Cabrillo College

2008 Transportation Survey

23 May 2008

Report prepared by the Planning & Research Office
Overview of the Transportation Survey

Cabrillo College is partnering with Ecology Action to reduce our carbon footprint and to alleviate traffic and parking congestion. This report is an important part of this collaboration. The information presented here will help drive strategies to improve use of alternative transportation.

In spring 2008 all Cabrillo College employees were asked via email to complete an online survey that assessed transportation behaviors and attitudes. Three hundred twenty four respondents began the survey and three hundred and twenty two respondents successfully finished the survey. The respondent pool represents approximately 35% of Cabrillo College’s 891 employees. The response rates for each of the employee groups are shown below.

![Response Rate by Employee Group](chart.png)

*The response from the part time faculty was artificially low because the college directory does not have a valid or current email for all part time faculty members.

While this report is primarily concerned with the Cabrillo College employee transportation survey, it does incorporate some findings from a similar survey of Cabrillo College students that was conducted in the 2008 Winter Session. Over three hundred students responded to that survey, which was administered in class. Results from that survey are also presented into this report, where applicable.

Characteristics of Cabrillo College Employee Survey Respondents

Most employees (91%) indicated that they work at the main Cabrillo College campus in Aptos. An additional 16% of employee respondents work at the Watsonville Center at least part of the time and another 6% work at the Scotts Valley center. Respondents could choose more than one work location. Respondents could select more than one location, so percentages add to more than 100%.
The majority of employee respondents (58%) work five days per week with about 20% more indicating that they work four days per week. About a fifth of Cabrillo employees work on campus three days or less; a few (4%) are on campus more than five days per week while about 18% work at Cabrillo three days or less per week.

Most respondents (65%) were full time employees. Forty six percent of faculty respondents were part time employees compared to 30% of the classified staff and 0% of the administrators.
Cabrillo Employees’ Commute Patterns

Respondents provided information about their weekly commute. Some employees make multiple trips in a given day (e.g., they may drive to work in the morning, then return home for lunch and then bicycle back to work in the afternoon). The graph below shows the transportation choices for a typical week. Although driving an automobile alone is the most common mode of transport (78%), nearly 22% of trips by Cabrillo employees use an alternative commute method. Nearly 6% of employee trips are via bicycle, nearly 5% of trips use a carpool and over 3% use the bus. Using the internet to avoid the need to commute is an alternative exercised by over 4% of employees; 2.2% of faculty teach online and 2.8% of staff telecommute at least once per week. 1,421 physical trips were reported by the survey respondents. Extrapolating out to the entire workforce, Cabrillo College employees make approximately 3,716 physical trips to Cabrillo per week, 2,900 of those are solo drives.

Employee groups have somewhat different rates of driving alone. Classified staff are somewhat less likely than other groups to drive alone (F=3.529, p=.030). Thirty two employees (10%) always used alternative transportation and never drove alone to work.
Ninety one (28.3%) of survey respondents reported using at least one type of alternative commute in a typical week. The most popular alternative commute method was bicycling (10%), followed by carpooling (8%) and taking the bus (5%). Thirty two employees (10%) reported using a bicycle to commute, at least occasionally. It was most common to use a bicycle only once per week. Better bicycle facilities (e.g., lockers, showers, more/safer bike racks) could encourage more extensive use of bicycles.

A sub-set of employees used multiple commute methods to arrive at work in a given week. Sixty four respondents (20%) used more than one commute method.

**Distance traveled to work**

The overall average one-way commute for Cabrillo College employees is 10.6 miles. The three longest reported commutes (70, 62 & 50 miles one way) are all for part time faculty members who teach one day per week at Cabrillo.
College. The longest commute of a full time Cabrillo employee is 45 miles one way while the shortest commute is one mile (seventeen respondents reported one-way commutes of one mile).

Characteristics of Employees’ Automobiles

Highway gas mileage of the primary commute vehicle was reported by the employee respondents. Sixteen respondents did not know or were uncertain as to the gas mileage of their primary commute vehicle; the highway miles per gallon (MPG) rating for these vehicles was found on www.fueleconomy.gov or, for model years prior to 2004, MPG ratings were obtained from www.edmunds.com. The accuracy of self-reported MPG was checked for a sample of 20 cars. It was found that the self-reported highway MPG ratings were very close to the official MPG estimates. Given the impact of individual driving habits, load and traffic on actual MPG, we concluded that the self-reported MPG ratings were reasonably accurate.
Whereas 4% of respondents reported that their primary automobile was a hybrid, another 4% of respondents reported driving a car that was at least 20 years old. While older cars tended to have lower MPG ratings than newer cars (r=.14, p<.01), this tendency was weak, probably due to the relatively fixed fuel economy standards of the past twenty years. There is some indication that individuals are choosing more fuel efficient cars, but there are still many low MPG choices among modern automobiles.

Cabrillo College employees make approximately 2,900 solo automobile trips to Cabrillo College in a typical week. Given the average commute distance and number of trips for each employee group, Cabrillo College employees are driving 64,550 miles per week to commute to work. It is possible to calculate the amount of fuel used in these solo commutes given the average number of trips, commute distance and average fuel economy per employee group – Cabrillo College employees are using 2,400 gallons of gasoline per week, producing 47,520 pounds of carbon dioxide.
**Attitudes toward commuting**

Those employees who usually drive to campus were asked why they made this choice. The most frequent reason for driving alone was the need to make additional stops and/or to run errands (58%).

Students responded to a similar question in the Winter 2008 survey with similar results. Their top reason was the need to save time (which was number two for employees), followed by the need to get to work and to make stops and run errands.
Employee respondents also indicated what type of alternative commute they would be most likely to use as an alternative to driving a car alone. Carpooling (45%), taking the bus (41%) and bicycling (35%) were the three top choices. Information on this question is also available from the Winter 2008 student survey, so that information is presented in the graph below. Carpooling was a top choice among students, as well.

Survey respondents felt that there were a variety of ways they could be encouraged to use alternative transportation. Assistance with carpooling was the number one item that respondents wanted assistance with. A discounted or free bus pass was the second most frequent checkbox choice while a desire for better schedules, more express busses with more direct Cabrillo service, free bus passes and support for better mass transit were common text responses.
Finding a Cabrillo College carpool partner to share the cost of gasoline. 37.7%

Discounted bus pass 28.0%

Free emergency ride home (taxi) 22.8%

Centralized transportation information and services 19.4%

Gift certificates to local businesses (restaurants, movies, etc) 14.9%

On-campus bicycle maintenance 14.2%

A $200 folding bicycle discount (for easier bus/bicycle commute) 10.8%

Zero interest bicycle loan 7.1%

Parking close to destination for carpoolers 7.1%

Help planning my commute 5.6%

Increased parking fees 4.9%

Open text responses

Other (please specify) 37.7%

Better mass transit 5.60%

Bike lane improvements 2.99%

Cabrillo sponsored vanpool 2.99%

Lockers for books, etc 2.61%

Discount on electric scooter 2.24%

More/safer bike racks 1.87%

Work schedule change 1.87%

Telecommute option 1.49%

Free bus pass 1.12%

Shower facilities 1.12%

Electric car recharge stations 0.75%

Motivational speaker 0.37%

Overnight crash pad 0.37%

Park & ride share areas 0.37%

Relaxed dress code 0.37%

Subsidy for electric car 0.37%

Both the open text responses and the check list responses indicate a strong interest in communal action to support alternative transportation to, from and among campus locations. Many ideas were endorsed, most of which require a relatively small investment of resources. It seems that a coordinated effort to accomplish these strategies may result in a marked decrease in fossil fuel consumption by Cabrillo College’s workforce.

Students provided similar information in the Winter 2008 Student Transportation Survey. The top choices for students were similar to the top choices for employees. Students were more motivated by the prospect of gift certificates than were employees but the next three choices were in line with the choices of employees: Help finding a carpool partner; free emergency rides home; and centralized transportation information and services.

<table>
<thead>
<tr>
<th>Student Respondents</th>
<th>Top Choices</th>
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</thead>
<tbody>
<tr>
<td>99</td>
<td>Gift certificates to local businesses (restaurants, movies, etc) 30.9%</td>
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<tr>
<td>85</td>
<td>Help finding a carpool partner 26.6%</td>
</tr>
<tr>
<td>71</td>
<td>Free emergency ride home (taxi) 22.2%</td>
</tr>
<tr>
<td>57</td>
<td>Centralized transportation information and services 17.8%</td>
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<tr>
<td>52</td>
<td>A $200 folding bicycle discount (for easier bus/bicycle commute) 15.0%</td>
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<tr>
<td>31</td>
<td>On-campus bicycle maintenance 9.7%</td>
</tr>
<tr>
<td>18</td>
<td>Help planning my commute 5.6%</td>
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</tbody>
</table>
Why alternative transportation is important

Three hundred and twelve employees and two hundred fifty three students provided information as to why they felt it was important to use commute alternatives. The top issue in both groups was environmental, with seven out of ten employees and six out of ten students indicating that being good to the environment was a critical or very important reason to carpool, bike or use mass transit. The second most important reason for students was saving money on gas, though this was only the fourth most important reason for employees who were somewhat more concerned about reducing traffic congestion.
College employees were given an opportunity to ask for more information about various alternative transportation choices. Carpooling was once again a top area of interest; when employees were asked which alternative transportation options they were most interested in – 46% indicated an interest in hearing more information about carpooling. Other top areas of interest were electric bikes (33%), bus information (31.7%) and Bicycling (31.1%).

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS</td>
<td>31.7%</td>
<td>57</td>
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<tr>
<td>BICYCLING</td>
<td>31.1%</td>
<td>56</td>
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<td>WALKING</td>
<td>10.0%</td>
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<td>CARPOOLING</td>
<td>46.1%</td>
<td>83</td>
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<tr>
<td>FOLDING BIKES</td>
<td>16.7%</td>
<td>30</td>
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<tr>
<td>EMERGENCY RIDE HOME</td>
<td>22.2%</td>
<td>40</td>
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<tr>
<td>ELECTRIC BIKES</td>
<td>33.3%</td>
<td>60</td>
</tr>
<tr>
<td>ZERO INTEREST BIKE LOAN</td>
<td>18.3%</td>
<td>33</td>
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</table>

answered question 180  
skipped question 144