

American Community Survey Bicycle Commuting Trends, 2000 to 2008



According to the US Census Bureau's 2008 American Community Survey (ACS), released on September 22, 2009, 0.55 percent of Americans use a bicycle as the *primary* means of getting to work. This is up 14 percent since 2007, 36 percent from the first ACS in 2005, and 43 percent since the 2000 Census. (Note that all ACS estimates are extremely conservative, and undercount cycling, for reasons explained below.)

On average, the 70 largest cities in the US, from New York City (population eight million) to Plano, Texas (population 259,000), had higher bicycle commuter levels and larger increases than the national average. The average bicycle commuter share for the largest 70 US cities in 2008 was 0.93 percent, having grown by nearly 50 percent since 2000.

Among the 70 largest cities, the 27 that have been designated by the League of American Bicyclists as [Bicycle Friendly Communities](#) (BFCs) for their pro-bicycling policies saw even higher levels of bicycle commuting and greater increases over the past eight years. In 2008, the average BFC bicycle commuter share was 1.5 percent, nearly three times the national average. BFCs also grew 60 percent more than the national average and 40 percent more than the 70 largest city average.

Bicycle Friendly Communities far outpaced the 43 largest non-BFCs, whose average bicycle commuter share is growing slower than even the national average. Between 2000 and 2008, the bicycle commuter share in the 27 largest BFCs increased by nearly 70 percent. In contrast, the share in the non-BFC cities increased only 23 percent, to 0.57 percent. This strongly suggests that the efforts of the BFCs to improve bicycling conditions by investing in engineering, education, encouragement, enforcement, and evaluation and planning are paying off with larger increases in bicycle commuters.

Figure 1.

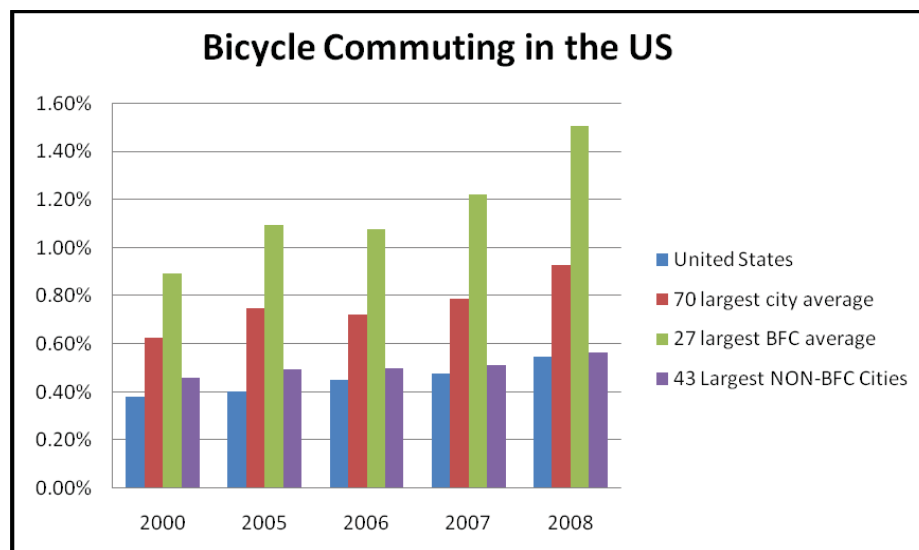
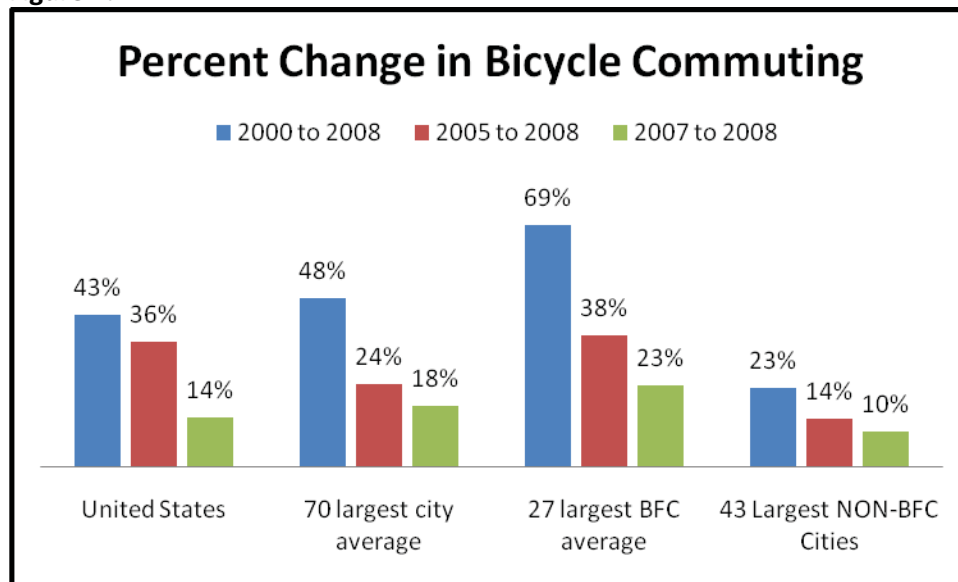


Figure 2.



Who grew?

Some of the fastest growing communities were those that started with relatively low bicycle commuter shares in 2000. Nashville and Cleveland tripled their share, and Cincinnati doubled its, but all three still have not reached three-quarters of a percent. On the other hand, some the cities with the highest bicycle commuter levels in 2000 also saw some of the largest increases. Platinum BFC Portland, OR saw the largest growth among all 70 large cities, more than tripling their bike share, to nearly 6 percent. Figure 4 shows the bicycle commuter share for the 23 largest BFCs and figure 5 show their percent change in bicycle commuting. Figure 3 shows three bicycle friendly communities that are not among the largest 70 US cities. Boulder is a Platinum community; Fort Collins and Madison are Gold. ACS data are not available for all years.

Figure 3.

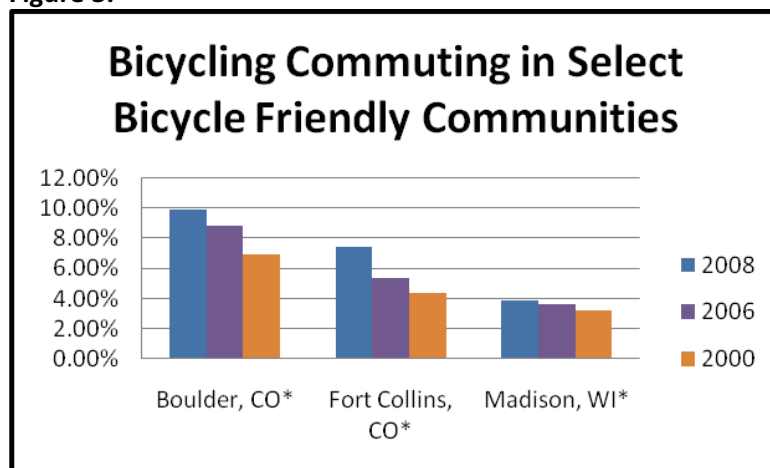


Figure 4.

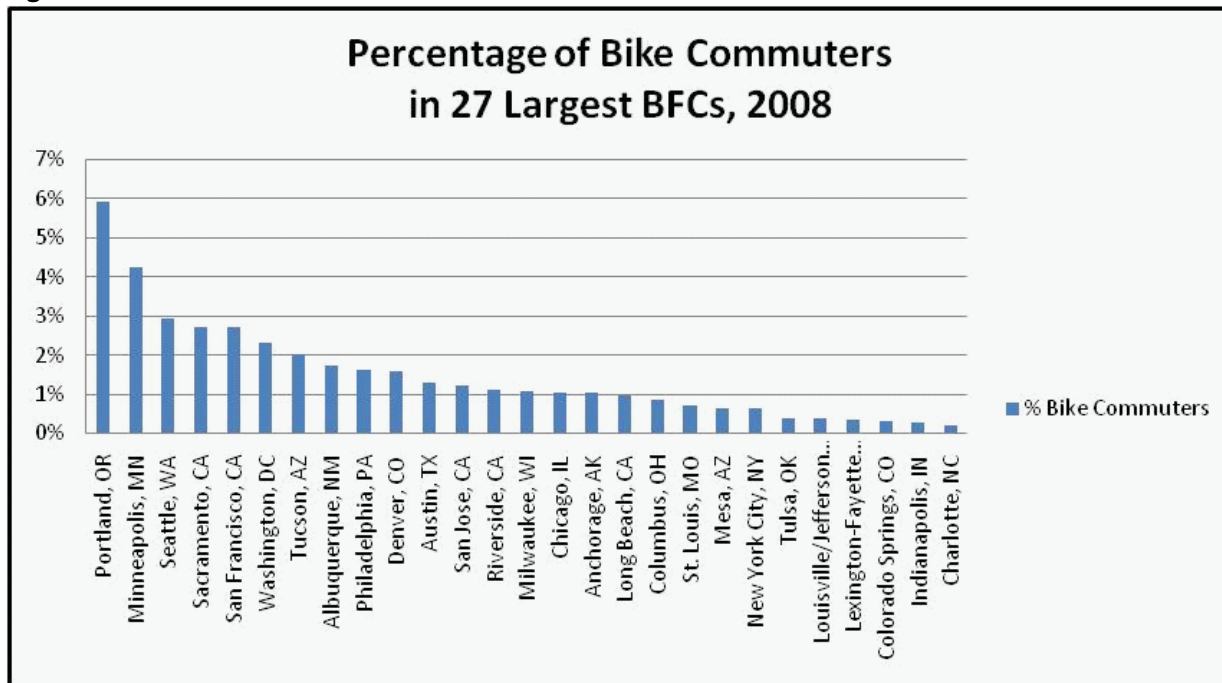
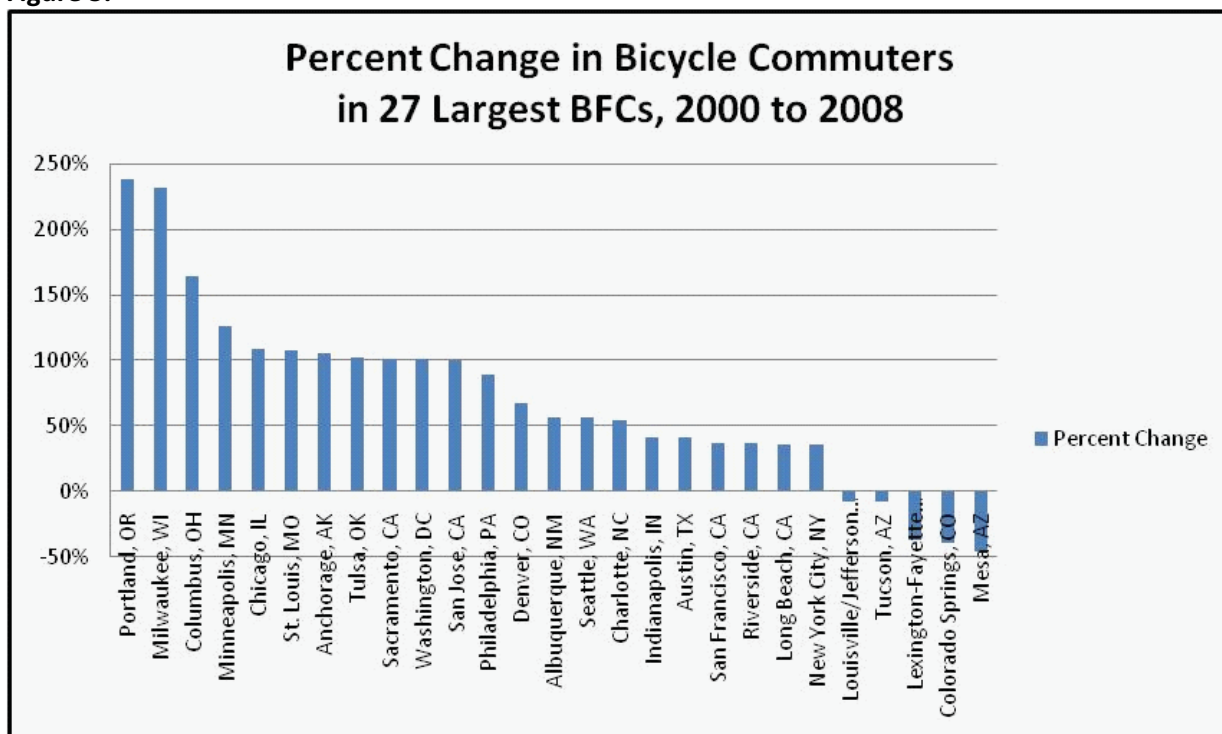


Figure 5.



* In 2000, the Census recorded data for "Louisville city," but in the ACS they use "Louisville/Jefferson County metro government (balance), KY". Starting in the 2008 ACS, Lexington-Fayette, KY changed to "Lexington-Fayette urban county, KY". These differences in geographical unit may explain the declining bicycling levels.

State Trends

Levels of bicycle commuting vary by state. Oregon has the highest share of bicycle commuters at 2 percent, while the others in the top five range from between one and two percent. The states with the lowest share of bicycle commuters range from between 0.1 and 0.2 percent. Table 1 shows the percent of bicycle commuters over time for the five highest and lowest states.

Table 1. States with the five highest and lowest shares of bicycle commuters

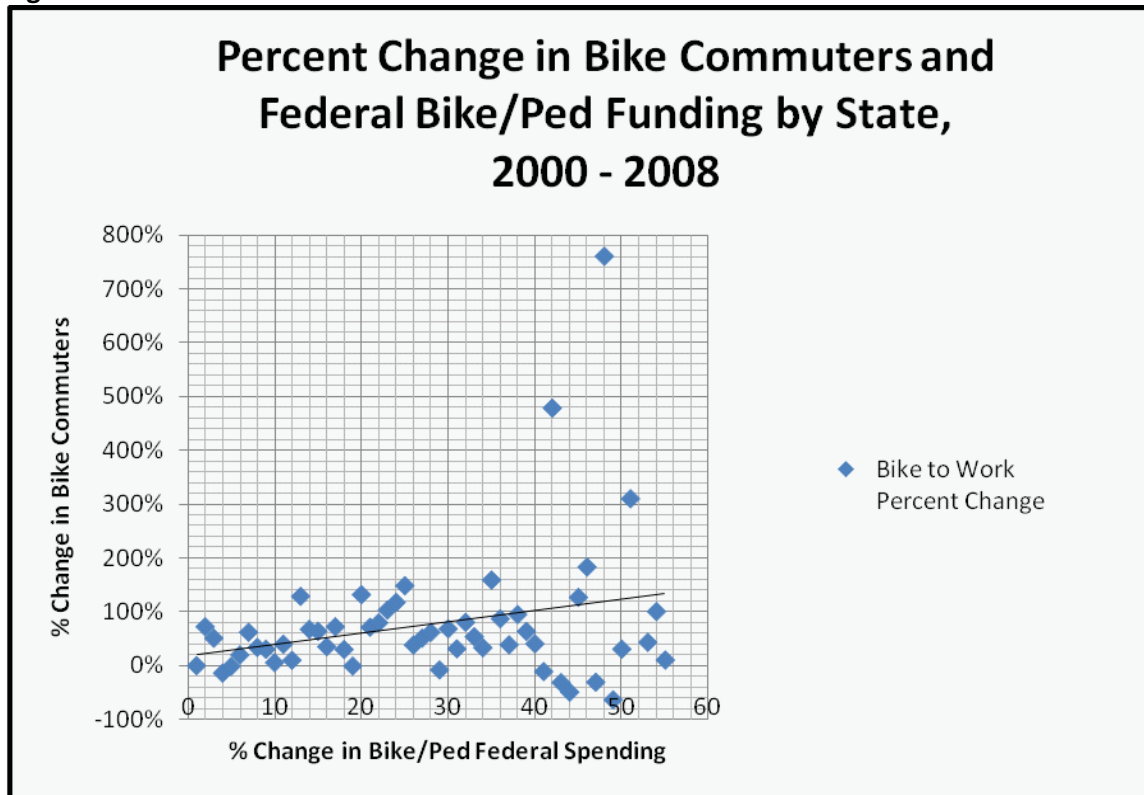
Rank	State	Bike to Work					Change
		2000	2005	2006	2007	2008	2000 to 2008
1	Oregon	1.07%	1.53%	1.68%	1.88%	2.09%	95.09%
2	Idaho	0.66%	1.00%	0.77%	1.09%	1.52%	128.82%
3	Montana	0.96%	1.60%	1.33%	1.42%	1.45%	51.17%
4	Colorado	0.77%	0.94%	1.08%	1.10%	1.25%	62.01%
5	New Mexico	0.56%	0.51%	0.56%	0.46%	1.02%	80.48%
Lowest							
46	Kentucky	0.15%	0.12%	0.13%	0.22%	0.19%	30.04%
47	Tennessee	0.24%	0.23%	0.23%	0.12%	0.16%	-31.64%
48	West Virginia	0.43%	0.64%	0.72%	0.22%	0.16%	-63.54%
49	Arkansas	0.13%	0.17%	0.16%	0.12%	0.13%	-1.26%
50	Alabama	0.07%	0.09%	0.07%	0.10%	0.13%	72.39%

Spending and Bicycling levels

The Federal Highway Administration publishes the amount spent on bicycle and pedestrian projects by year in each state. Using this information, we calculated the percent increase in bicycle and pedestrian spending between 2000 and 2008 and plotted it against the percent increase in bicycle commuting over the same period (figure 6). The linear trend line in the chart shows that, on average, larger increases in state spending on bicycle and pedestrian projects are correlated with larger increases in bicycle commuting levels. Washington State, South Dakota, and Wyoming saw the largest increases in bicycle commuter share. Note that large percentage increases do not necessarily indicate high levels of spending or bicycle commuting relative to other states if the starting point was very low.

Overall, the results of the 2008 ACS travel data show that bicycling to work is becoming more popular. Locations that had relatively high shares of bicycle commuting in 2000 showed no signs of leveling off. In fact, those communities increased their shares of bicycle commuters at above average rates. Cities that were recognized by the League of American Bicyclists for investing in bicycling saw above average increases in bicycle commuting.

Figure 6.



Notes on the American Community Survey and Decennial Census (Long Form) Estimates

The [American Community Survey](#) is the country's largest household survey with an annual sample size of about 3 million addresses. The survey uses questionnaires and interviews to gather information on demographic, economic, and housing characteristics, including journey to work information. Annual estimates are available for geographic areas with populations of 65,000 or more, although because of limited sample sizes, data on bicycle commuting are not available for all of those locations. The ACS replaces the Census Long Form questionnaire, which was given to one in six Census-takers every ten years.

Using the decennial Census and the annual American Community Surveys, the U.S. Census bureau has asked the same question about means of travel to work over time, making it one of the best sources for tracking trends in bicycling to work levels. However, there are several limitations to using the ACS as a measure of bicycling levels. Bicycling's share of all trips is nearly three times larger than bicycling's share of commuter travel -- the 2000 Census estimated that 0.34 percent of American workers usually bike to work, in contrast, the 2001 National Household Transportation Survey (NHTS) estimated that 0.9 percent of all trips were made by bicycle -- therefore, the ACS bicycle commuter percentage should not be interpreted as equivalent to the proportion of all trips. (Note: the NHTS data collected between April, 2008 and May, 2009 is scheduled for release in January 2010.)

In addition, the ACS and the decennial Census undercount bicycle commuting levels. They [ask](#) for the *principal* mode of travel the worker *usually* used to get from home to work during the previous week. Workers were asked to list only the means of transportation they used on the largest number of days in that week. This means that if the respondent rode a bicycle to work two days but drove three, they would not be counted as a cyclist. Likewise, workers were asked only for the means of transportation used for the longest distance during the trips. If someone biked one mile to a bus stop and rode the bus for two miles they would not be recorded as a bicyclist.

Finally, it is important to note that the results of the ACS (and the Census long form) are only estimates based on population samples. The ACS releases an estimate of the number of workers 16 years old and over and the estimated number of workers who used each mode (drive alone, car-pool, public transportation, walk, bike, taxi, or motorcycle). The estimates are used to calculate the share of workers using each mode. Along with these estimates, the ACS publishes the margin of error, a range within which they can be 90 percent confident that the true number falls. For example, the ACS estimates with 90 percent confidence that the number of bicycle commuters in New York City is between 21,162 and 27,694. The given estimate is 24,428 with a +/- range of 3,266. For communities with low counts of bicycle commuters this range can be quite large, in few cases the +/- range can be as large as the estimated number of bike commuters. Plano, Texas, for example, has an estimate of 230 and a +/- range of 235, meaning the ACS estimates with 90 percent confidence that the actual number of bike commuters is between zero (since negative five is impossible) and 465. For simplicity's sake, these analyses use the mid-point in the range, but when reading the tables, keep in mind that all percentages are in fact just estimates.

The decennial Census (the long form) and the ACS are comparable because they ask the same question and use the same basic sampling methodology. However, there is one important difference. The decennial Census asked for journey to work information only at one time during the year (in April, which could underestimate counts in cooler climates,) whereas the ACS contacts respondents in equal numbers each month year-round.

Notes:

- As stated above, the ACS numbers are estimates – small differences among years or cities may not be statistically significant.
- These numbers are based on the “principal city” not the larger Metropolitan Statistical Area (MSA).
- Population numbers in the tables are drawn from the 2008 ACS population estimates, not from the separate Census Bureau population estimates.