City of Bellevue

2013 Pedestrian and Bicycle Count Report

City of Bellevue

PEDESTRIAN AND BICYCLE COUNT REPORT 2013

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PURPOSE AND OVERVIEW

Policy PB-29 of Bellevue's Comprehensive Plan policy instructs Transportation Department staff to "[develop] procedures to collect data in order to measure pedestrian and bicycle usage on an ongoing basis." The data collected through annual counts helps track Bellevue's progress toward its goal of improving bicycling and walking conditions in the city. The information also contributes to a larger effort in Washington State to improve decisions about where to invest transportation funds and how to improve safety. Data from these counts will be used to inform investments in bicycle and pedestrian facilities as well as educational programs statewide.

City of Bellevue staff conducted manual counts of bicyclists and pedestrians at five locations in the city using video capture technology. The counts were performed for two peak periods (7:00 AM - 9:00 AM and 4:00 PM - 6:00 PM) for three consecutive days from Tuesday 10/1/2013 through Thursday 10/3/2013. The Cascade Bicycle Club performed on-site counts at six additional locations throughout the city. This was the sixth annual count, and the fifth to use video capture technology.

The resulting data provided 15-minute counts for bicycles and pedestrians for the five locations. This data was used for time of day analysis and for comparison to previous years' counts. The results of this study including methodology, count results, data analysis, and discussion are contained in this report.

Travelers in Downtown Bellevue opt for non-motorized transportation choices
(108th Ave NE and NE 4th St, looking southwest)

METHODOLOGY – Locations

For the original 2009 Pedestrian and Bicycle Count, five locations were chosen which displayed high traffic for pedestrians and bicycles. These sites were chosen under several guidelines: locations which roughly encircle downtown, locations with major trip destinations, and locations along priority bicycle corridors as designated in the 2009 Pedestrian and Bicycle Transportation Plan.

The following year, in 2010, pedestrian and bicycle volumes counts were recorded for the same five locations, but counts for NE Northup Way were taken at 108th Avenue NE instead of at Bellevue Way NE. The data collected at these adjacent intersections is comparable and is considered to represent the same node of activity.

In 2011, four of the five previous count locations were observed. The fifth location, NE 12th St at 116th Ave NE, was omitted due to ongoing construction throughout the duration of the count, resulting in non-typical pedestrian and bicycle traffic.

The next year, in 2012, the City was in the process of testing a new traffic camera system during count period and the camera at the Bellevue Way, north of 4th Street was not able to make recordings. A fourth location was selected at Lake Washington Loop trail at Coal Creek Parkway SE. This location was selected as it was located on a trail that lies along priority bicycle corridor and also because of a 2013 wayfinding installation project, which was to direct pedestrians and bicyclists to the trail from multiple destinations.

In 2013, the City conducted manual counts using recordings at five locations, adding back the NE 12th St west of 116th Ave NE location. The Lake Washington Loop Trailhead at Coal Creek Parkway SE was counted again to build data to analyze how wayfinding and other improvements may influence usage and count volume. In 2013 a Bicycle Wayfinding Project added Wayfinding signs along the Lake Washington Loop.

See Table 1 for the City of Bellevue 2009-2013 camera count locations.
See Table 2 and Figure 1 for all City of Bellevue count locations.

2009 Camera Count Locations

G	114th Ave NE north of SE 8th St
D	NE 12th St west of 116th Ave NE
A	Bellevue Way north of NE Northup Way
F	108th Ave NE south of NE 4th St
E	Bellevue Way north of NE 4th St

2010 Camera Count Locations

G	114th Ave NE north of SE 8th St
D	NE 12th St west of 116th Ave NE
A	108th Ave NE north of NE Northup Way
F	108th Ave NE south of NE 4th St
E	Bellevue Way north of NE 4th St

2011 Camera Count Locations

G	114th Ave NE north of SE 8th St
A	108th Ave NE north of NE Northup Way
F	108th Ave NE south of NE 4th St
E	Bellevue Way north of NE 4th St

2012 Camera Count Locations

G	114th Ave NE north of SE 8th St
A	108th Ave NE north of NE Northup Way
F	108th Ave NE south of NE 4th St
M	Lake Washington Loop at Coal Creek Pkwy SE

2013 Camera Count Locations

G	114th Ave NE north of SE 8th St
D	NE 12th St west of 116th Ave NE
A	108th Ave NE north of NE Northup Way
F	108th Ave NE south of NE 4th St
M	Lake Washington Loop at Coal Creek Pkwy SE

Table 1: Camera Count Locations 2009-2013

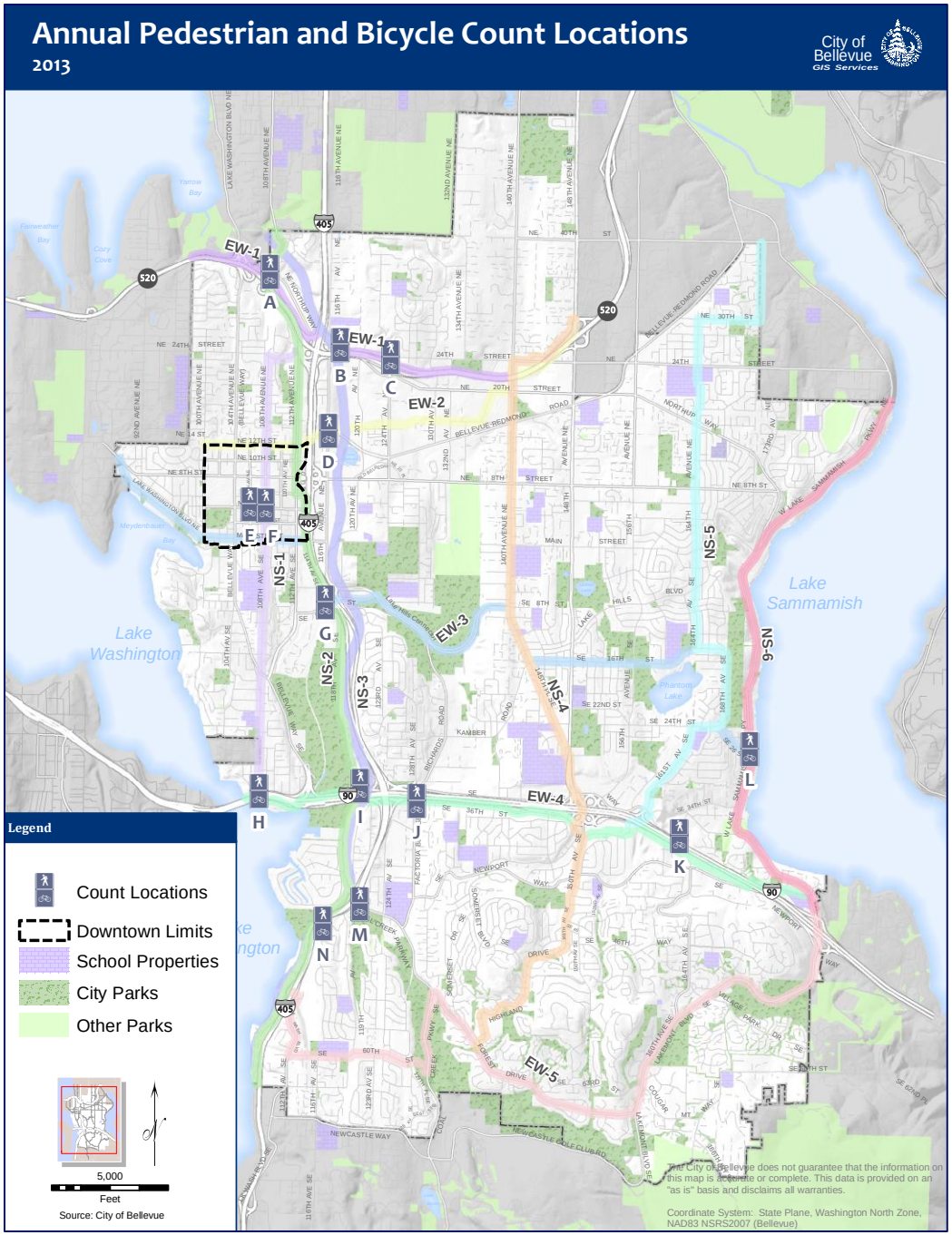


Figure 1: All City of Bellevue Count Locations Map

	All Count Locations
A	108th Ave NE north of NE Northup Way
B	115th Ave NE east of 116th Ave NE
C	SR 520 Trail at NE 24TH St
D	NE 12th St west of 116th Ave NE
E	Bellevue Way north of NE 4th St
F	108th Ave NE south of NE 4th St
G	114th Ave NE north of SE 8th St
H	I-90 Trail at Enatai
I	118th Ave SE north of I-90
J	I-90 Bike Trail west of Factoria Blvd SE
K	I-90 Sunset Bike Trail east of Eastgate Way
L	West Lake Sammamish south of SE 26th St
M	Lake Washington Loop at Coal Creek Pkwy SE
N	Trail at Newcastle Beach Park

Table 2: All City of Bellevue Count Locations 2009-2013

Bicyclist crossing SE 8th St at 114th Ave SE, looking southwest

Data Collection

Counting Techniques

Following the National Bicycle and Pedestrian Documentation Project (NBPD) guidelines, the City of Bellevue selected five sites for manual screen line counts of bicycles and pedestrians. Counts were performed by recording two-hour AM and PM peak segments using existing traffic cameras. A City of Bellevue intern volunteer reviewed the recordings and manually counted pedestrians and bicyclists for the five locations.

Manual screen line counting is the process of counting pedestrians and bicycles that cross a pre-designated point or line on the road. A tally is made for each pedestrian and bicycle that crosses this line in either direction. The tallies represent the number of pedestrians and bicycles that have traveled that street for the given time period. A depiction of the screen lines used in the count is shown in Table 3. The red line designates the screen line in each figure. City staff used counting forms to tally pedestrian and bicycle volumes at each site. Copies of 2013 Count Forms can be found in Appendix D.

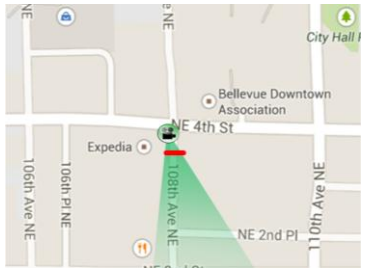
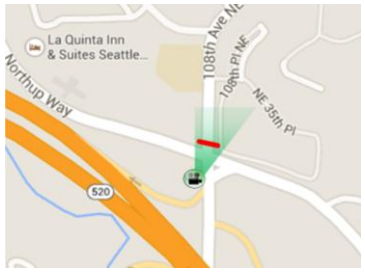
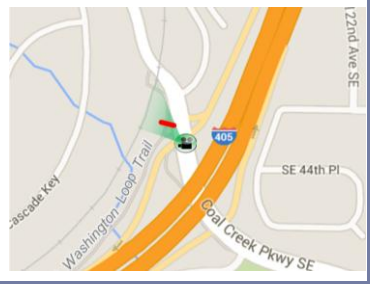
	108th Ave NE south of NE 4th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	114th Ave SE north of SE 8th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
Screenline					
Camera Location					

Table 3: Camera Count Locations and Screenlines 2013

Date and Time

In the past the Pedestrian and Bicycle Count has counted volumes for a single Tuesday for the AM and PM peak period in late September or early October. Counting for a single day could possibly present misleading statistics due to random spikes in volume.

Since 2011, counts have been performed for three consecutive days from Tuesday to Thursday.

In 2013, counts were performed from Tuesday 10/1/2013 to Thursday 10/3/2013. AM and PM peak period counts from 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM were performed for each day. Counts were tabulated every 15 minutes.

Counting for multiple days allowed for the analysis to take averages for all three days in order to determine "typical" weekday volumes. In addition, because the volumes were tabulated every 15 minutes, this allows for a time of day analysis to see how volumes change throughout the day.

RESULTS

After counts were performed, data were separated by the three count days and the AM and PM peak periods. These data can be found in Appendix A.

Two recording errors were detected when videos were reviewed for counting. There were two periods at two different locations where the camera was not able to make recordings: on the count day of 10/1/2013, the camera located at Lake Washington Loop Trail and Coal Creek Pkwy SE, for the PM peak period and on the count day of 10/3/2013, the camera located at 114th Ave SE, north of SE 8th St, for the AM peak period.

In order to determine smoothed weekday volumes, averages were taken for each count interval for three days in 2013. For the intervals in which data was missing, the averages were taken for the remaining two days. See Table 4, Figure 2 and Figure 3 for the resulting peak period pedestrian volumes, Table 5, Figure 4 and Figure 5 for the resulting peak period bicycle volumes. Values were rounded to the nearest whole number.

To compare the observed volumes to previous years, a total volume for each peak period was calculated for each site. Peak period volume totals from past counts were combined with this year's data to compare side by side. In addition to volume data, weather conditions were noted for each year. The resulting data are shown in Tables 6, 7, 8 and 9.

Peak Period Volumes 2013, measured in 15-minute intervals

Pedestrian Volumes

	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
7:00-7:15	0	1	1	20	1
7:15-7:30	2	3	2	20	1
7:30-7:45	1	5	7	27	0
7:45-8:00	0	3	4	26	1
8:00-8:15	1	4	3	29	0
8:15-8:30	1	4	2	25	0
8:30-8:45	2	4	2	32	0
8:45-9:00	0	5	3	43	1
AM # Total:	7	29	24	222	4
16:00-16:15	2	3	3	49	9
16:15-16:30	2	3	3	42	9
16:30-16:45	2	3	4	42	2
16:45-17:00	3	4	4	44	4
17:00-17:15	5	6	4	53	1
17:15-17:30	2	3	4	65	0
17:30-17:45	4	3	6	42	1
17:45-18:00	3	3	2	33	1
PM # Total:	23	28	30	370	27

Table 4: Average Weekday AM and PM Peak Period Pedestrian Volumes 2013

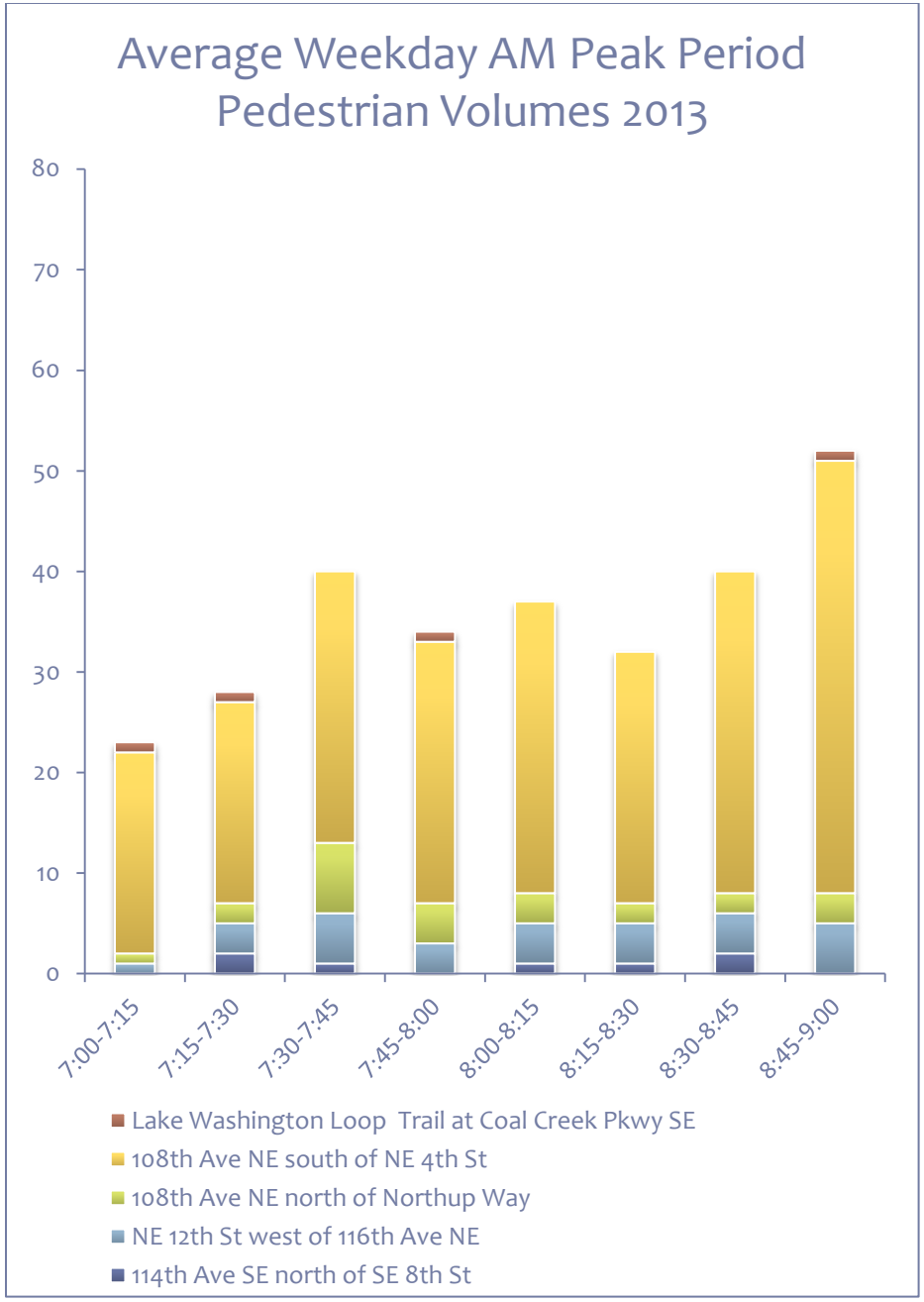


Figure 2: Average Weekday AM Peak Period Pedestrian Volumes 2013

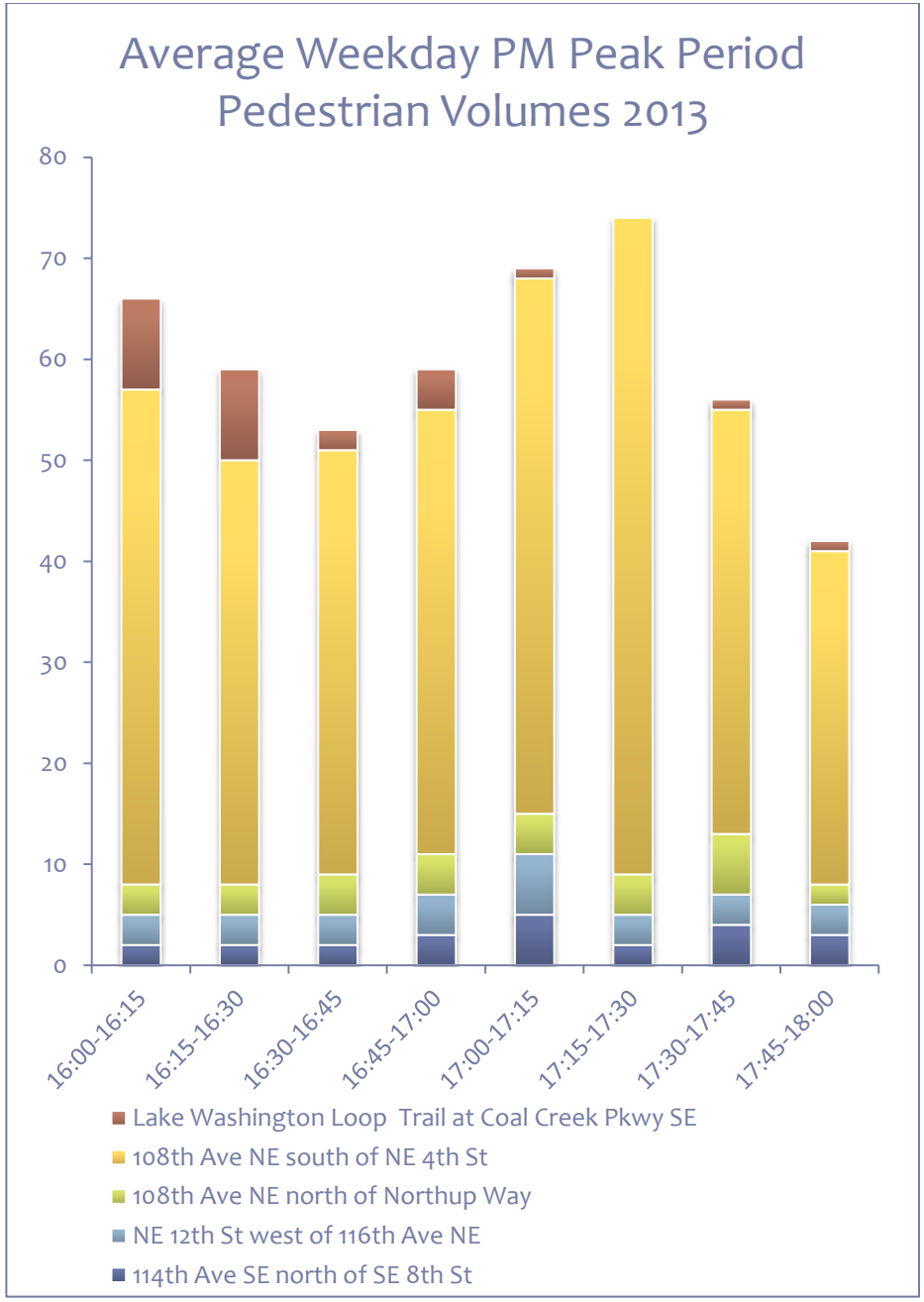


Figure 3: Average Weekday PM Peak Period Pedestrian Volumes 2013

Bicycle Volumes

	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
7:00-7:15	2	1	0	0	3
7:15-7:30	2	2	2	1	4
7:30-7:45	1	1	1	2	2
7:45-8:00	0	3	1	1	2
8:00-8:15	1	2	2	2	1
8:15-8:30	1	2	1	1	2
8:30-8:45	3	3	0	2	0
8:45-9:00	1	3	2	2	2
AM # Total:	11	17	9	11	16
16:00-16:15	1	2	1	1	4
16:15-16:30	1	2	0	2	4
16:30-16:45	2	3	0	1	6
16:45-17:00	3	3	1	2	4
17:00-17:15	1	1	1	2	4
17:15-17:30	1	3	0	4	3
17:30-17:45	2	4	1	2	5
17:45-18:00	3	4	1	2	5
PM # Total:	14	22	5	16	35

Table 5: Average Weekday AM and PM Peak Period Bicycle Volumes 2013

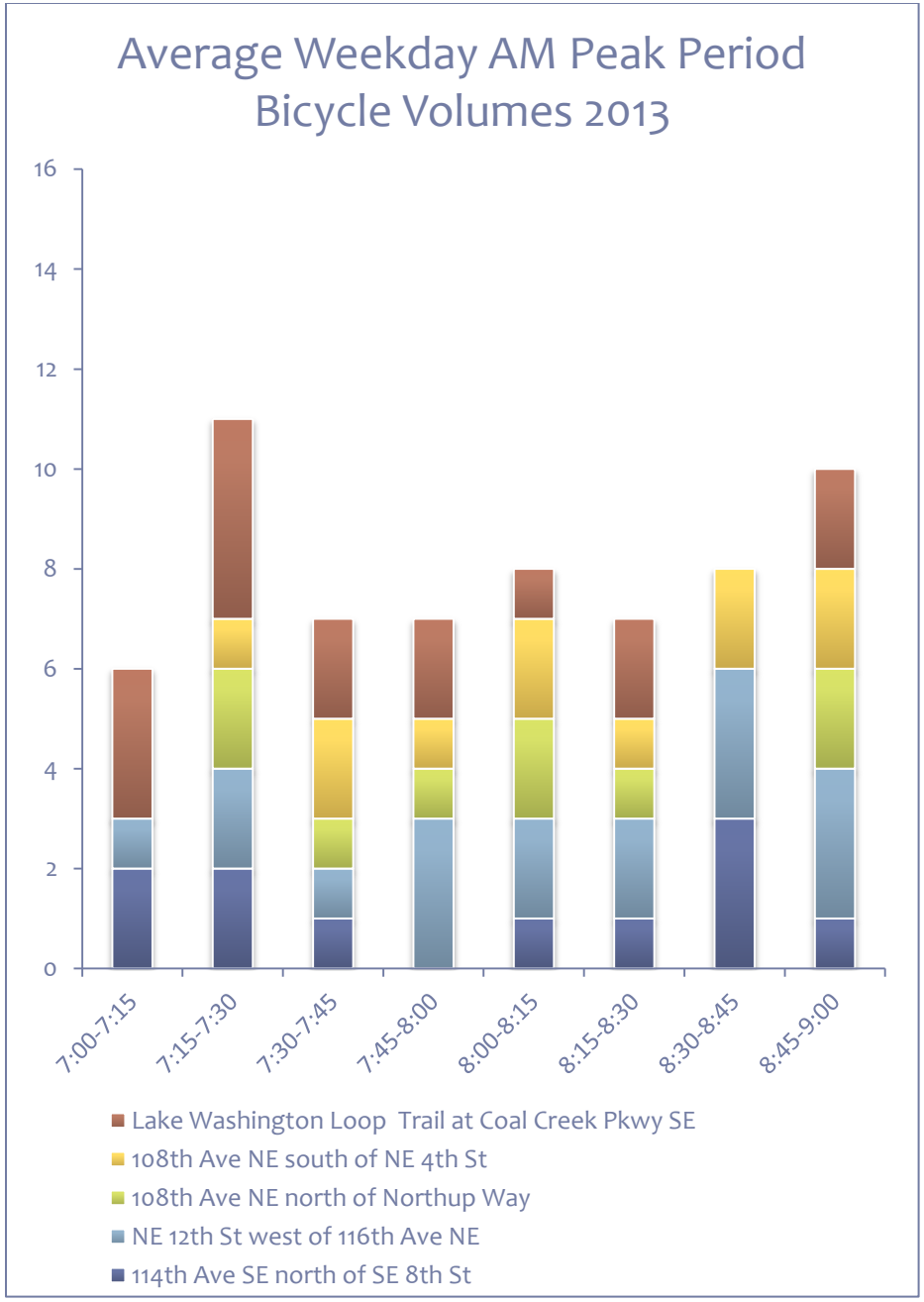


Figure 4: Average Weekday AM Peak Period Bicycle Volumes 2013

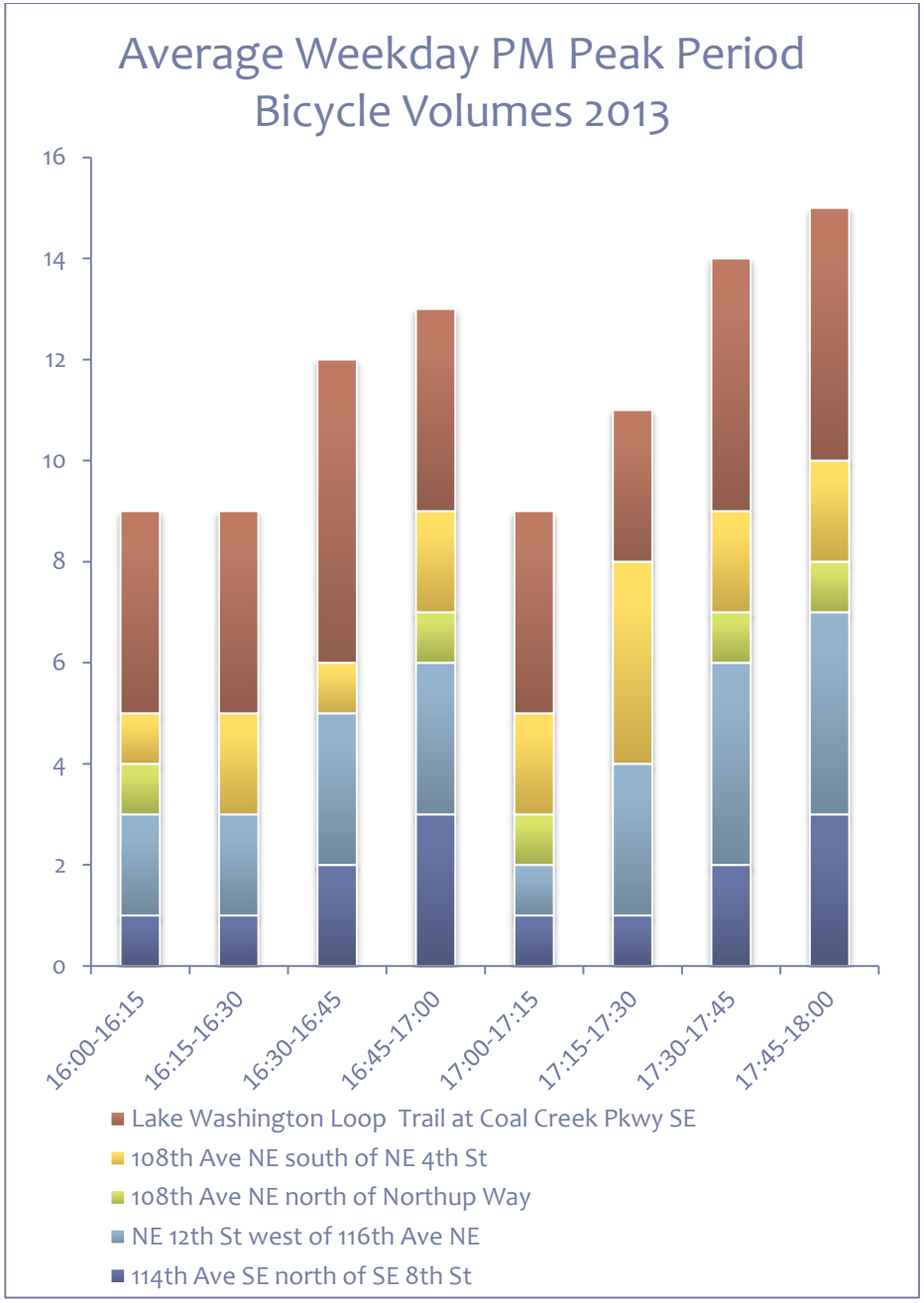


Figure 5: Average Weekday PM Peak Period Bicycle Volumes 2013

Average Weekday Volumes 2009-2013

Pedestrian Volumes

Year	Date	Weather*		114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
		°F	Conditions						
2009	29-Sep	48	Fair	4	32	19	295	265	-
2010	5-Oct	48.8	Sunny to Clear	30	16	34	294	235	-
2011	27-Sep 28-Sep 29-Sep	52.4	Clear to Mostly Cloudy	9	-	28	441	229	-
2012	25-Sep 26-Sep 27-Sep	64.3	Clear to Scattered Showers	7	-	32	247	-	9
2013	1-Oct 2-Oct 3-Oct	53.9	Mostly Cloudy Light Rain Overcast	7	29	24	222	-	4

Table 6: Average Weekday AM Peak Period Pedestrian Volumes 2009-2013

* *Weather information provided by www.wunderground.com*

Year	Date	Weather*		114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
		°F	Conditions						
2009	29-Sep	48	Fair	6	27	11	361	359	-
2010	5-Oct	48.8	Sunny to Clear	16	16	38	368	443	-
2011	27-Sep 28-Sep 29-Sep	52.4	Clear to Mostly Cloudy	9	-	32	507	569	-
2012	25-Sep 26-Sep 27-Sep	64.3	Clear to Scattered Showers	10	-	52	351	-	22
2013	1-Oct 2-Oct 3-Oct	53.9	Mostly Cloudy Light Rain Overcast	23	28	30	370	-	27

Table 7: Average Weekday PM Peak Period Pedestrian Volumes 2009-2013

Bicycle Volumes

Year	Date		Weather	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
		°F	Conditions						
2009	29-Sep	48	Fair	14	24	19	11	3	-
2010	5-Oct	48.8	Sunny to Clear	39	17	6	16	3	-
2011	27-Sep 28-Sep 29-Sep	52.4	Clear to Mostly Cloudy	21	-	4	19	9	-
2012	25-Sep 26-Sep 27-Sep	64.3	Clear to Scattered Showers	21	-	12	12	-	21
2013	1-Oct 2-Oct 3-Oct	53.9	Mostly Cloudy Light Rain Overcast	11	17	7	11	-	16

Table 8: Average Weekday AM Peak Period Bicycle Volumes 2009-2013

Year	Date		Weather	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
		°F	Conditions						
2009	29-Sep	48	Fair	17	20	21	15	5	-
2010	5-Oct	48.8	Sunny to Clear	42	25	9	19	12	-
2011	27-Sep 28-Sep 29-Sep	52.4	Clear to Mostly Cloudy	39	-	12	19	13	-
2012	25-Sep 26-Sep 27-Sep	64.3	Clear to Scattered Showers	23	-	17	12	-	48
2013	1-Oct 2-Oct 3-Oct	53.9	Mostly Cloudy Light Rain Overcast	14	22	5	16	-	35

Table 9: Average Weekday PM Peak Period Pedestrian and Bicycle Volumes 2009-2013

For all City of Bellevue Count Locations Results 2009-2013, see Appendix C.

ANALYSIS

Two types of analysis can be performed on the data collected from this year's count. First, a time of day comparison is possible by retrieving average volumes for each 15-minute count interval. Second, a comparison to previous years' peak period volumes can be made.

Time of Day

Pedestrian Volumes Change AM-PM

In 2013 among the count locations coordinated by Bellevue, the greatest AM peak period pedestrian volumes were counted during the 8:45 AM-9:00 AM interval, during which 18.2% (52 counts) of the average AM peak period weekday pedestrian counts (286 counts) were recorded. The greatest PM peak period pedestrian volumes were counted during the 5:15 PM – 5:30 PM interval with 15.5% (74 counts) of the average PM weekly pedestrian counts (479 counts).

Of the five count locations counted by the Transportation Department staff, 108th Avenue NE south of NE 4th Street had by far the highest observed pedestrian volumes. Counts at this location account for 77.6% (222 counts) of pedestrians recorded during the AM peak period and 77.4% (370 counts) pedestrian counts during the PM peak period.

37.4% of pedestrian trips were recorded during the AM peak period and 62.6% were counted during the PM peak period. The smallest pedestrian change occurred at NE 12th St west of 116th Ave NE, which remained almost the same (29 for AM and 28 for PM). The largest change occurred at Lake Washington Loop Trail at Coal Creek Pkwy SE which jumped from 4 pedestrians to 27 pedestrians, a 575% increase.

See Table 10 and Figure 6 for Average Weekday AM-PM Peak Periods Pedestrian Volumes Change in 2013

	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE	Peak Period Total
AM # Total	7	29	24	222	4	286
AM %	2.4%	10.1%	8.4%	77.6%	1.4%	
PM # Total	23	28	30	370	27	478
PM %	4.8%	5.9%	6.3%	77.4%	5.6%	
AM/PM # Change	16	-1	6	148	23	192
AM/PM Change %	228.6%	-3.4%	25.0%	66.7%	575.0%	67.1%

Table 10: Average Weekday AM-PM Peak Periods Pedestrian Volumes Change 2013

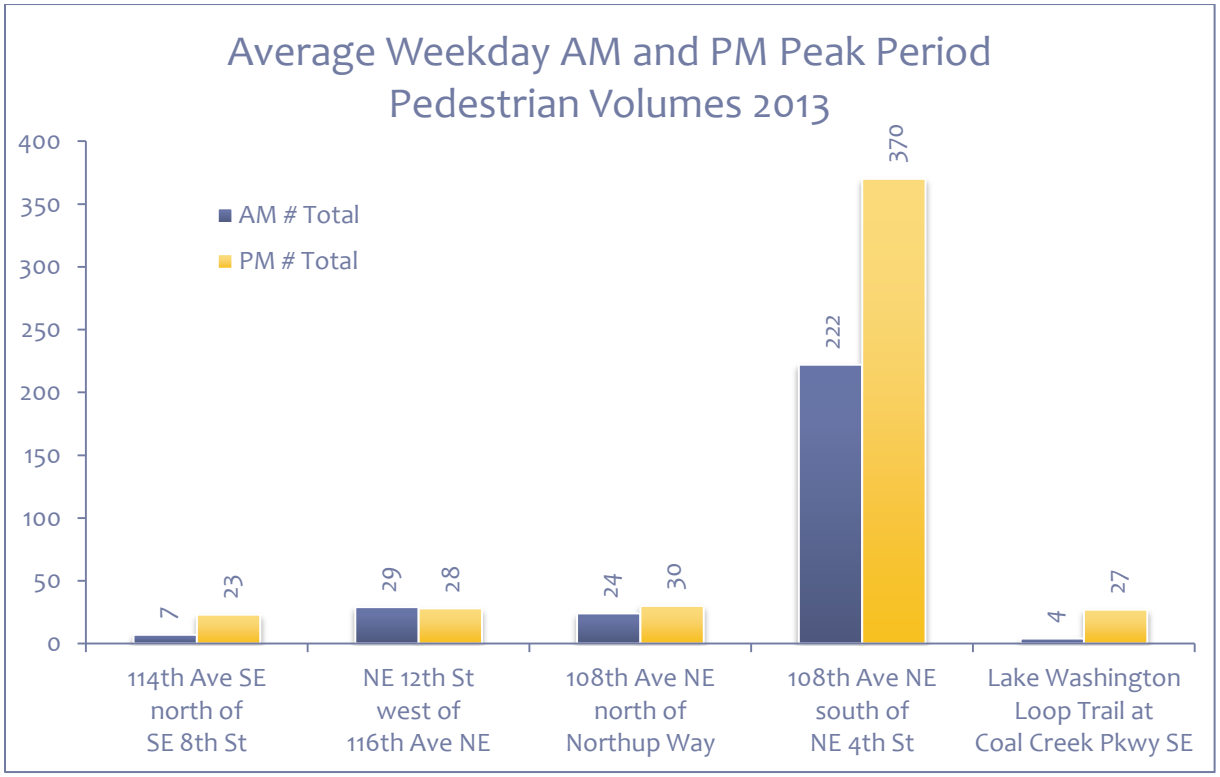


Figure 6: Average Weekly AM and PM Peak Period Pedestrian Volumes 2013

Bicycle Volumes Change AM-PM

Similar to pedestrian travel volumes recorded this year, 41.0% (64) of all bicycle trips (156) were recorded during the AM peak period and 59.0% (92) were counted during the PM peak period.

The highest recorded bicycle volume 17.2% (11) of all AM bicycle counts (64) at the five locations coordinated by Transportation Department staff were counted from 7:15 AM to 7:30 AM. The greatest PM bicycle volume 16.3% (15) was recorded for the interval from 5:45 PM to 6:00 PM.

The Lake Washington Loop Trail at Coal Creek Pkwy SE count location had the highest recorded bicycle volumes – 25.0% (16) of all AM bicycle counts observed across the five primary locations and 38.0% (35) of all PM bicycle counts. The count location at NE 12th Street west of 116th Avenue NE had the second largest volumes observed – 26.6% (17) of all AM bicycle counts and 23.9% (22) of PM bicycle counts. The 108th Ave NE north of Northup Way had the lowest bicycle volume of 14.1% (9) of all AM bicycle counts and 5.4% (5) of all PM bicycle counts.

Total bicycle volume experienced high variability due to low overall volumes. Four of the locations had higher bicycle volumes during the PM period. Only the 108th Ave NE north of Northup Way location volumes decreased – from 9 for the AM period to 5 for the PM period. The smallest change (27.7%) occurred at 114th Ave SE north of SE 8th St, which counted 11 bicycles for the AM period and 14 for the PM period. Lake Washington Loop Trail at Coal Creek Pkwy SE location recorded the greatest increase - 16 bicyclists during the AM period to 35 bicyclists during the PM period, a change of 188.8%.

See Table 11 and Figure 7 for Average Weekday AM-PM Peak Periods Bicycle Volumes Change 2013.

	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE	Peak Period Total
AM # Total	11	17	9	11	16	64
AM %	17.2%	26.6%	14.1%	17.2%	25.0%	
PM # Total	14	22	5	16	35	92
PM %	15.2%	23.9%	5.4%	17.4%	38.0%	
AM/PM # Change	3	5	-4	5	19	28
AM/PM Change %	27.3%	29.4%	-44.4%	45.5%	118.8%	43.8%

Table 11: Average Weekday AM-PM Peak Periods Bicycle Volumes Change 2013

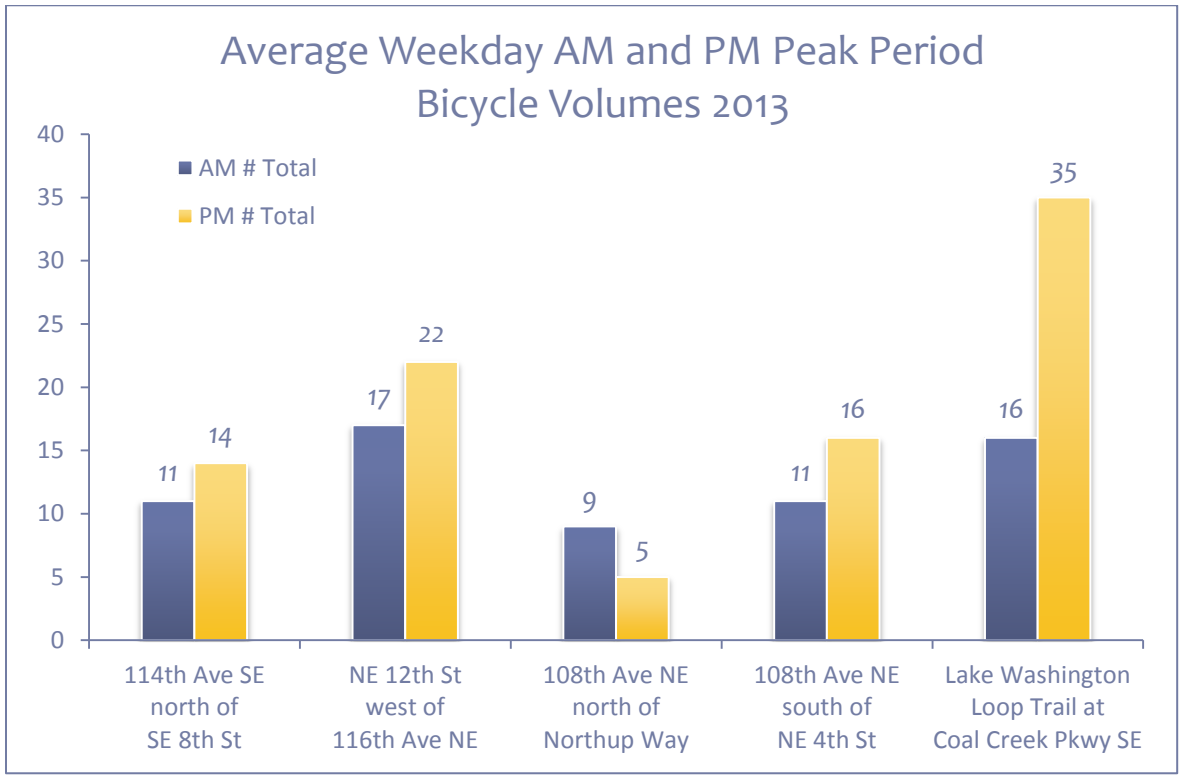


Figure 7: Average Weekday AM and PM Peak Periods Bicycle Volumes 2013

Count Year

A comparison was made for pedestrian and bicycle traffic between 2012 and 2013. Tables 6 and 7 in the Results section show the numerical volumes for each year.

Weekday AM and PM pedestrian and bicycle volumes for 2009-2013 can be found in Appendix B.

Pedestrian Volume Change 2012-2013

Four count locations have data for both 2012 and 2013. For these locations, peak period pedestrian volumes remained almost the same – 707 in 2013 compared to 730 in 2012, a 3.2% decrease.

AM peak period pedestrian volumes decreased by 12.9% (38) in 2013 compared to 2012. This decrease may be related to the weather conditions in 2013. Five fewer pedestrians were counted at Lake Washington Loop Trail at Coal Creek Pkwy SE in 2013 compared to 2012, a 55.6% decline. The only location where AM peak period pedestrian volumes remained the same was 114th Ave SE north of SE 8th St.

PM peak period pedestrian volumes increased by 3.4% (15). During the PM peak period, pedestrian volumes decreased only at 108th Avenue NE, north of NE Northup Way, a decrease of 42.3% (22). A notable increase in PM peak period pedestrian volumes of 130% (13) was observed for the 114th Ave SE north of SE 8th St count location.

Table 12, Figure 8 and Figure 9 display pedestrian volumes for 2012 and 2013 for all locations that the Transportation Department staff recorded in both 2012 and 2013.

Year	Time Period	114th Ave SE north of SE 8th St	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE	Total
2012	AM Peak	7	32	247	9	295
2012	PM Peak	10	52	351	22	435
2013	AM Peak	7	24	222	4	257
2013	PM Peak	23	30	370	27	450
AM Change #		0	-8	-25	-5	-38
PM Change #		13	-22	19	5	15
AM % Change		0.0%	-25.0%	-10.1%	-55.6%	-12.9%
PM % Change		130.0%	-42.3%	5.4%	22.7%	3.4%

Table 12: Average Weekday AM and PM Peak Period Pedestrian Volumes Change 2012-2013

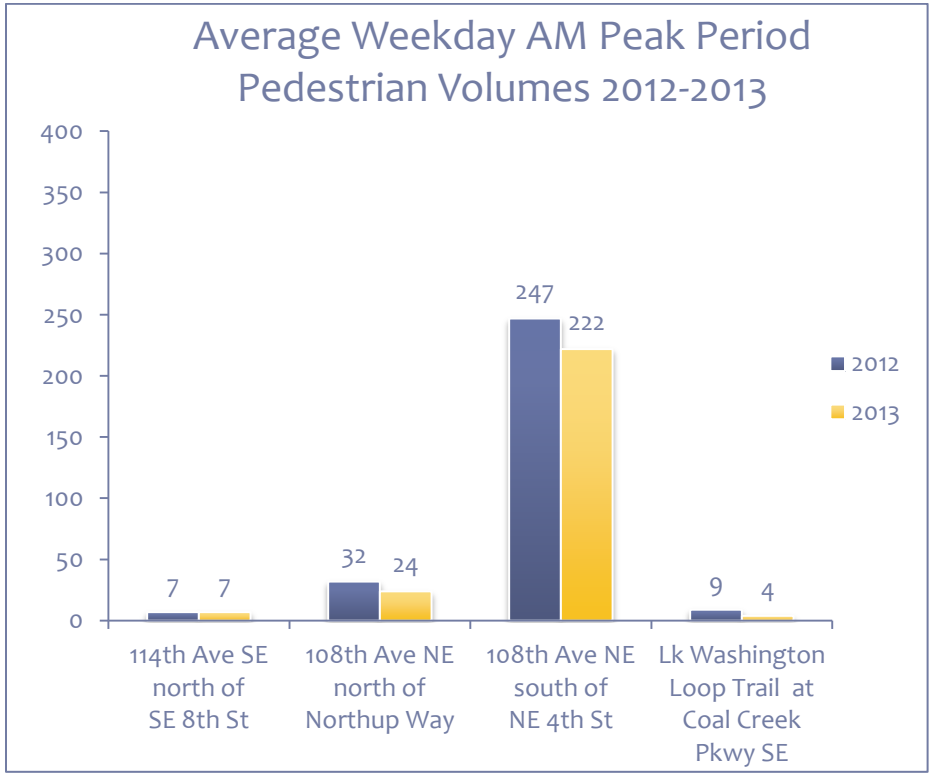


Figure 8: Average Weekday AM Peak Period Pedestrian Volumes 2012-2013

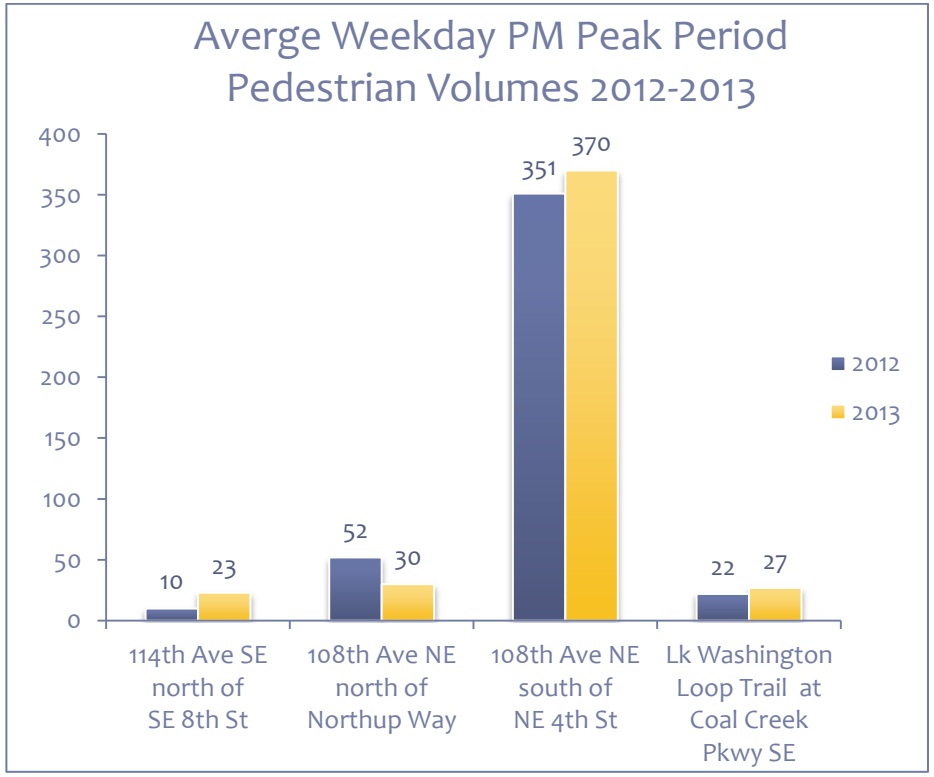


Figure 9: Average Weekday PM Peak Period Pedestrian Volumes 2012-2013

Bicycle Volume Change 2012-2013

Four count locations have data for both 2012 and 2013. For these locations, peak period bicycle volumes decreased from 166 in 2012 to 117 in 2013, a decrease of 29.5%.

AM peak period bicycle volumes decreased by 47.6% (19). Ten fewer bicyclists we counted in 2013 compared to 2012 at 114th Avenue SE north of SE 8th Street, a decrease of 47.6%. The lowest decrease, 8.3 % (4), was recorded at the 108th Avenue NE south of NE 4th Street count location.

PM peak period bicycle volumes decreased by 30.0% (30). 108th Avenue NE south of NE 4th Street was the only count location where increased bicycle volumes were observed. An average of 33.3% (4) more bicyclists were recorded at this location during the PM peak period. A notable decrease in PM peak period bicycle volumes of 70.6% (12) was observed for the 108th Avenue NE north of Northup Way count location.

Table 13, Figures 10 and Figure 11 display bicycle volumes for 2012 and 2013 for all locations that the Transportation Department staff recorded in both 2012 and 2013.

Year	Time Period	114th Ave SE north of SE 8th St	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE	Total
2012	AM Peak	21	12	12	21	66
2012	PM Peak	23	17	12	48	100
2013	AM Peak	11	9	11	16	47
2013	PM Peak	14	5	16	35	70
AM Change #		-10	-3	-1	-5	-19
PM Change #		-9	-12	4	-13	-30
AM % Change		-47.6%	-25.0%	-8.3%	-23.8%	-47.6%
PM % Change		-39.1%	-70.6%	33.3%	-27.1%	-30.0%

Table 13: Average Weekday AM and PM Peak Period Bicycle Volumes Change 2012-2013

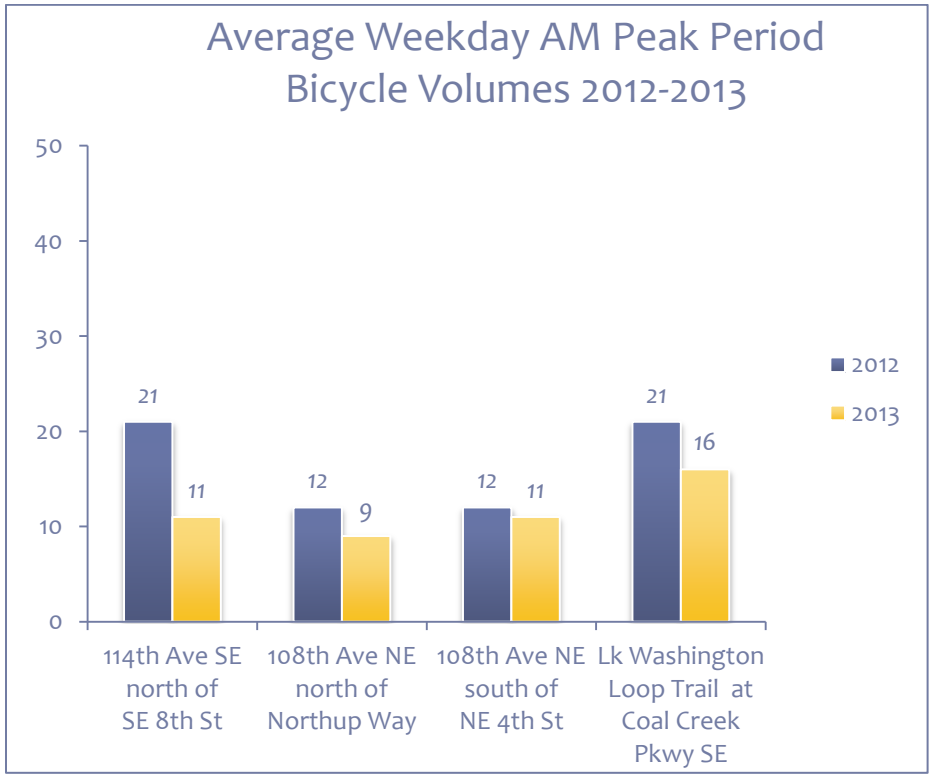


Figure 10: Average Weekday AM Peak Period Bicycle Volumes 2012-2013

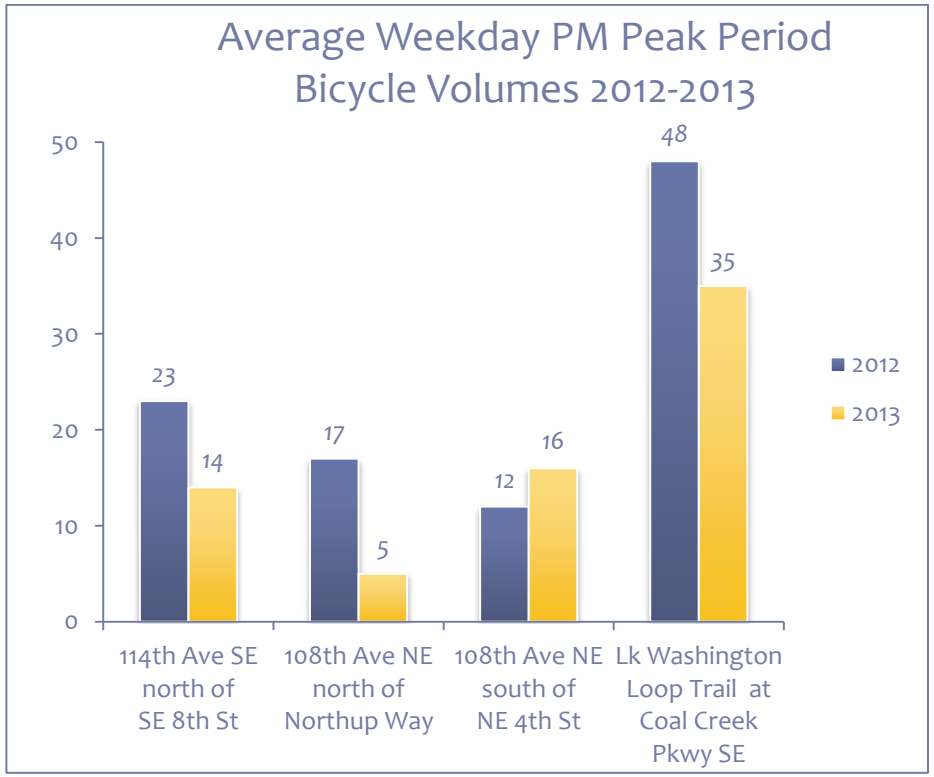


Figure 11: Average Weekday PM Peak Period Bicycle Volumes 2012-2013

DISCUSSION

Several key observations can be made after reviewing the results.

108th Ave NE south of NE 4th St, showed the highest volumes of pedestrians. Due to its location within Downtown Bellevue, it is safe to note that many of these trips are commute-related. Furthermore, this is confirmed by spikes in the traffic most likely associated with common commute times just before 9:00 AM, and just after 5:00 PM for the Downtown location. The second highest pedestrian volumes occurred at NE 12th Street west of 116th Avenue NE, which is the next closest count location to Bellevue Downtown. The highest peak period pedestrian volumes occurred before 9:00 AM and around 5:00 PM. This observation is not true for locations outside Downtown. For example, Lake Washington Loop Trail at Coal Creek Pkwy SE registered the highest pedestrian volumes from 7:00 AM to 7:30 AM and from 4:00 PM to 4:30 PM. That may be because pedestrian volumes at locations farther from Downtown and from other major employment centers may be associated with recreational uses.

During the review, staff noted that pedestrian volumes often occurred in waves of people. This could likely be explained by transition to or from transit, which serves groups at a time. Another explanation may be signal changes at intersections, which have a tendency to group pedestrians and bicyclists together.

Lake Washington Loop Trail at Coal Creek Pkwy SE showed the highest peak period bicycle volumes. This is consistent with the previous year's count. NE 12th Street west of 116th Avenue NE recorded the second highest peak period bicycle volumes. 114th Avenue SE north of SE 8th Street was once again a preferred choice for bicyclists. Again, many trips appear to be work related, as seen from spikes in volumes associated with common commute times.

Pedestrians can become grouped together when waiting for signal changes
(108th Ave NE and NE 4th St, looking east-southeast)

Group of bicyclists when waiting for signal change
(I-90 Bike trail west of Factoria Blvd, looking west)

With small exceptions, for both modes, volumes decreased for the AM and PM peak periods for all of the four locations that were counted in both 2012 and 2013. The Downtown location, 108th Avenue NE south of NE 4th Street, is the only location with a higher PM pedestrian and bicycle count in 2013 compared to 2012.

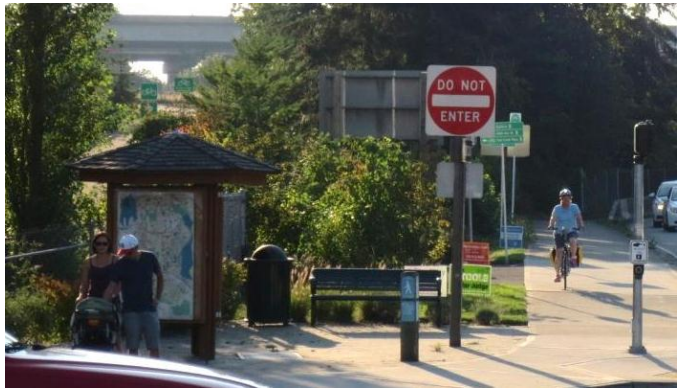
The increase of pedestrian and bicycle activity during PM peak period in Downtown may be related to a combination of increased pedestrian and bicycle commute trips, increased walkability and bikeability in Downtown as it continues to grow, and increased transit use.

Overall, pedestrian and bicycle volumes are higher in PM peak period compared to AM peak period. While the trip times indicate that pedestrian and bicycle travel are often commute related, this higher PM volume show use of non-commute related trips on the system such as recreation, shopping, etc.

The Pedestrian and Bicycle Count aims to capture average weekday volumes. Because counts are typically performed manually, it is difficult to obtain large amounts of data without using excessive time and resources.

These "typical" weekday volumes should not be used as an average throughout 2013. Pedestrian and bicycle volumes will vary heavily due to changes in weather, season, school breaks, holidays, and other factors. However, the data is valuable in observing trends over time. In addition, counting for multiple days and averaging results helps to reduce peaks which may occur on non-typical weekdays due to changing conditions.

Bicyclist crossing NE 4th St at 108th Ave NE, looking southwest



Pedestrian and bicycle activities associated with recreational and shopping uses (I-90 trail at Factoria Blvd)

Appendix A: Complete Camera Locations Count Data 2013

114th Avenue SE north of SE 8th Street

	Day 1		Day 2		Day 3	
Time Interval	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians
7:00-7:15	0	0	3	0		
7:15-7:30	2	3	2	1		
7:30-7:45	1	1	0	1		
7:45-8:00	0	0	0	0		
8:00-8:15	1	0	1	1		
8:15-8:30	1	0	1	1		
8:30-8:45	1	1	5	2		
8:45-9:00	1	0	1	0		
Total:	7	5	13	6		
16:00-16:15	1	2	1	2	1	1
16:15-16:30	0	3	0	1	3	3
16:30-16:45	1	3	2	2	2	1
16:45-17:00	2	1	3	4	3	3
17:00-17:15	1	5	1	5	1	5
17:15-17:30	0	2	0	0	2	5
17:30-17:45	1	2	3	11	2	0
17:45-18:00	0	0	1	2	8	7
Total:	6	18	11	27	22	25

Table 14: 114th Ave SE north of SE 8th St AM and PM Peak Period 15-minute Count Data

NE 12th Street west of 116th Avenue NE

	Day 1		Day 2		Day 3	
Time Interval	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians
7:00-7:15	0	0	0	1	2	1
7:15-7:30	1	5	1	0	3	3
7:30-7:45	1	4	0	8	3	3
7:45-8:00	3	2	0	3	7	3
8:00-8:15	1	5	0	7	5	1
8:15-8:30	2	6	0	3	4	3
8:30-8:45	4	2	1	6	3	5
8:45-9:00	2	5	2	2	6	8
Total:	14	29	4	30	33	27
16:00-16:15	1	3	2	4	4	3
16:15-16:30	0	6	2	1	3	3
16:30-16:45	2	5	3	3	4	2
16:45-17:00	0	3	2	8	7	2
17:00-17:15	0	2	2	5	1	10
17:15-17:30	3	6	5	2	2	1
17:30-17:45	1	1	0	4	12	3
17:45-18:00	5	5	3	1	5	2
Total:	12	31	19	28	38	26

Table 15: NE 12th St west of 116th Ave NE AM and PM Peak Period 15-minute Count Data

108th Avenue NE north of Northup Way

	Day 1		Day 2		Day 3	
Time Interval	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians
7:00-7:15	0	1	0	0	0	1
7:15-7:30	2	5	3	0	0	1
7:30-7:45	1	8	0	2	1	12
7:45-8:00	0	4	2	4	0	5
8:00-8:15	0	6	5	2	0	2
8:15-8:30	0	2	1	1	1	3
8:30-8:45	0	0	0	2	1	5
8:45-9:00	0	4	4	1	1	3
Total:	3	30	15	12	4	32
16:00-16:15	2	3	0	4	1	1
16:15-16:30	1	0	0	4	0	5
16:30-16:45	0	2	0	5	1	5
16:45-17:00	1	7	1	2	0	3
17:00-17:15	1	0	1	6	0	7
17:15-17:30	1	4	0	4	0	4
17:30-17:45	2	5	0	8	2	4
17:45-18:00	1	2	1	2	0	1
Total:	9	23	3	35	4	30

Table 16: 108th Ave NE north of Northup Way AM and PM Peak Period 15-minute Count Data

108th Avenue NE south of NE 4th Street

	Day 1		Day 2		Day 3	
Time Interval	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians
7:00-7:15	0	25	0	18	0	18
7:15-7:30	0	27	0	17	2	16
7:30-7:45	1	28	3	27	2	25
7:45-8:00	0	30	1	17	2	30
8:00-8:15	1	29	2	28	3	30
8:15-8:30	0	31	0	23	2	21
8:30-8:45	3	30	1	35	2	30
8:45-9:00	0	48	4	42	1	39
Total:	5	248	11	207	14	209
16:00-16:15	0	59	1	40	1	49
16:15-16:30	1	40	1	46	4	40
16:30-16:45	1	34	0	40	3	52
16:45-17:00	1	34	1	57	5	40
17:00-17:15	3	65	1	51	3	43
17:15-17:30	4	62	4	93	4	39
17:30-17:45	1	35	1	53	4	39
17:45-18:00	0	51	0	17	7	30
Total:	11	380	9	397	31	332

Table 17: 108th Ave NE south of NE 4th St AM and PM Peak Period 15-minute Count Data

Lake Washington Loop Trail at Coal Creek Pkwy SE

	Day 1		Day 2		Day 3	
Time Interval	Bicyclists	Pedestrians	Bicyclists	Pedestrians	Bicyclists	Pedestrians
7:00-7:15			1	1	4	0
7:15-7:30			1	1	6	1
7:30-7:45			0	0	3	0
7:45-8:00			1	2	2	0
8:00-8:15			1	0	1	0
8:15-8:30			2	0	1	0
8:30-8:45			0	0	0	0
8:45-9:00			1	0	2	1
Total:			7	4	19	2
16:00-16:15	1	0	3	23	9	4
16:15-16:30	3	1	2	27	6	0
16:30-16:45	3	2	3	2	11	1
16:45-17:00	4	0	5	10	2	2
17:00-17:15	3	3	2	0	6	1
17:15-17:30	2	0	1	0	7	1
17:30-17:45	3	0	0	0	13	2
17:45-18:00	3	0	1	2	12	1
Total:	22	6	17	64	66	12

Table 18: Lake Washington Loop Trail at Coal Creek Pkwy SE AM and PM Peak Period 15-minute Count Data

Appendix B: Weekday AM and PM Peak Period Pedestrian and Bicycle Volumes 2009-2013

Weekday AM and PM Peak Period Pedestrian Volumes 2009-2013

Year	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
2009	4	32	19	295	265	
2010	30	16	34	294	235	
2011	9		28	441	229	
2012	7		32	247		9
2013	7	29	24	222		4

Table 19: Average Weekday AM Peak Period Pedestrian Volumes 2009-2013

Year	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
2009	6	27	11	361	359	
2010	16	16	38	368	443	
2011	9		32	507	569	
2012	10		52	351		22
2013	23	28	30	370		27

Table 20: Average Weekday PM Peak Period Pedestrian Volumes 2009-2013

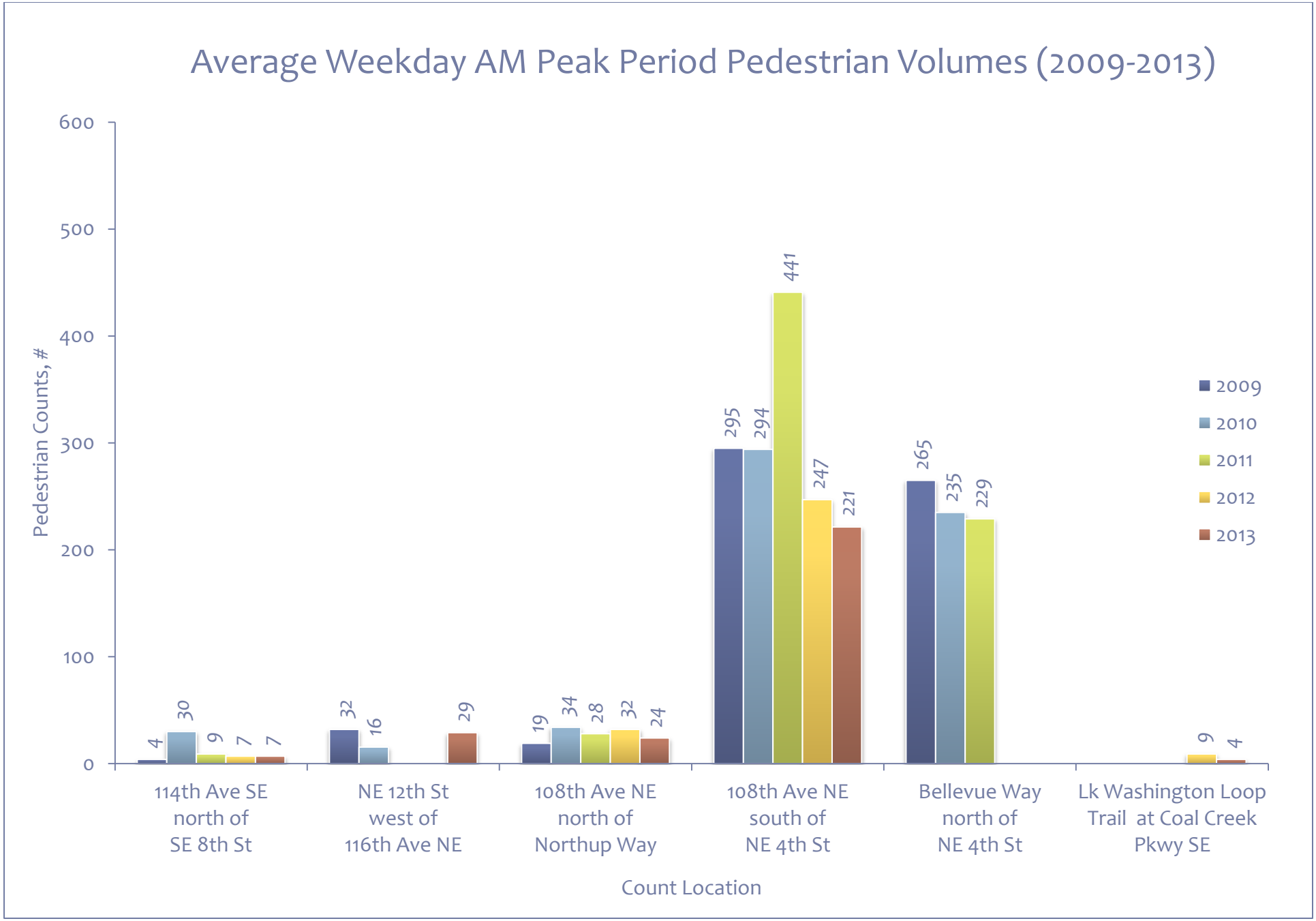


Figure 12: Average Weekday AM Peak Period Pedestrian Volumes 2009-2013

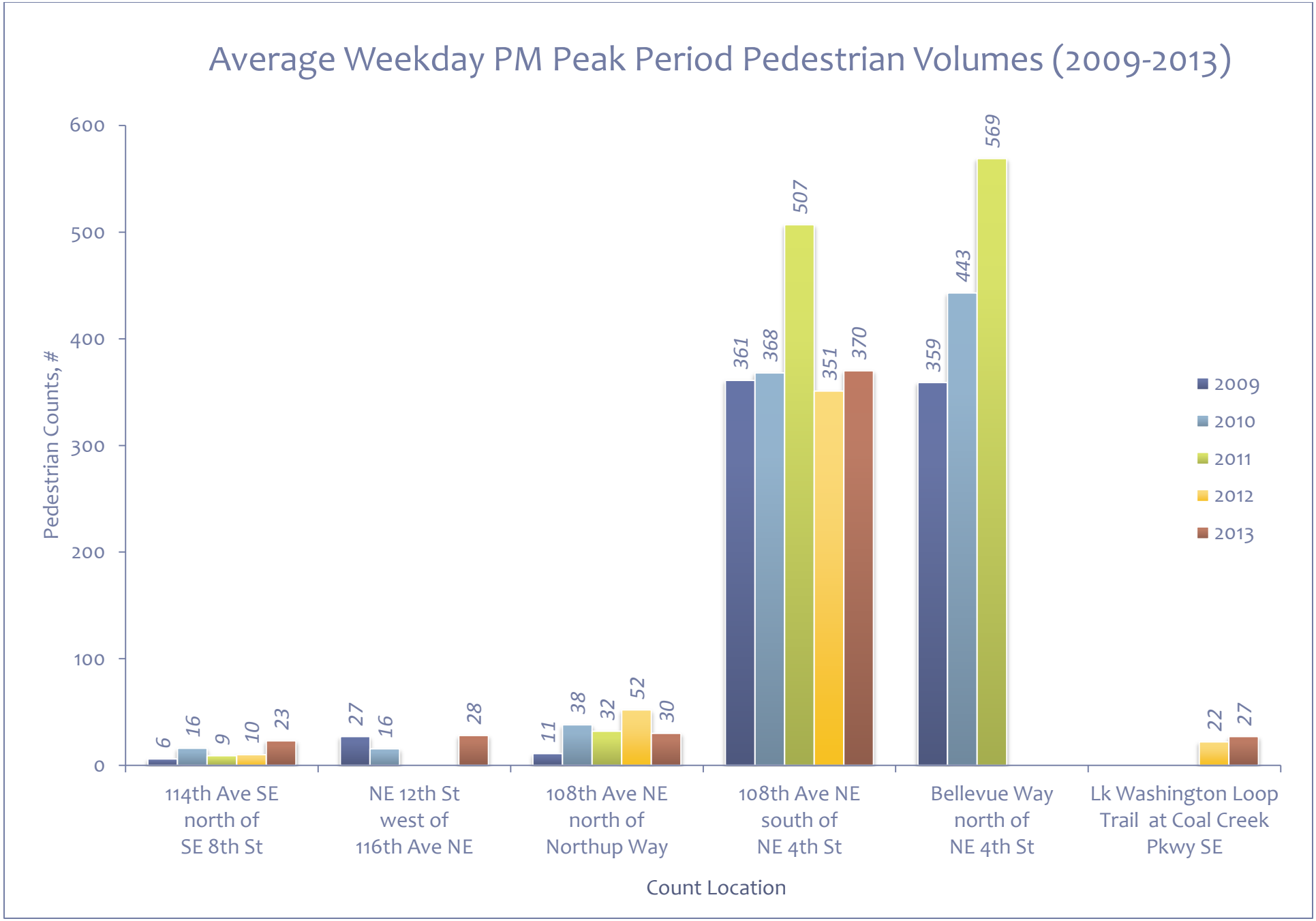


Figure 13: Average Weekday PM Peak Period Pedestrian Volumes 2009-201

Weekday AM and PM Peak Period Bicycle Volumes 2009-2013

Year	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
2009	14	24	19	11	3	
2010	39	17	6	16	3	
2011	21		4	19	9	
2012	21		12	12		21
2013	11	17	9	10		16

Table 21: Average Weekday AM Peak Period Bicycle Volumes 2009-2013

Year	114th Ave SE north of SE 8th St	NE 12th St west of 116th Ave NE	108th Ave NE north of Northup Way	108th Ave NE south of NE 4th St	Bellevue Way north of NE 4th St	Lake Washington Loop Trail at Coal Creek Pkwy SE
2009	17	20	21	15	5	
2010	42	25	9	19	12	
2011	39		12	19	13	
2012	23		17	12		48
2013	14	22	5	16		35

Table 22: Average Weekday PM Peak Period Bicycle Volumes 2009-2013

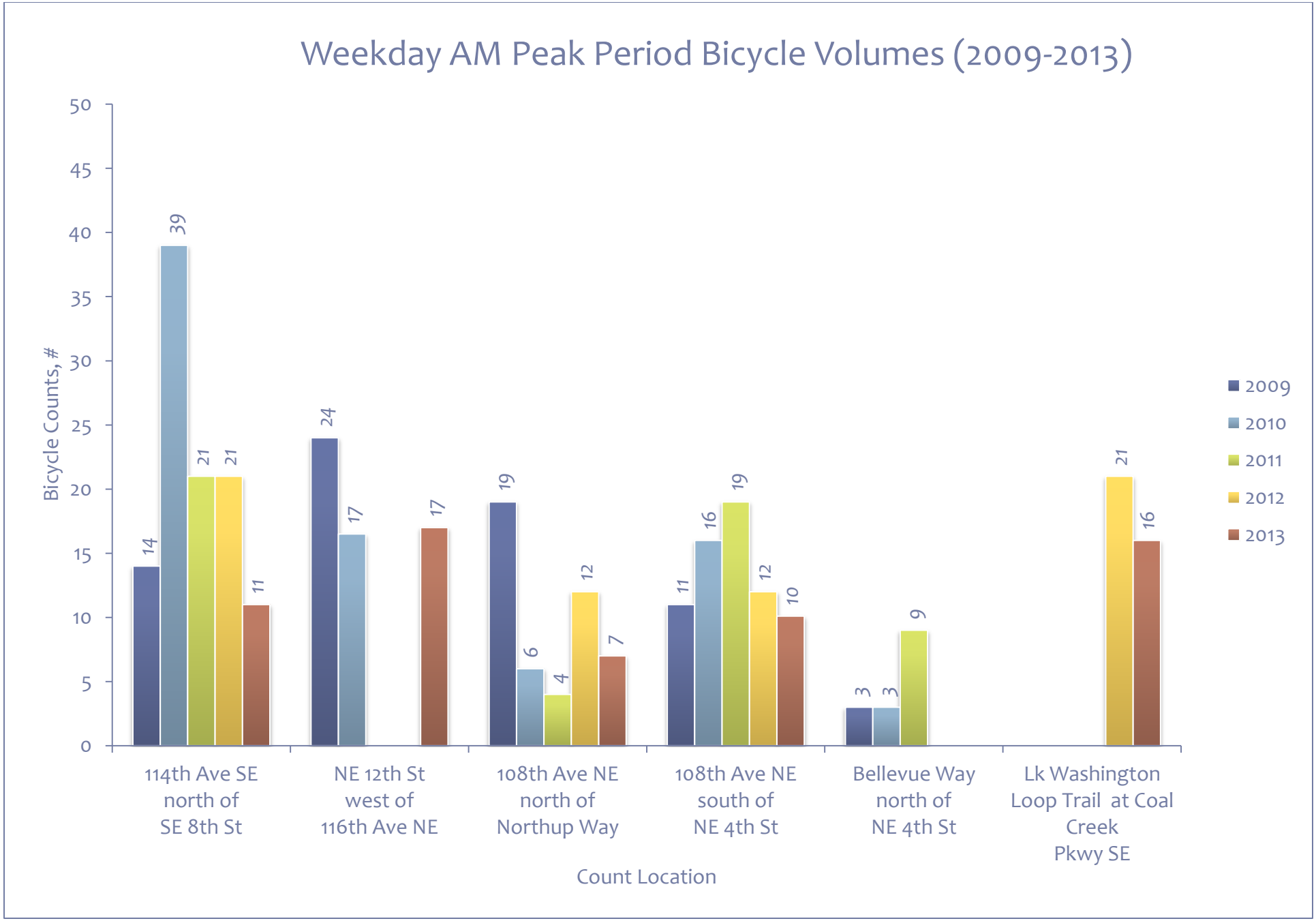


Figure 14: Average Weekday AM Peak Period Bicycle Volumes 2009-2013

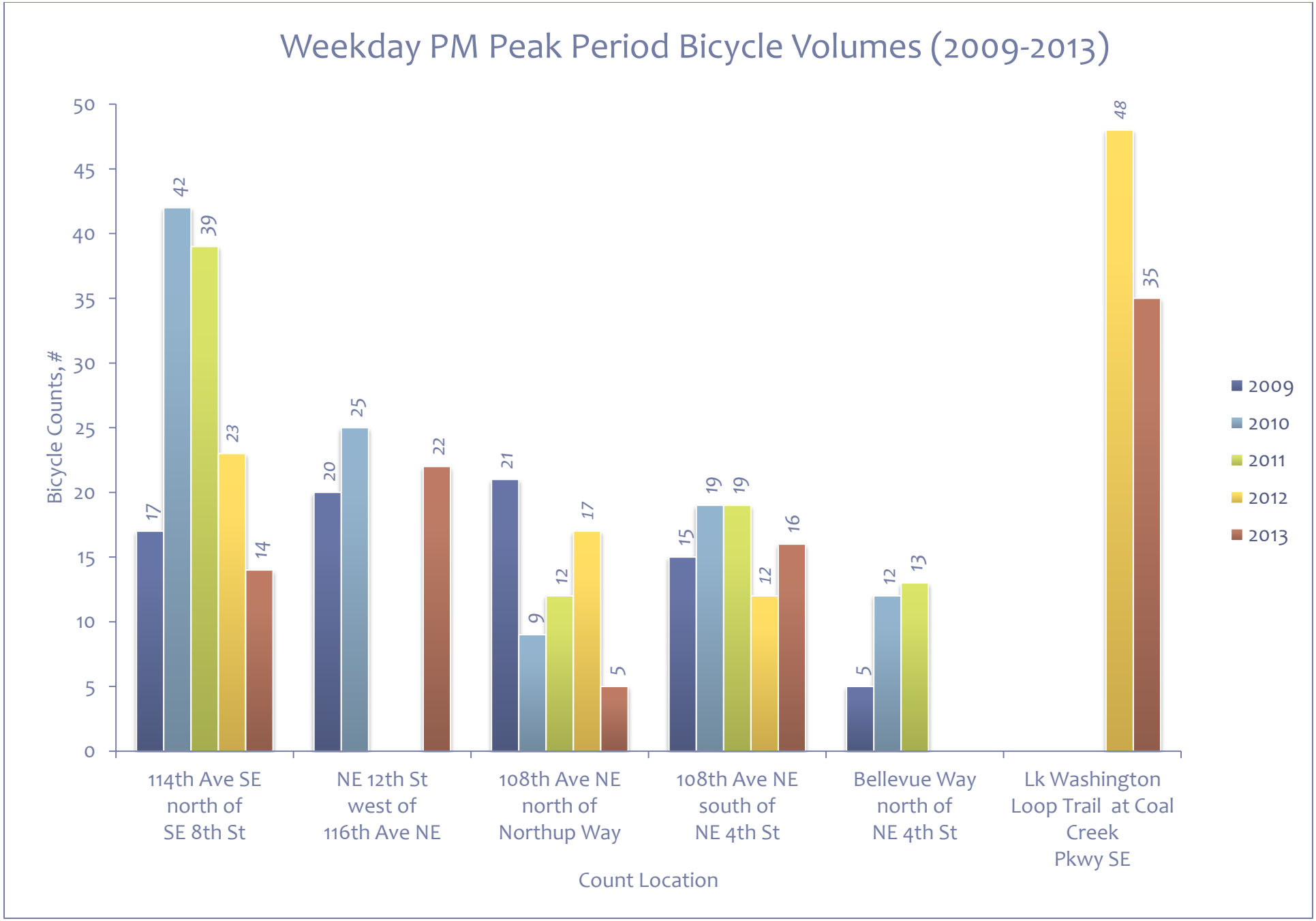


Figure 15: Average Weekday PM Peak Period Bicycle Volumes 2009-2013

Appendix C: All City of Bellevue Locations Count Data (2009-2013)

		2009		2010		2011		2012		2013	
No.	Location	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
A	108th Ave NE north of NE Northup Way	19	11	34	38	28	32	32	52	24	30
B	115th Ave NE east of 116th Ave NE	4	27					6	11		
C	SR 520 Trail at NE 24TH St							6	15	3	14
D	NE 12th St west of 116th Ave NE	32	27	16	16		79	52		29	28
E	Bellevue Way north of NE 4th St	265	359	235	443	229	569				
F	108th Ave NE south of NE 4th St	295	361	294	368	441	507	247	351	222	370
G	114th Ave NE north of SE 8th St	4	6	30	16	9	9	7	10	7	23
H	I-90 Trail at Enatai					10	91		47	5	35
I	118th Ave SE north of I-90										
J	I-90 Bike Trail west of Factoria Blvd SE					48	11	50	111	34	80
K	I-90 Sunset Bike Trail east of Eastgate Way						23	7	18	11	19
L	West Lake Sammamish south of SE 26th St					2	4	6	16		16
M	Lake Washington Loop at Coal Creek Pkwy SE							9	22	4	27
N	Trail at Newcastle Beach Park					16		4	12	9	

Table 23: Average Weekday AM and PM Peak Period Pedestrian Counts All Bellevue Locations 2009-2013

		2009		2010		2011		2012		2013	
No.	Location	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
A	108th Ave NE north of NE Northup Way	19	21	6	9	4	12	21	23	9	5
B	115th Ave NE east of 116th Ave NE	6	13	17	22			16	21		
C	SR 520 Trail at NE 24TH St	24	22	24	42			30	38	25	41
D	NE 12th St west of 116th Ave NE	24	20	17	25		27	18		17	22
E	Bellevue Way north of NE 4th St	3	5	3	12	9	13				
F	108th Ave NE south of NE 4th St	11	15	16	19	19	19	10	17	11	16
G	114th Ave NE north of SE 8th St	14	17	39	42	21	39	12	24	11	14
H	I-90 Trail at Enatai	61	98	119	182	143	188		194	59	73
I	118th Ave SE north of I-90	22	28	39	67						
J	I-90 Bike Trail west of Factoria Blvd SE	35	43	62	76	63	85	51	117	38	41
K	I-90 Sunset Bike Trail east of Eastgate Way	8	17	16	20		23	12	14	15	13
L	West Lake Sammamish south of SE 26th St	3	5	4	20	2	15	7	13		10
M	Lake Washington Loop at Coal Creek Pkwy SE							21	48	16	35
N	Trail at Newcastle Beach Park	17	29	20	69	30		30	87	12	

Table 24: Average Weekday AM and PM Peak Period Bicycle Counts All Bellevue Locations 2009-2013

Appendix D: Count Forms and Instructions

When recording non-motorized road users for the Annual Pedestrian and Bicycle counts, staff or volunteers are asked to follow the five basic instructions for all agencies and jurisdictions involved in the statewide documentation project. These guidelines include:

1. Count for two hours in 15-minute intervals;
2. Count bicyclists who ride on the sidewalk;
3. Count the number of people on bicycles, not the number of bicycles;
4. Pedestrians include people in wheelchairs or others using assistive devices, children in strollers, etc.; and
5. People using equipment such as skateboards or rollerblades should be included in the "other non-motorized" category.

Pedestrian and Bicycle Count:
City of Bellevue Screenline Count Form

Data Collector Name:	
Data Collection Date:	
Count Date:	
Count Time:	
Weather Conditions:	
Average Temperature:	
Average Humidity:	
Wind Speed:	
Location:	

Time Interval	Bicyclists	Pedestrians
7:00-7:15		
7:15-7:30		
7:30-7:45		
7:45-8:00		
8:00-8:15		
8:15-8:30		
8:30-8:45		
8:45-9:00		
Total:		

Location:

Time Interval	Bicyclists	Pedestrians
16:00-16:15		
16:15-16:30		
16:30-16:45		
16:45-17:00		
17:00-17:15		
17:15-17:30		
17:30-17:45		
17:45-18:00		
Total:		

Table 24: Count Forms