), a collaboration among engineering firms, non-governmental organizations, public agencies, and citizen volunteers across the United States to gather statistics on pedestrian and bicycle travel. The NBPD promulgates a standardized count protocol and count date range, and in Washington, the Cascade Bicycle Club and Washington State Department of Transportation coordinate NBPD-based counts. This year, the counts took place between September 27^{th} and 29^{th} (each jurisdiction choses a date within that range), and included morning (7-9 AM) and evening (4-6 PM) count periods.

As in previous years, the City of Redmond hired Quality Counts, a private firm, to gather data in 2011. Quality Counts placed cameras at 12 count sites, and their employees later reviewed the video, counting bicyclists and pedestrians and reporting them in 15 minute intervals. Counters also noted the gender of each bicyclist and pedestrian.

Not every site that was counted in 2011 was counted in previous years. Figure 1 indicates the years in which data were counted at each site. The year-to-year percent change figures listed later in this document are based on data from those sites that were counted in all three years.

Count Location	2009	2010	2011
148th Ave NE north of SR 520 W/B ramp	9/15	9/30	9/27
166th Ave south of NE 104th St.	9/15	9/30	9/28
Bear Creek Trail south of Redmond Way	9/15	9/30	9/29
East Lake Sammamish Trail @ Marymoor Connector	Not counted	10/6	Construction
Leary Way south of Redmond Way	9/15	Not counted	10/5
NE 40th St Bridge across SR 520	9/15	9/30	9/27
NE 85th St west of 160th Ave NE	9/15	9/30	9/28
Old Red. Road east of 140th Ave NE	9/15	10/6	9/27
Sammamish River Trial south of Leary Way	9/15	Not counted	9/27
Sammamish River Trail north of NE 85th St	9/15	9/30	10/5
SR 520 Trail north of NE 40th St	9/15	9/30	9/27
West Lake Sammamish Pkwy south of NE 40th St	9/15	9/30	9/27

Figure I. Bicycle and Pedestrian Count Sites

This summary report uses the PM count period for its comparisons, as is common for automobile volume analyses. Due to an equipment malfunction and a stolen camera, two sites were re-counted one week later than the rest in 2011: Sammamish River Trail north of NE 85th St and Leary Way south of Redmond Way. A third site, East Lake Sammamish Trail, was under construction during 2011. A substitute count was conducted on the nearby East Lake Sammamish Parkway; those volumes are reported in Figure 2, but are not included in the totals or used in the calculation of year-to-year figures. Data from on-site volunteer counts was used for two sites in 2010: the East Lake Sammamish Trail and Old Redmond Road.

Date	Temperature (F)	Weather Conditions	
9/15/09	77	Partly cloudy	
9/30/10	70	Clear	
10/6/10	65	Clear	
9/27/11	63	Partly cloudy	
9/28/11	63	Mostly cloudy	
9/29/11	74	Mostly cloudy	
10/5/11	54	Cloudy, rain	

Table I. Count Date Weather Conditions at SeaTac Airport

Results

Pedestrian volumes in 2011 were up 12% from the 2009 baseline, while bicycle volumes were 37% lower (see Figure 2. PM Peak Pedestrian and Bicycle Count Volumes, % Change from 2009 Baseline).

Compared to 2010, bicycling at the count sites dropped 60%, and walking decreased 23% (see Figure 3).

Of the nine sites that were counted in both 2010 and 2011, two saw increases in the amount of bicycle traffic: the NE 40th Street Bridge crossing SR 520 (from 16 to 32 cyclists) and NE 85th St west of 160th Ave NE (from 8 to 19 cyclists). The rest of the sites had volume reductions (see Figure 4. PM Peak Bicycle Volumes by Count Site). The top site for bicycle traffic in 2011 was the Sammamish River Trail south of Leary Way with 98 bicyclists over two hours.

Of all the cyclists counted, 16% were female.

Three sites had increases in pedestrian traffic: 148th Ave NE north of SR 520 westbound ramp (from 46 to 80 pedestrians), NE 85th St west of 160th Ave NE (from 48 to 145 pedestrians), and SR 520 Trail north of NE 40th St (from 9 to 13 pedestrians). The site with the highest pedestrian traffic in 2011 was the NE 40th St Bridge, with 205 pedestrians over the course of the two hour count period.

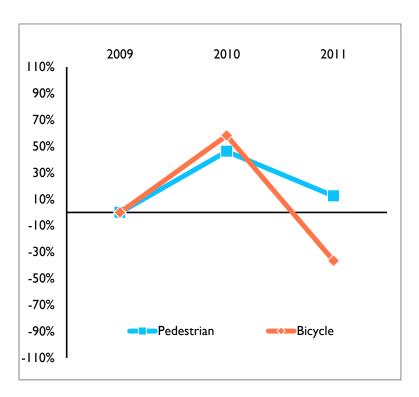


Figure 2. PM Peak Pedestrian and Bicycle Count Volumes, % Change from 2009 Baseline

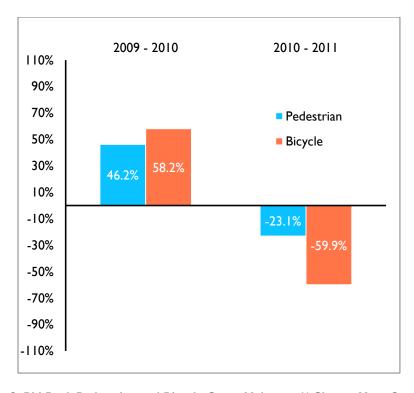


Figure 3. PM Peak Pedestrian and Bicycle Count Volumes, % Change Year-Over-Year

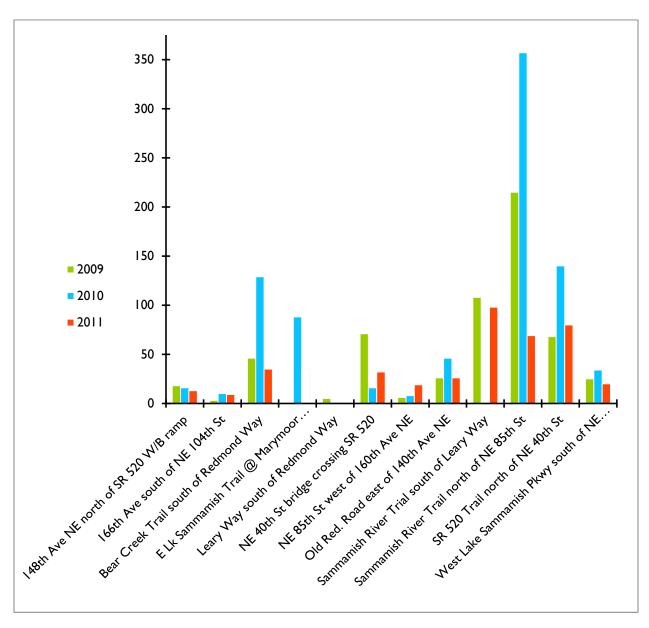


Figure 4. PM Peak Bicycle Volumes by Count Site

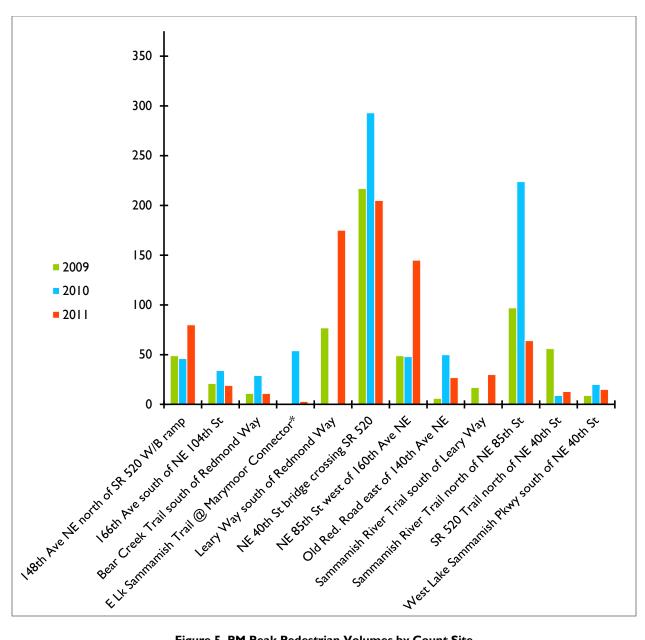


Figure 5. PM Peak Pedestrian Volumes by Count Site

Count Site	Pedestrian	Bicycle	% Female Bicyclists
148th Ave NE north of SR 520 W/B ramp	80	13	31%
166th Ave south of NE 104th St	19	9	33%
Bear Creek Trail south of Redmond Way	11	35	29%
E Lk Sammamish Pkwy north of Marymoor Connector (substitute site; not included in totals)	3	35	6%
Leary Way south of Redmond Way	175	I	0%
NE 40th St Bridge crossing SR 520	205	32	41%
NE 85th St west of 160th Ave NE	145	19	0%
Old Redmond Road east of 140th Ave NE	27	26	12%
Sammamish River Trial south of Leary Way	30	98	23%
Sammamish River Trail north of NE 85th St	64	69	n/a
SR 520 Trail north of NE 40th St	13	80	10%
West Lake Sammamish Pkwy south of NE 40th St	15	20	5%
Total	784	402	20%

Table 2. 2011 PM Peak Pedestrian and Bicycle Volumes by Count Site

Discussion

Because of low baseline numbers of bicyclists and pedestrians at most Redmond count sites, and because there are only three years of data available, the current data are not sufficient to extrapolate trends. As the count program proceeds, statistics will eventually reveal underlying trends, although external factors will continue to cause year-to-year fluctuations.

External factors probably depressed bicycle volumes in 2011. The East Lake Sammamish Trail was closed for paving, eliminating one option for travel into Southeast Redmond. However, that trail terminates at SR 520, and it had a gravel surface prior to the project, so its impact on bicycling was probably limited. The closure of the Burke Gilman Trail in Lake Forest Park, on the other hand, might have had a greater impact. The Burke Gilman Trail feeds into the Sammamish River and Bear Creek trails, and links Redmond with Seattle. The similar travel patterns at the Bear Creek Trail site and Sammamish River Trail north of NE 85th St site could be explained by a reduction in the number of commuter cyclists using those trails to ride to Seattle or its northern suburbs. King County Parks anticipates that the Burke Gilman Trail upgrade project will conclude in early 2012, so autumn data from next year should show whether the closure had a significant impact. Finally, the Sammamish River Trail count site at NE 85th St was affected by an equipment malfunction that necessitated a recount one week later. The weather deteriorated over the intervening days, and rain and cool temperatures on the make-up date probably convinced some cyclists to stay home. Because that site has the most bicycle traffic in Redmond, its lower-than-usual volumes brought down the overall bicycle count for 2011.

The site at NE 85th St west of 160th Ave NE is notable for the jump in pedestrian volumes in 2011, especially considering the stability of volumes in prior years. In 2009 and 2010, counters noted 49 and 48 pedestrians, respectively. This year 145 people walked through the count site between four and six o'clock. The three-fold increase might be attributable to activity related to the opening of the Metro RapidRide stop at 160th and NE 85th, which served its first paying customers two days after the count date.

An unusually low percentage of cyclists in Redmond are women: about 20%. This is less than the regional average, according to results from the 2006 Regional Household Travel Survey. That survey found that 28% of bicycle trips in King, Kitsap, Pierce, and Snohomish counties were taken by women. Research indicates that, on average, women have a lower tolerance for physical risk than men, and bicycle planners worldwide are increasingly using the percentage of women cyclists as an indicator of users' comfort with their local bicycle transportation system. In Northern European nations, which have advanced bicycle networks and very low bicycle fatality rates, the proportions of male and female cyclists are about equal.

Along with the perceived safety of bicycle facilities in Redmond, lifestyle choices and land use patterns are probably significant contributors to the observed gender divide. However, the low percentage of women cyclists in Redmond would seem to lend support to the City's "Bicycling for Comfort" strategy (being developed as part of the 2011 Transportation Master Plan update), which seeks to improve access to bicycle facilities that are protected from vehicular traffic.