

Enticing commuters to switch modes during (and after) a temporary freeway closure

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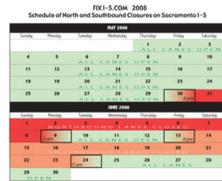
Principal Investigator: Patricia Mokhtarian, Professor of Civil and Environmental Engineering, University of California, Davis

Closure of I-5 near downtown Sacramento, June 2008



About the Fix I-5 project

- \$27 million construction project on Interstate 5 in Sacramento (between the U.S. Highway 50/Capitol City Freeway Interchange and Richards Boulevard)
- Project to replace pavement, improve drainage and the install new dewatering wells and monitoring equipment
- Required various lane closures during the construction period, May 31 – July 28, 2008
- All northbound lanes were closed May 31 – June 8, 2008
- All southbound lanes were closed June 14 – 22, 2008



Push for commuters to try alternatives during the project

Governor Schwarzenegger issued an Executive Order encouraging state workers to adopt alternative work schedules, telecommuting, public transit, and other transportation options to relieve congestion during the project.

Incentives and publicity included:

- Increased number of buses
- Increased light rail service
- Reduced fares on some public transportation
- Free parking at some transit and parking facilities
- Reduced off-street parking rates downtown after 5 p.m.
- Bicycles permitted on K Street mall
- Media blitz, including coverage on the radio, TV, in newspapers, on agency websites, and over commuter email lists.
- Some employer offered incentives such as:
 - preferred parking for carpools/vanpools
 - reduced-rate transit passes
 - telecommuting options
 - compressed work week
 - variable start/end times
 - guaranteed ride home
 - bike parking / shower facilities

UC Davis survey of Sacramento commuters

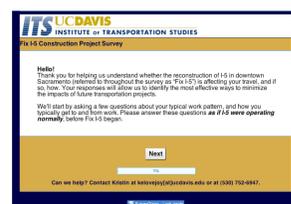
An online survey administered in three waves, intended to capture travel behavior during and after the construction project:

- Wave 1: reference week June 2-8 (during northbound closure)
- Wave 2: reference week June 16-22 (during southbound closure)
- Wave 3: planned for January 2009

Number of respondents by wave	
Wave 1 only (northbound closed)	3000
Wave 2 only (southbound closed)	3469
Participated in both Wave 1 & 2	1525
Total respondents	7994
State employees among these	4005

Respondents were recruited by email through several sources:

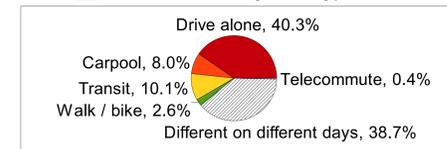
- Sacramento-area state agency directors asked to forward an invitation to their employees
- Invitation sent to TMA commuter club mailing lists
- Public press release invited members of the general public to participate
- For Wave 2, those who completed Wave 1 and were indicated interest in participating again were emailed directly



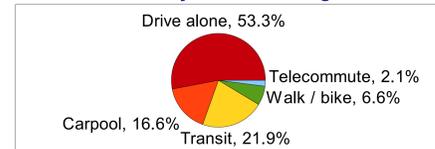
Respondents' usual commute mode

Respondents were asked to describe the number of days they travel to work by various modes – or work at home – in a typical month. Most respondents drive or carpool, with about a fifth of trips involving transit.

Share of respondents who use the following modes on all their commute days in a typical month:



Average share of commute days on which people do any of the following:



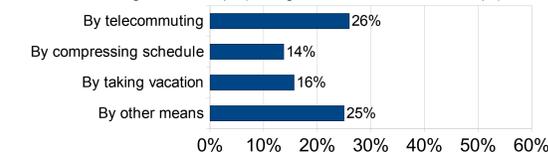
Behavior change during the project

18% of respondents made fewer commute trips and 9% used a different mode of transportation than they normally use.

Change made	Number of respondents	Share of respondents
Fewer commute trips	1351	17%
By telecommuting	351	4%
By compressing schedule	186	2%
By taking vacation	212	3%
By other means	338	4%
Changed mode	707	9%
More transit	386	5%
More walking/ biking	183	2%
More carpooling	106	1%
More driving alone	40	1%
Total	7994	100%

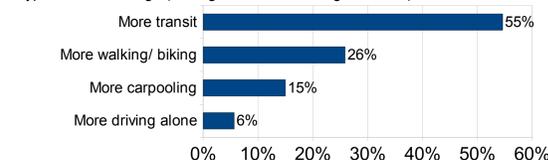
Among those who made fewer trips than usual, 26% did so by telecommuting.

Means of reducing commute trips (among N=1351 who made fewer trips)



Among those who changed modes, 55% used transit and 26% walked or biked.

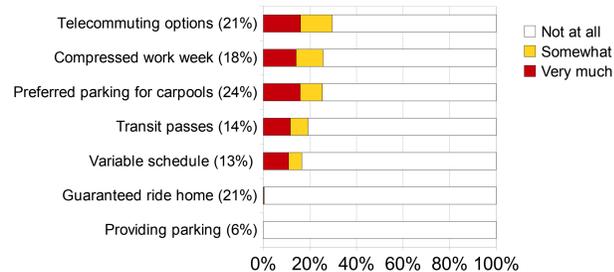
Type of mode change (among N=707 who changed modes)



Role of incentives

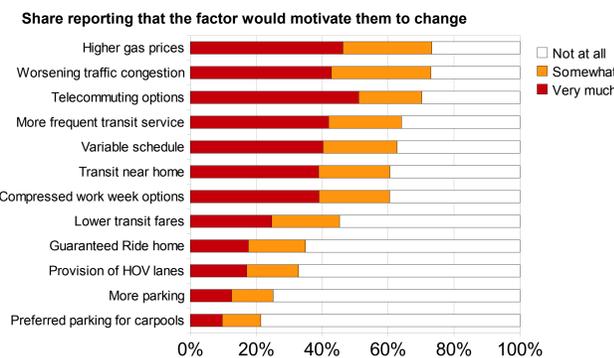
Employer programs played a limited role in commute changes during the construction project.

Share reporting that the incentive influenced their commute choice (% answering the question shown in parentheses)



Respondents indicated that gas prices and traffic congestion would have the strongest effect on their commute behavior in the future

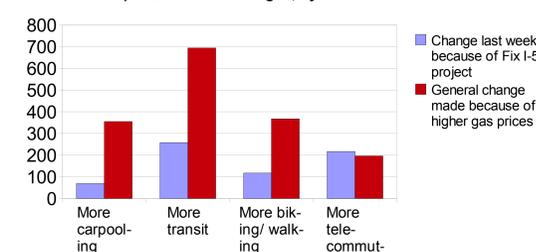
Assuming each of the following was in place, how strongly would each motivate you to change your commute in the future, after the Fix I-5 project is completed?



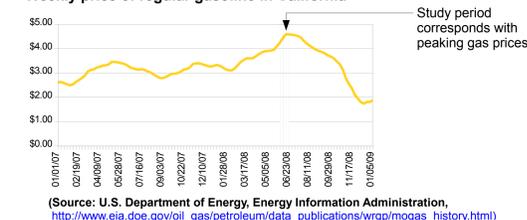
Confounding role of gas prices

The number of (Wave 2) respondents who made changes to their commutes because of gas prices is much greater than those who made changes for the Fix I-5 project. 13% (671) wave 2 respondents reported switching modes, telecommuting, or compressing their work week because of the fix, whereas 39% (1925) reported having made such changes because of higher gas prices.

Number of respondents who changed, by mode



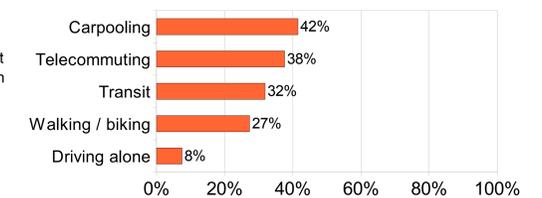
Weekly price of regular gasoline in California



Respondents' experience of the alternatives

About a third of those who made changes tried something new that they'd never tried before.

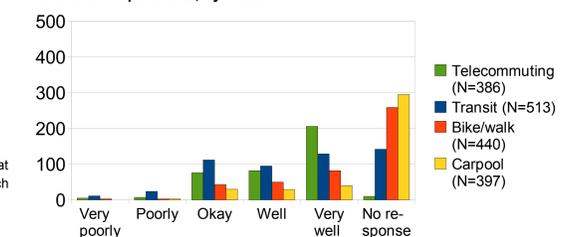
Share for whom this mode was new (among those who changed)



Respondents' experiences with the alternatives they tried were more positive than negative.

How well did [the new mode] work for you this week?

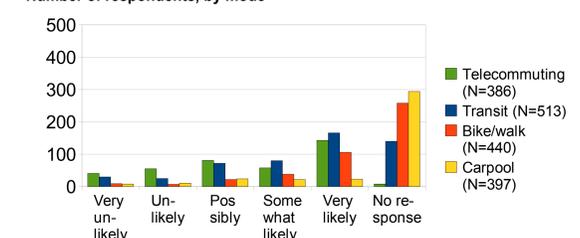
Number of respondents, by mode



About 37% (636) indicated that it was at least somewhat likely they would continue using the alternative.

How likely are you to continue [the new mode] after the Fix I-5 project is complete?

Number of respondents, by mode



Next steps

Wave 3 to be administered in January 2009

- Recruit participants from Wave 1 & Wave 2 for follow-up survey
- Assess whether any changes in commute patterns have persisted
- More in depth evaluation of commuters' attitudes toward travel, environmental issues and lifestyle patterns

More in-depth analysis

- Determinants of behavior change and the persistence of mode shift
- Understand which types of commuters are most likely to adopt changes