



Journey to Work in the City of Boulder

Travel Data Update: October 2009

Compiled by City of Boulder Transportation Staff

Newly released data from 2008 American Community Survey (ACS) shows that the City of Boulder continues to make consistent progress on reducing single-occupant vehicle (SOV) travel. The data, released in September 2009, measures work-trip mode shares. The ACS is conducted by the U.S. Census Bureau to provide data between decennial Census surveys. For both the Census and the ACS, respondents are asked how they “usually” travel to work. All respondents reside in the City of Boulder. The margin of error is 1.65 percent with a 90 percent confidence interval.

Key findings from the 2008 ACS, in the context of past ACS and Census results, include:

1. The City of Boulder continues to make progress in reducing SOV mode-share. Since the 2000 Census, the SOV work-trip mode share has decreased from 61.3 percent to 53.6 percent according to the 2008 ACS.
2. Boulder residents report significantly higher alternative mode shares compared to nation and Denver Metro area; according to the 2008 ACS, the bus plus bike plus walk mode share is 28.8 percent for Boulder residents compared to 8.3 percent and 7.7 percent for the nation and the Denver Metro area respectively.
3. Boulder’s bicycle commuting share (9.9 percent) is 18 times the national average (0.55 percent) and is the highest among Bicycle Friendly Communities that were surveyed by the 2008 ACS. Boulder’s transit use is twice the national average (10.6 percent locally v 5.0 percent nationally), and walk trips are three times the national average (8.3 percent locally v 2.8 percent nationally).
4. The ACS results validate some of the city’s own survey findings and methodologies as they report similar SOV work-trip mode shares over time.

Boulder’s Journey to Work

According to Census and ACS data, the ‘drive-alone’ work-trip mode share has decreased by 7.7 percent from the 2000 Census to the 2008 ACS. In that same time period, the transit work-trip mode share increased by 5 percent and the bicycle work-trip increased by 2.9 percent. Pedestrian travel fell by 2.5 percent in the same period. It is also interesting to note that the percentage of Boulder residents who work from home nearly doubled since the 2000 Census.

Table 1: Work-trip Mode Share Data

Mode	1990	2000	2006 ACS	2008 ACS	Change between 2000 Census and 2008 ACS
	Census	Census			
Drive-alone	61.3%	59.8%	55.5%	53.6%	-7.7%
Carpool/Vanpool	9.5%	8.7%	6.7%	6.9%	-2.6%
Bus	5.6%	8.3%	9.0%	10.6%	+5.1%
Bike	7.0%	6.9%	8.8%	9.9%	+2.9%
Walk	10.7%	9.0%	10.0%	8.3%	-2.5%
Other	0.8%	0.8%	0.8%	1.0%	+0.2%
Work from home	5.1%	6.5%	8.6%	9.6%	+4.5%

Census and ACS data suggest that in comparison to work-trip mode split data for the nation and the Denver Metro area, the City of Boulder’s investments in multimodal infrastructure and support programs have had a significant impact on single-occupant vehicle use. Since the 2000 Census, the national drive-alone work-trip mode share has increased by 5.1 percent, while Boulder’s has decreased by 7.7 percent. The Denver Metro area has experienced virtually no change.

Table 2: Comparing Drive-alone Work-trips Mode Shares

Drive-alone Work-trip Mode Share	1990 Census	2000 Census	2006 ACS	2008 ACS	Change between 2000 Census and 2008 ACS
Boulder	61.3%	59.8%	55.5%	53.6%	-7.7%
Denver Metro	75.0%	75.6%	76.0%	75.5%	+0.5%
Nation	69.5%	75.7%	75.9%	74.6%	+5.1%

Drive Alone Work Trip Mode Share

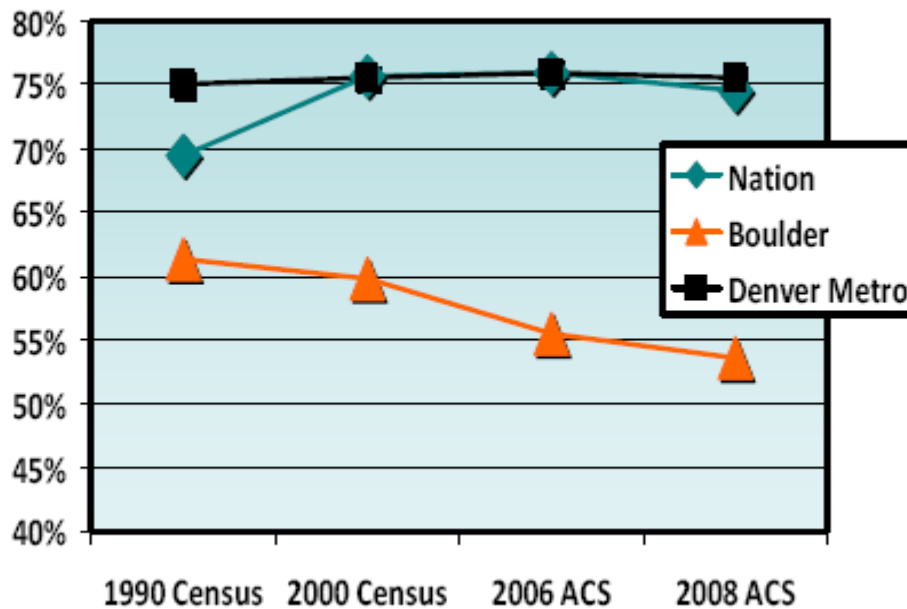


Table 3 shows the ACS drive-alone work-trip results for residents of the communities included in the survey in Colorado. City of Boulder residents have the lowest drive-alone mode share in Colorado, more than 13 percentage points lower than Denver with the next lowest share.

Table 3: Comparison of Colorado communities

Drive-alone Work-trip Mode Share	2008 ACS
Colorado	73.7%
Arvada	78.5%
Aurora	76.1%
Boulder	53.6%
Centennial	75.5%
Colorado Springs	78.9%
Denver	66.7%
Fort Collins	70.5%
Greeley	76.3%
Highlands Ranch	75.8%
Lakewood	74.9%
Longmont	73.3%
Loveland	80.4%
Pueblo	75.1%
Thornton	79.1%
Westminster	80.7%

Using other modes

In looking at alternative mode work-trip shares, the City of Boulder has experienced a 3.1 percent increase in modes other than driving alone or working from home since the 2000 Census. In the same period the nation and the Denver Metro Area has witnessed declines of 2.3 percent and 1.7 percent respectively.

Table 4: Comparing Alternative Mode Work-trips Mode Shares

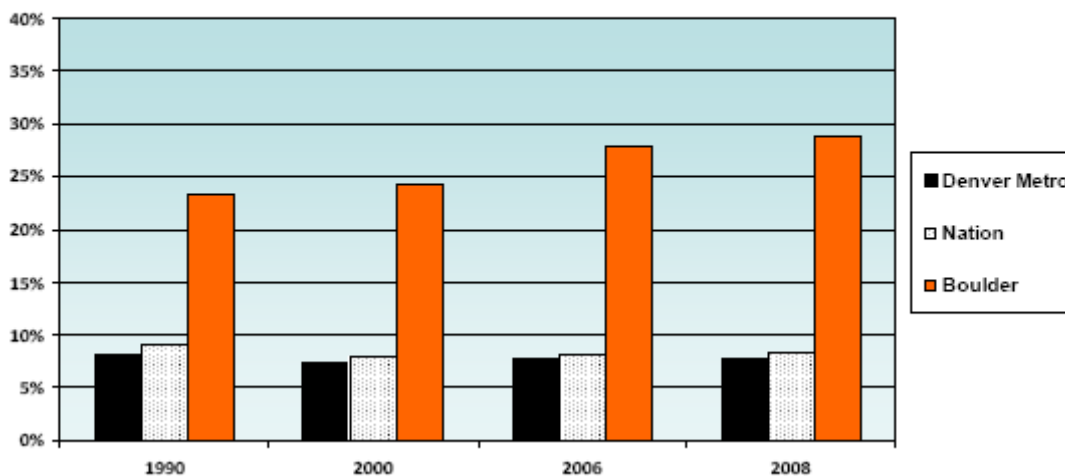
Work-trip Mode Share	1990	2000	2006 ACS	2008	Change
	Census	Census		ACS	from 2000 to 2008
Nation	Carpool	12.7%	12.2%	10.7%	-2.0%
	Bus	5.00%	4.70%	4.80%	0.0%
	Bike	0.40%	0.40%	0.50%	0.1%
	Walk	3.70%	2.90%	2.90%	-0.9%
	Other	0.90%	0.80%	1.10%	0.5%
	Total	22.69%	21.00%	20.00%	20.40%

Work-trip Mode Share		1990 Census	2000 Census	2006 ACS	2008 ACS	Change from 2000 to 2008
Denver Metro	Carpool	12.4%	11.5%	9.8%	10.5%	-1.9%
	Bus	4.20%	4.30%	4.60%	4.90%	0.7%
	Bike	0.70%	0.70%	0.70%	0.80%	0.1%
	Walk	3.30%	2.40%	2.30%	2.10%	-1.2%
	Other	0.70%	0.70%	1.40%	1.30%	0.6%
	Total	21.34%	19.64%	18.84%	19.62%	-1.7%

Work-trip Mode Share		1990 Census	2000 Census	2006 ACS	2008 ACS	Change from 2000 to 2008
City of Boulder	Carpool	9.5%	8.7%	6.7%	6.9%	-2.6%
	Bus	5.60%	8.30%	9.00%	10.60%	5.0%
	Bike	7.00%	6.90%	8.80%	9.90%	2.9%
	Walk	10.70%	9.00%	10.00%	8.30%	-2.4%
	Other	0.80%	0.80%	0.80%	1.00%	0.2%
	Total	33.59%	33.69%	35.30%	36.69%	3.1%

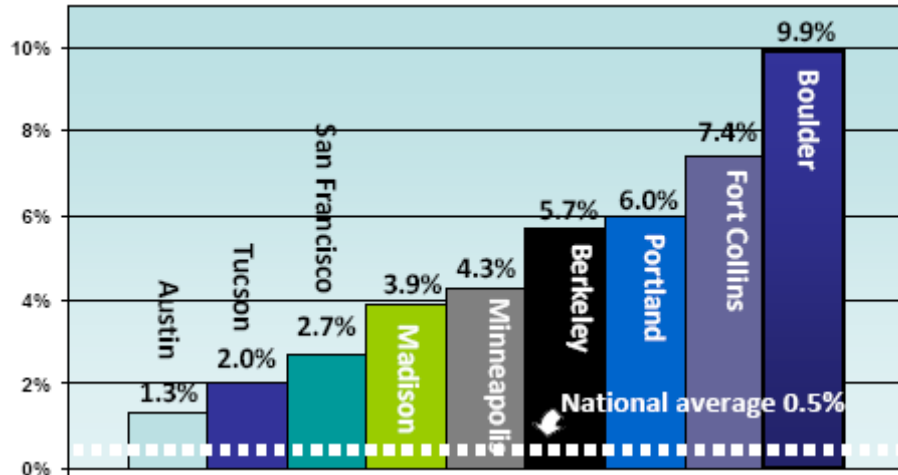
In comparing combined bus, bike and walk work-trip mode shares, Boulder's working residents reported significantly different travel behavior. The bus+bike+walk mode share for work-trips for Boulder's residents of 28.8 percent is over three times the national average and almost four times higher than residents of the Denver Metro area.

BUS+BIKE+WALK Work Trip Mode Shares



Bicycle Commuting

The 2008 ACS data also reveals that Boulder's bicycle commuting mode share is 18 times the national average, and is the highest of the League of American Bicyclists Bicycle Friendly Communities with Platinum or Gold designations that were surveyed in 2008.



Note: Davis, CA, the only other Platinum city besides Boulder, was not surveyed in the 2008 ACS.

Validation of City of Boulder Survey Data

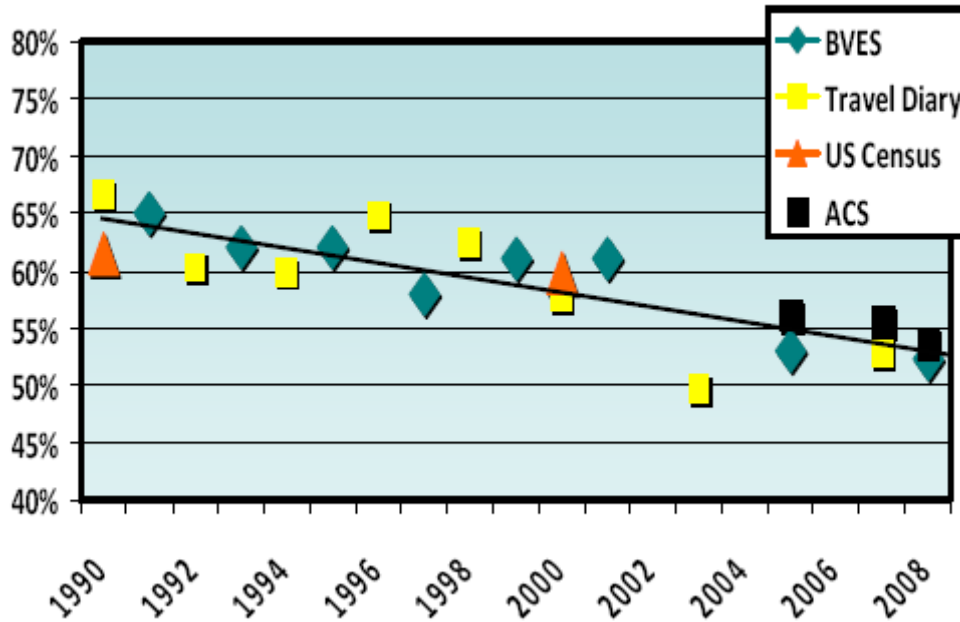
The results also validate some survey findings from the Boulder Valley Employee Survey (BVES) and the Travel Diary Surveys, which are funded by the City Transportation Division and conducted by the National Research Center. Drive-alone mode shares are very consistent between the local and national surveys.

It is important to remember that difference in other modes may result from the different ways in which respondents report their travel behavior. Respondents to the BVES are asked to record how they got to work on a particular day, while the ACS asks how respondents "usually" get to work. This also may be why there are larger fluctuations in our local survey data, particularly for bike and transit mode shares.

Table 5: Comparison of BVES and ACS

Work-trip Mode Share	2005	2006	2008	2008
	BVES	ACS	BVES	ACS
Drive-alone	53.0%	55.5%	52.3%	53.6%
Carpool/Vanpool	7.0%	6.7%	5.0%	6.9%
Bus	15.0%	9.0%	8.7%	10.6%
Bike	7.0%	8.8%	17.2%	9.9%
Multimodal	2.0%		4.3%	
Walk	7.0%	10.0%	8.5%	8.3%
Other	2.0%	0.8%	0.6%	1.0%
Work from home	7.0%	8.6%	3.4%	9.6%

Change in Drive Alone Work Trip Mode Share



This graph plots the results of the various surveys over time. The Travel Diary Survey tracks all trips made by Boulder residents, including non-work-trips. The black line indicates the trend line over time. In aggregate, the surveys indicate continuing progress towards Boulder's goals of shifting trips from single occupant vehicles to other modes.

Other ACS Data of Note

The ACS collects a wide variety of travel behavior data. Travel behavior data can be further analyzed by a number of respondent characteristics, including income, gender, vehicle access, travel time and time leaving for work. For example, according to the 2008 ACS, the number of vehicles that a respondent can access significantly impacts their journey to work. As the table below shows, respondents that have access to one or two vehicles have similar travel behavior excluding walking to work. However, respondents with access to three or more vehicles are far less likely to use transit.

Table 6: Access to Vehicles Impact on Travel Behavior in Boulder

2008 ACS Work-trip Mode Share	No Vehicle	1 vehicle	2 vehicles	3 vehicles or more
Drive-alone	17.8%	50.5%	57.8%	65.3%
Carpool	6.7%	5.6%	7.5%	6.6%
Bus	22.2%	12.6%	10.1%	3.9%
Walked	43.8%	11.7%	1.4%	4.0%
Other including bicycle	4.8%	11.3%	12.2%	10.1%
Worked at home	4.8%	8.3%	11.0%	10.1%

The ACS also measures travel time to work. Despite growth in population and employment, travel time in Boulder has not significantly increased. For almost half of Boulder residents, the journey to work takes less than 15 minutes. Only one in five Boulder residents has a work commute that takes longer than 30 minutes. Since 1990, there have not been significant changes in terms of the percent of commuters that travel less or more than 30 minutes respectively. In 1990, 82 percent of commuters traveled less than 30 minutes, and in 2008, 81 percent travel less than 30 minutes.

Table 7: Travel Time to Work

Travel Time to Work	1990 Census	2000 Census	2006 ACS	2008 ACS
Less than 10 minutes	23.3%	20.2%	24.0%	20.8%
10 to 14 minutes	26.5%	25.3%	25.4%	27.1%
15 to 19 minutes	18.7%	20.8%	19.7%	16.6%
20 to 24 minutes	9.0%	11.0%	10.0%	12.2%
25 to 29 minutes	2.8%	3.3%	3.1%	4.2%
30 to 34 minutes	5.7%	6.2%	7.0%	6.6%
35 to 44 minutes	4.7%	3.8%	3.5%	3.1%
45 to 59 minutes	5.5%	4.8%	3.3%	4.9%
60 or more minutes	3.7%	4.5%	4.1%	4.6%

For further information on the City of Boulder’s analysis of ACS data, contact Chris Hagelin, Senior Transportation Planner, at 303-441-1832 or hagelinc@bouldercolorado.gov.

ACS data is available at <http://www.census.gov/acs/www/>.

City of Boulder Travel Diary Survey (also called Mode Shift Report) and Boulder Valley Employee Survey results are available at

http://ci.boulder.co.us/index.php?option=com_content&task=view&id=467&Itemid=1657.