



# 2015 Bike to Work Day: Survey Report

Denver Regional Council of Governments

# CONTENTS

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**Introduction** ..... 3

**Executive Summary** ..... 4

**Detailed Research Findings** ..... 6

    Demographics ..... 6

    Bike to Work Day Participation ..... 7

    Sponsors ..... 16

    Bicycling to Work ..... 19

    Non-work Bicycling ..... 26

**Appendix A: Methodology** ..... 28

**Appendix B: Survey Instrument** ..... 29

# INTRODUCTION

**Background** Each year, the Denver Regional Council of Governments (DRCOG), in partnership with local governments and community organizations, facilitates Bike to Work Day (BTWD) as a way to raise awareness of bicycle commuting. In 2015, 20,368 individuals registered for this event.

DRCOG hired Corona Insights, a Denver-based market research and strategic consulting firm, to survey Bike to Work Day participants to understand their reasons for participating, their typical bike to work behaviors, non-work bicycling, recall of sponsors, and general demographics. The research also analyzed changes in opinions and behaviors from year to year.

This study's results can readily inform event planners, marketers, transportation planners, government officials, and others involved in planning and implementing Bike to Work Day events.

**Methodology** DRCOG provided Corona Insights with the full database of 2015 Bike to Work Day registrants and their email addresses to use as a sampling frame. Corona randomly selected 3,200 registrants and emailed them an online survey invitation. Corona sent two follow-up email reminders before closing the survey. Analysis includes mostly descriptive statistics including means and percentages, but also includes testing for statistically significant relationships and differences. A detailed methodology is found in [Appendix A](#).

**Margin of Error** We gathered 1,226 valid responses between October 12 and October 25, 2015, resulting in an overall adjusted margin of error of  $\pm 2.8$  percent within a 95 percent confidence interval. Margins of error by previous year and segments in 2015 are shown in the table below. All reported margins of error are corrected for the weighting effect, which will increase the margin of error in proportion to the size of the applied weights.

	Completed Surveys	95% Margin of Error
<b>Overall 2013</b>	1,015	3.1%
<b>Overall 2014</b>	1,190	2.8%
<b>Overall 2015</b>	1,226	2.8%
<b>First year to register for BTWD (2015 only)</b>	331	5.3%
<b>Registered for BTWD in previous years (2015 only)</b>	882	3.2%

# EXECUTIVE SUMMARY

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The following key findings are specific to the 2015 survey unless otherwise noted.

## YEAR-TO-YEAR COMPARISONS

- ➔ **Uptick in first year registrants.** The proportion of first year registrants bounced back to 37 percent, after dropping from 38 percent in 2013 to 29 percent in 2014. [Question 1](#)
- ➔ **Uptick in participants saying “BTWD motivated me to bike more for all trips.”** This proportion rose by 17 percent compared to 2014, and it was offset by those who said BTWD had no influence. [Question 5](#)
- ➔ **Uptick in bike commuting for environmental reasons (for non-BTWD days).** While a majority of respondents still bike commute for health and exercise, the percentage of people biking because it was the environmentally responsible thing to do moved up from 9 percent to 13 percent, a 44 percent increase. [Question 13](#)
- ➔ **No year-to-year change in biking behavior—before or after BTWD.** While our estimate of the average number of biking trips per month slightly dipped between 2014 and 2015 (both before and after BTWD and for both commute and non-work trips), this change was not statistically significant. [Questions 10, 11, and Questions 20, & 21](#)
- ➔ **No change in attrition.** In 2015, eight percent of respondents did not ride to work, which was slightly higher, but not statistically different, from the attrition rate in 2014. The most common reasons for not participating are work-related, long distance, and personal reasons. [Question 6 & 7](#)
- ➔ **No change in awareness of Way to Go’s role.** About 25 percent of respondents know Way to Go sponsors BTWD, and about 20 percent know Way to Go is part of DRCOG, but neither percentage changed, statistically, from last year. There was no change in awareness among several segments that we explored. [Questions 8 & 9](#)

## BIKE TO WORK DAY PARTICIPATION

- ➔ **Participants hear about BTWD through employers, email, and friends/coworkers.** Other sources tested were answered by no more than ten percent of respondents. Traditional media (e.g., radio, television, and ads on buses) were relatively uncommon sources. Frequent riders, repeat participants, and older participants are much more likely to hear about BTWD by email. First year and younger registrants are much more likely than others to hear about it from a friend or co-worker. [Question 2](#)
- ➔ **Similar to 2014, reasons for registering strongly depend on frequency of bike commuting.** Respondents most likely indicated their primary reason for registering for BTWD was to “support bicycle commuting” or because it was “a fun thing to do;” however, these responses varied depending on self-reported frequency of biking to work. Frequent riders were likely to want to “raise awareness for bicycle commuting,” and respondents who only ride on BTWD were likely to register because it was a “fun thing to do.” Competing in the business challenge and having a chance to win prizes were the least common reasons for registering, even for BTWD only participants. [Question 3](#)

- ➔ **About half of participants have no prize preference.** Among all respondents, almost half had no preference for a chance to win fewer high value prizes or many lower value prizes, and another six percent were unsure of their preference. This finding, in combination with the small percentage of respondents who registered for the chance to win prizes, suggests that prizes are not a strong motivator for registration. [Question 16](#)

## SPONSORS

- ➔ **Participants are more likely to believe they can recall a sponsor than they are able to accurately recall a sponsor.** About 37 percent of all respondents said they could recall the name of a BTWD sponsor, but only 12 percent actually did name at least one of the 19 official sponsors. RTD and 9-News were mentioned the most frequently, while no respondent mentioned Colorado Health Foundation or OzoneAware.org. [Question 17 & 18](#)
- ➔ **Non-sponsors were commonly mentioned.** Among respondents who said they could recall at least one sponsor, 87 percent mentioned at least one non-sponsor. Many of these non-sponsors hosted a breakfast station or way-home station, suggesting that some respondents took a broad definition of the term sponsor, or they believed that hosting a station meant they were a sponsor. [Question 18](#)

## BICYCLING TO WORK

- ➔ **Similar to 2014, participants commute by bicycle more frequently after BTWD than before BTWD.** Participants reported bike commuting about two and one-half days more often, on average, in the three months after BTWD than they did in the months before BTWD. The largest spring to fall increases were of frequent riders and riders between 18 and 34 years old. [Questions 10 and 11](#)
- ➔ **There is a relationship between commute length and reasons for bike commuting.** People with longer commutes are more likely to bike to work for health and exercise, whereas people with shorter commutes are more likely to bike for convenience. [Question 13](#)
- ➔ **There is a relationship between age and reasons for bike commuting.** Older participants are more likely to bike to work for health and exercise, whereas younger participants are more likely to bike to work for the environmental benefits and for convenience. [Question 13](#)

## NON-WORK BICYCLING

- ➔ **Similar to last year, participants rode their bikes for non-work trips more frequently after BTWD than before BTWD.** After BTWD, respondents rode bikes for almost eight non-work trips per month, which was about an extra half trip per month more than before BTWD. We found this to be true across almost all segments, except for participants who registered for the first time this year, occasional riders, and participants 55 or older. [Questions 20 and 21](#)

## DETAILED RESEARCH FINDINGS

The following exhibits represent results from all respondents and key segments where specified. Some exhibits compare results with previous years. We rounded figures in all graphs and tables for reporting purposes. To improve readability, we occasionally removed value labels on graphs, typically for values smaller than four percent. Analysis tables and open-ended responses to all questions can be found in the accompanying Excel workbook.

### DEMOGRAPHICS

The following tables and charts summarize the general profile of survey respondents in 2015. These characteristics provide context to the report findings.

Age	
18 - 24	4%
25 - 34	29%
35 - 44	23%
45 - 54	25%
55 - 64	18%
65 years or older	2%

Household Income	
Less than \$25,000	2%
\$25,000 - \$49,999	10%
\$50,000 - \$99,999	32%
\$100,000 - \$149,999	22%
\$150,000 or more	16%
Don't know	0%
Prefer to not answer this question	17%

Gender	
Male	57%
Female	41%
Prefer to not answer this question	2%

Educational Attainment	
0 - 11 years, no diploma	0%
High school graduate or GED	2%
Some college, no degree	9%
Associate's degree	5%
Bachelor's degree	44%
Graduate degree	40%
I prefer to not answer this question	1%

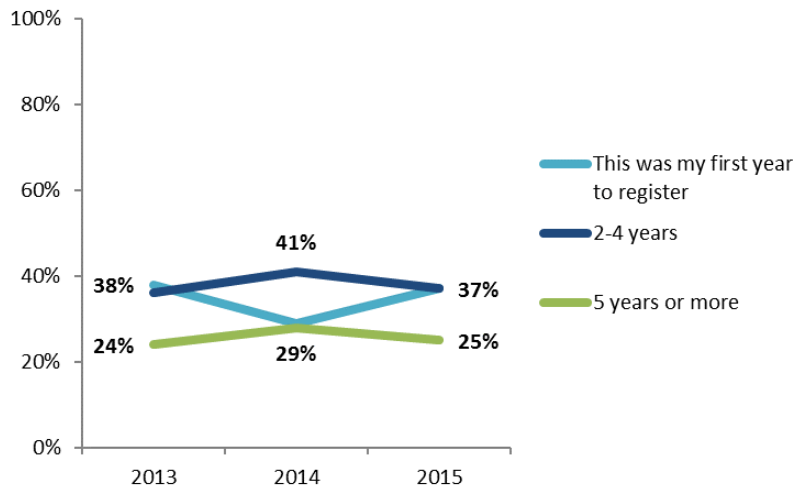
Occupation	
Professional/Managerial/Administrative	82%
Sales/Clerical/Service	6%
Laborer/Craftsman/Foreman	3%
Other	7%
Prefer to not answer this question	2%

## BIKE TO WORK DAY PARTICIPATION

**Q1: “Including this year (2015), how many years have you registered as a Bike to Work Day participant?”**

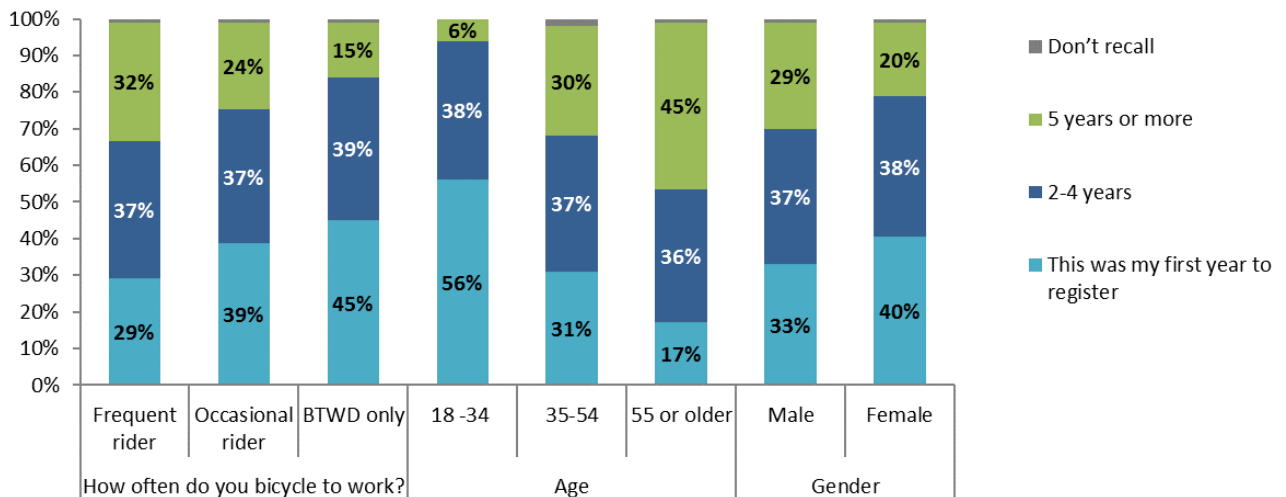
In 2015, the proportion of first year registrants bounced back to 37 percent, after dropping to 29 percent in 2014. With the increase in proportion of new registrants, we found slight decreases, since 2014 for 2-4 year registrants as well as those who registered for five years or more.

**Exhibit A: History of registering for BTWD**



Not surprisingly, frequent bike commuters and older participants are much more likely than less frequent bike commuters or younger participants to have registered for BTWD for five years or more. However, about 30 percent of frequent bike commuters registered for BTWD for the first time this year. Similar to previous years, males were more likely than females to have registered for five years or more and females were more likely than males to have registered for the first time this year.

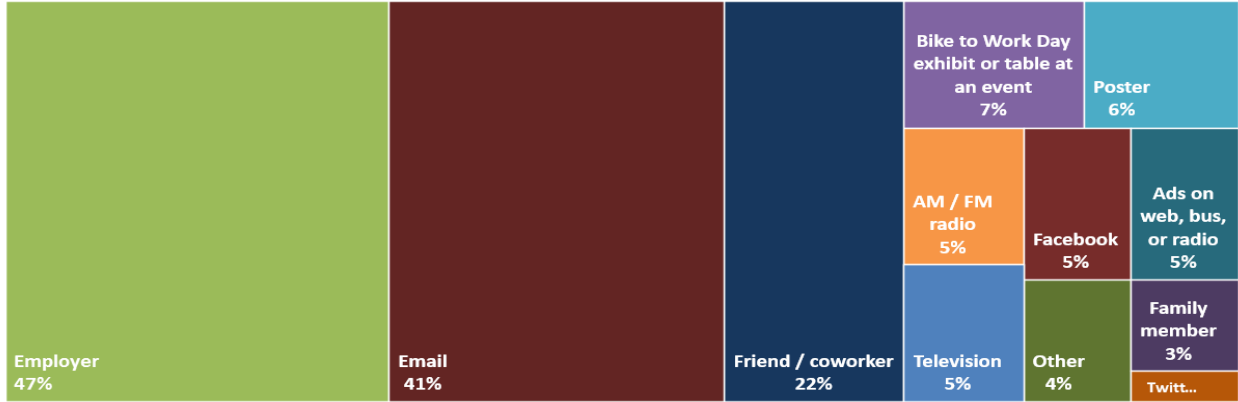
**Exhibit B: History of registering for BTWD by frequency, gender, and age (2015 only)**



**Q2: “How did you hear about Bike to Work Day this year? (Select all that apply)”**

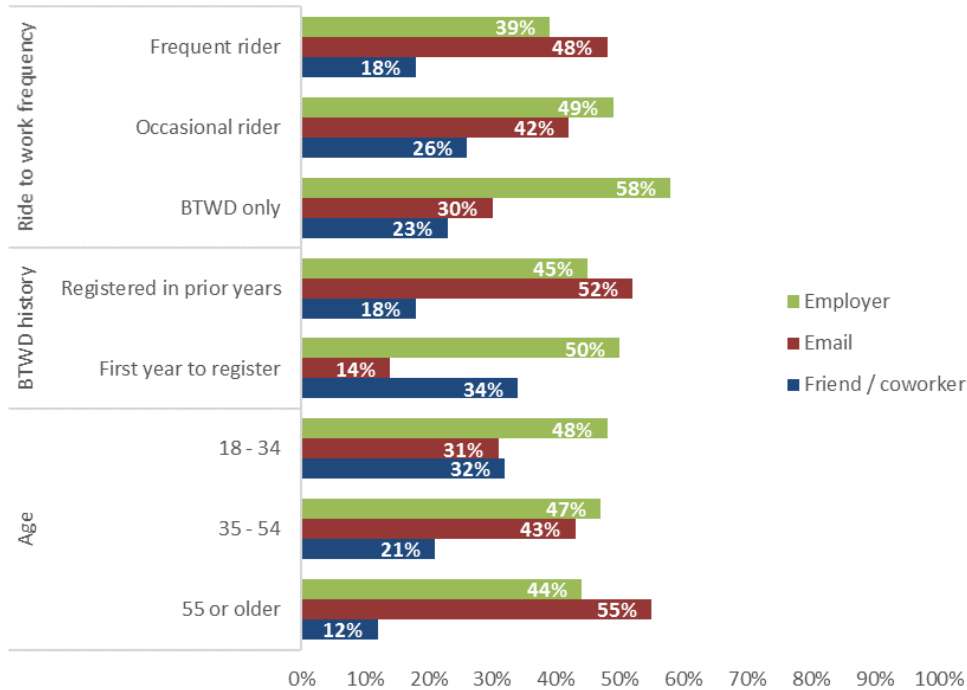
Almost half of respondents heard about BTWD through their employer and two-fifths heard about it by email. Generally, word of mouth (via employers/co-workers, not family members) and direct communications by email seems to reach more registrants than does general media (e.g., TV, public ads, radio, etc).

**Exhibit A: How heard of BTWD?**



How registrants heard about BTWD depended on their rider frequency, BTWD history, and age. Frequent riders, repeat participants, and older participants are much more likely to hear about BTWD by email. First year and younger registrants are much more likely than others to hear about it from a friend or co-worker. BTWD only participants are much more likely than frequent riders to hear about the event from their employer. Additionally, older participants are more likely to hear via radio and TV, while younger participants are more likely to hear through Facebook (data not shown). We found no reliable differences by gender.

**Exhibit B: How heard of BTWD (top-3 categories only) by registration history, frequency, and age**

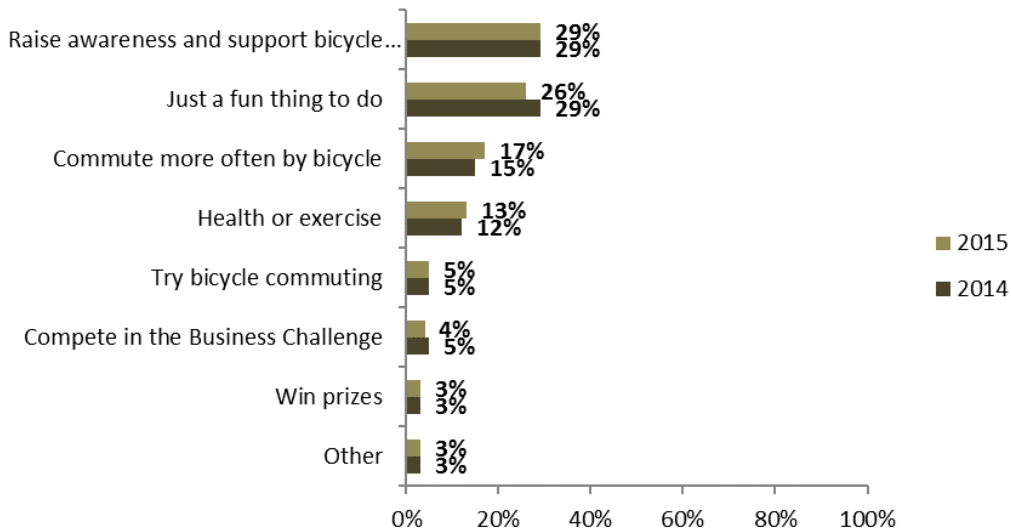




**Q3: “Which ONE of the statements below best describes why you decided to register for Bike to Work Day this year.”**

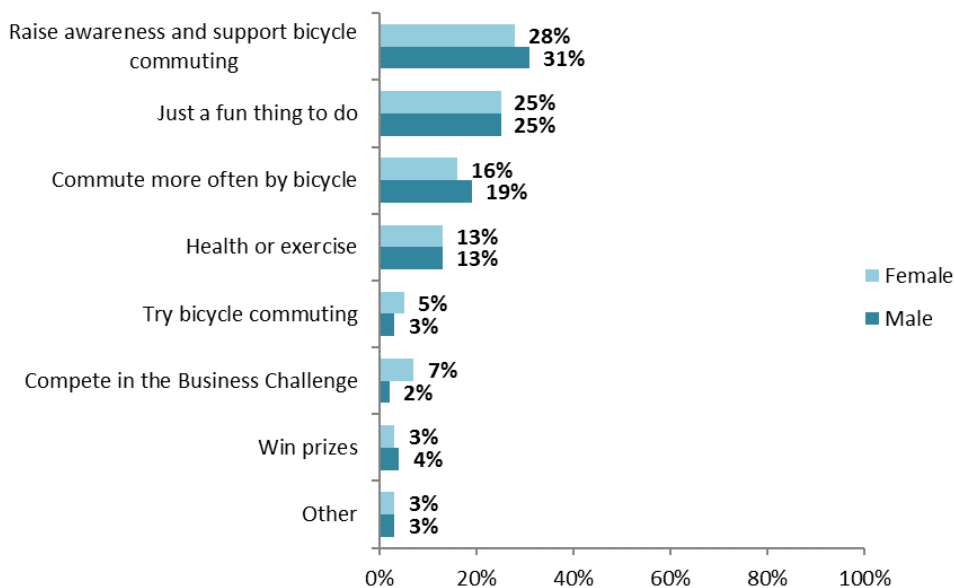
To raise awareness and support bicycle commuting remained the top reason why people registered for Bike to Work Day in 2015 and “it was a fun thing to do” was a close second. Competing in the business challenge or having the chance to win prizes were uncommon reasons why people registered. We found no significant changes in reasons for registering between 2015 and 2014.

**Exhibit A: Reason for registering**



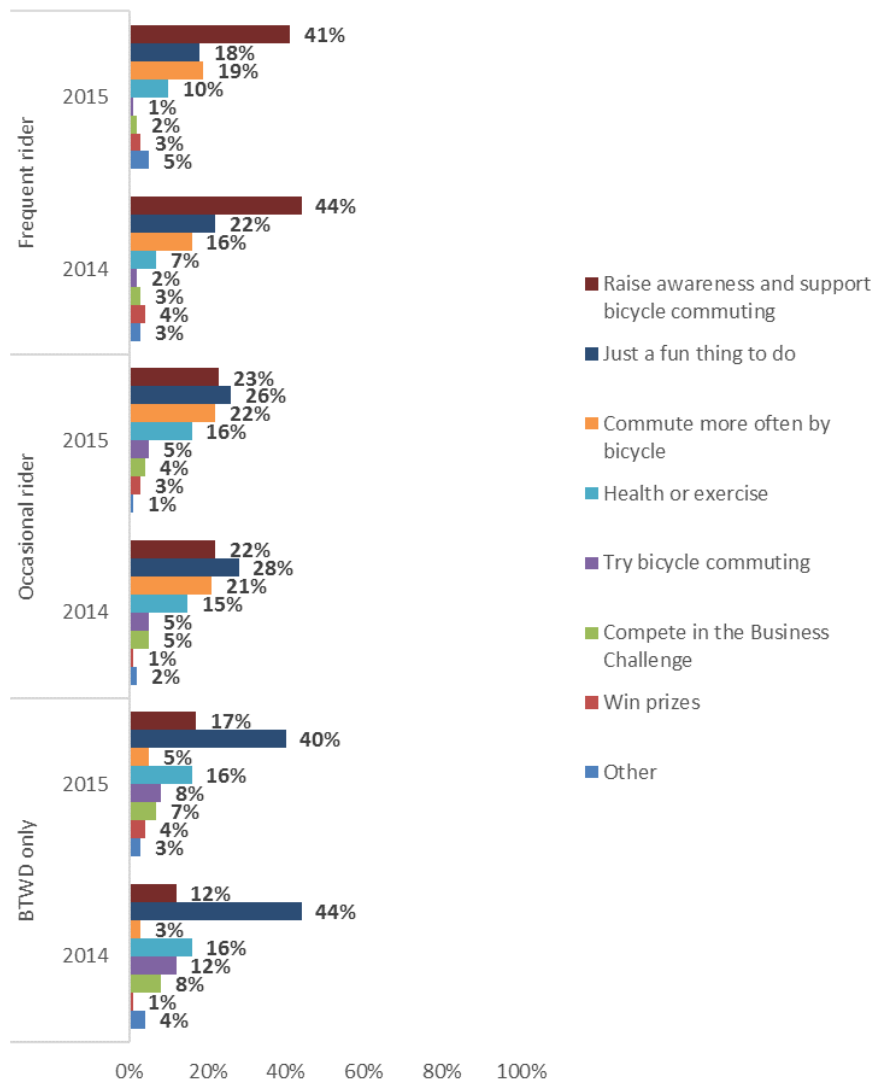
Reasons for registering for BTWD generally did not differ between females and males, with the exception that females were statistically more likely to indicate competing in the business challenge. This suggests promoting the business challenge may help boost the female registration percentage.

**Exhibit B: Reason for registering, by gender (2015 only)**



In 2015, reasons for registering for BTWD differed significantly based upon frequency of biking to work. Frequent riders (i.e., respondents who indicated they ride to work frequently, either all year-round or in the spring, summer, and/or fall) were more likely than others to register to raise awareness and support bicycle commuting, and they were more likely than BTWD only riders to want to commute by bike more often. Conversely, BTWD only riders were more likely than frequent riders to register because it was a “fun thing to do,” to try bike commuting, and to compete in the business challenge. These patterns did not statistically differ between 2015 and 2014.

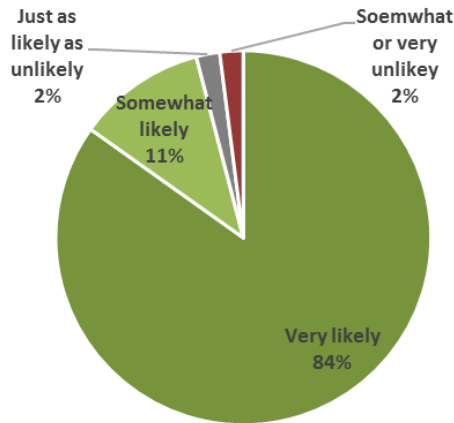
**Exhibit C: Reason for registering by frequency and year (2015 and 2014 only)**



**Q4: “How likely are you to register for Bike to Work Day next year (2016)?”**

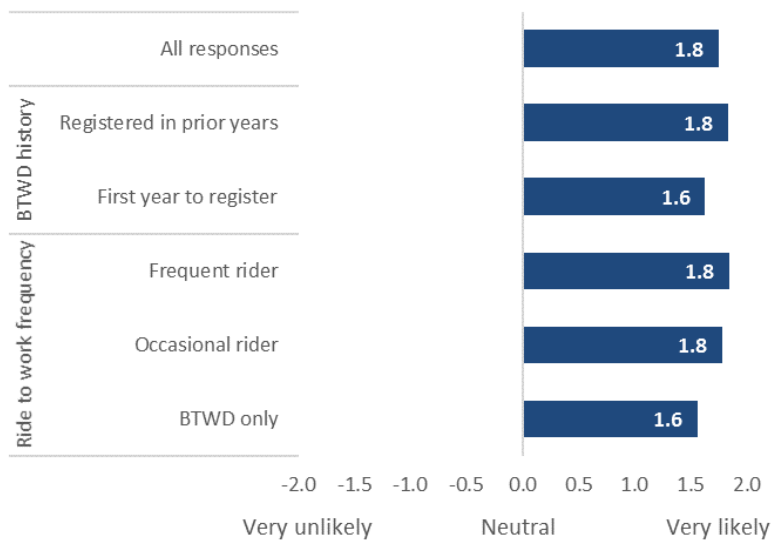
Among all respondents, there was a strong intention to re-register for BTWD in 2016. Indeed, only two percent were somewhat or very unlikely to re-register.

**Exhibit A: Likelihood of re-registering next year**



After assigning numeric values to each response category (i.e., very likely = 2, somewhat likely = 1, just as likely as unlikely = 0, somewhat unlikely = -1, and very unlikely = -2), we calculated average likelihood scores for several segments. Those who registered in prior years have a stronger likelihood, on average, of re-registering next year. Those who ride to work on BTWD only had a weaker likelihood, on average, than did those who ride occasionally or frequently.

**Exhibit B: Likelihood of re-registering next year (average), by registration history and frequency**



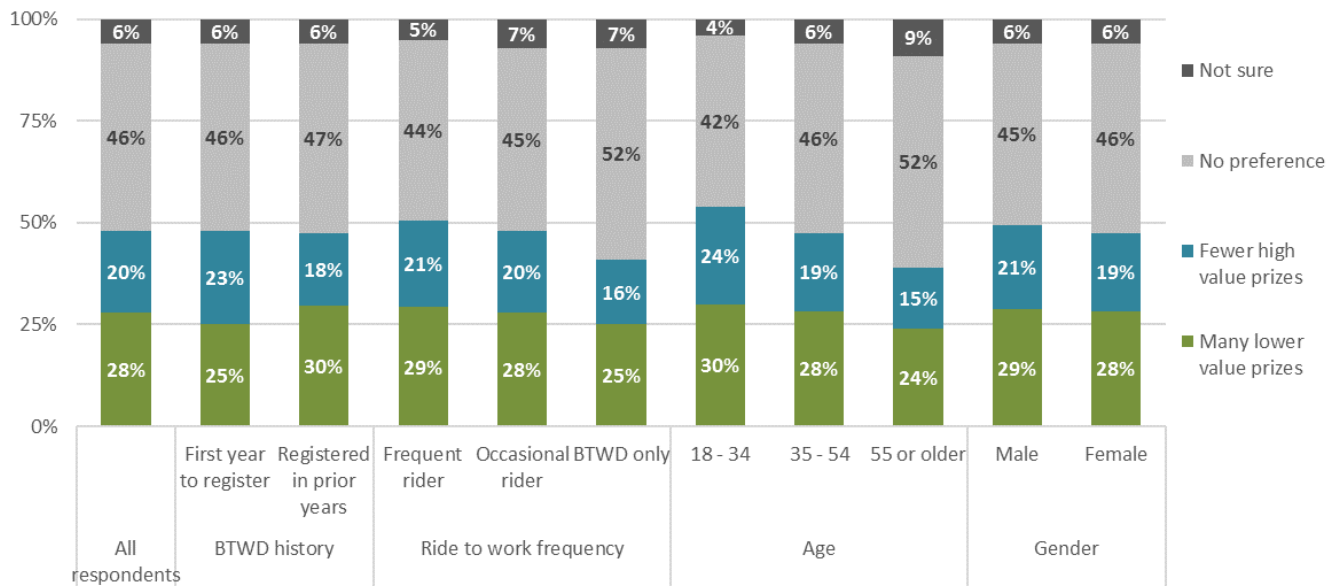
**Q16 “Which of these potential prize offerings would most strongly motivate you to register for Bike to Work Day next year (2016)?”**

We asked respondents to tell us which prize preference would most motivate them to re-register next year. About half of all respondents had no preference or were unsure, and there was a slight lean towards a chance to win one of many low or moderate value prizes. While it is interesting to see what current registrants preferred, it is of more value to understand what would motivate those who did not register this year. We planned to use responses to Q4 (i.e., likelihood to register next year) as a proxy for those who did not register, but the distribution of responses to Q4 was highly skewed, with 95 percent saying they would likely register for BTWD next year. Instead, we used BTWD history and BTWD only as proxies for non-participants—assuming respondents who registered for the first time in 2015 or only bike to work on BTWD would have similar attitudes as those who did not register or participate at all.

First year registrants were more likely than repeat registrants to prefer fewer high value prizes and less likely to prefer many lower value prizes. This suggests that offering fewer high value prizes will be more motivating to non-participants. However, BTWD only registrants were more likely than others to have no prize preference, and were less likely (although not statistically) to prefer fewer high value prizes. With both variables serving as proxy for non-participants, it is unclear which prize type would be more motivating. However, considering the high percentage of respondents who have no preference, and considering that the chance to win prizes is a reason to register for just three percent of participants (based on Q3), the data suggest that the chance to win prizes is not a strong motivator of registration.

Lastly, younger respondents (i.e., age 18 to 34) preferred fewer high value prizes, and they were less likely than older respondents to have no preference. We found no statistical differences by gender.

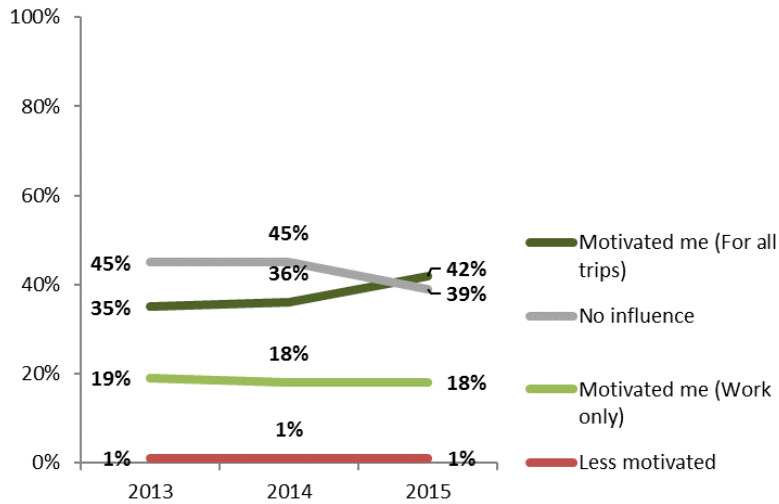
**Exhibit A: Motivators to re-register in 2016, by BTWD history and frequency**



**Q5: “Which ONE of these statements best describes how Bike to Work Day has influenced your attitude toward bicycle commuting to work or for other types of trips?”**

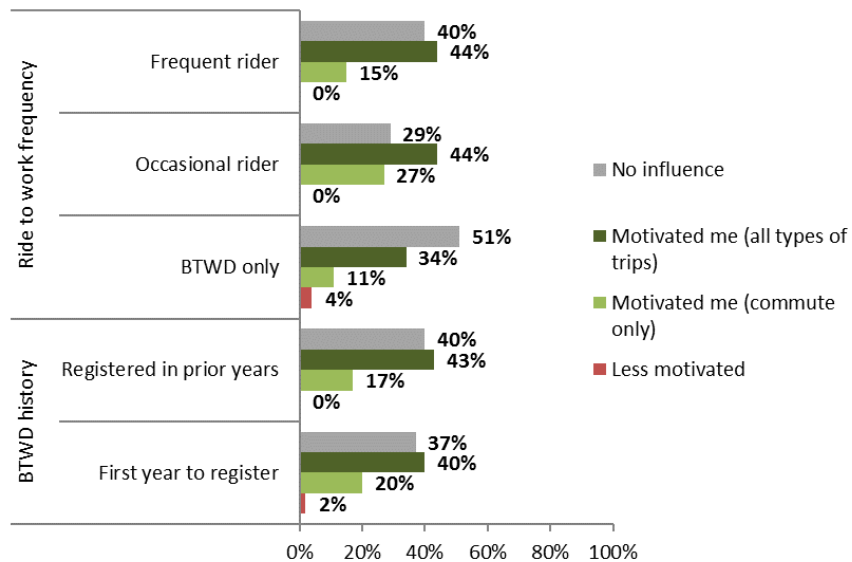
Post-event attitudes about bicycle commuting for all types of trips increased by 14 percent compared to 2014, signaling that BTWD is having an influence on behavior and not just commute behavior. About forty percent of respondents indicated Bike to Work Day had no influence on their attitude toward bicycle commuting.

**Exhibit A: Influence of BTWD**



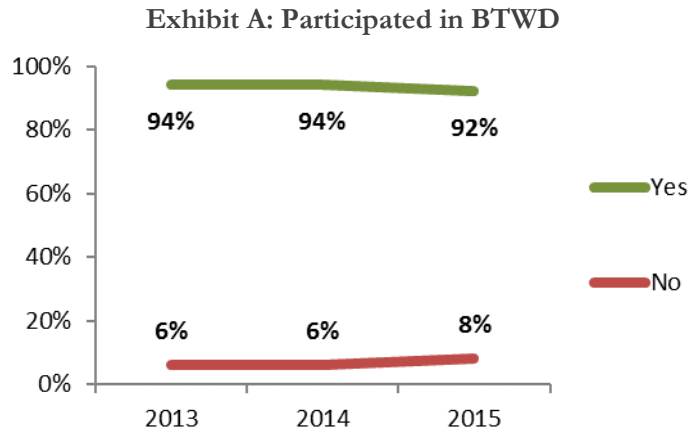
Just like last year, participants that bike to work occasionally were statistically more likely than frequent riders and BTWD only riders to state that participating in BTWD increased their motivation to commute to work more often by bicycle. They were also least likely to state BTWD had no influence on their bicycle commuting behavior. Compared to 2014, frequent riders were much more likely to say that BTWD 2015 motivated them to bike more often for all types of trips (data not shown).

**Exhibit B: Influence of BTWD by frequency and registration history (2015 only)**



**Q6: “Did you ride a bicycle for any part of your trip to work on Bike to Work Day (June 24<sup>th</sup>) this year?”**

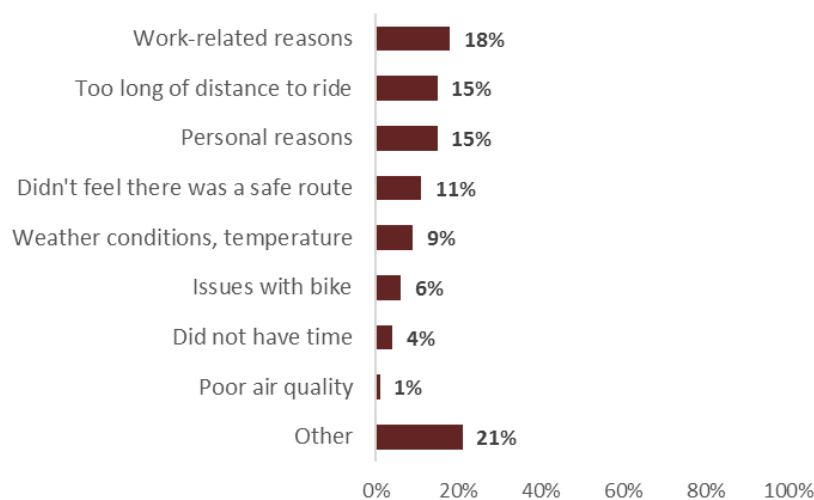
In 2015, 92 percent of registrants rode a bicycle for at least part of their trip to work, which was not statistically different than the percentage in previous years.



**Q7: “What most prevented you from riding to work on Bike to Work Day?” (Select only one)**

Among the 86 respondents who did not ride their bicycle on Bike to Work Day in 2015, about one-fifth cited a reason not provided as a response option, and almost 20 percent cited work-related reasons. Poor air quality, not having time, and issues with bike were the least common barriers to riding on Bike to Work Day. Due to changes in the question wording between 2014 and 2015 (this question in 2014 asked for all reasons that prevented them from participating), comparisons of results of this question between years are not reliable.

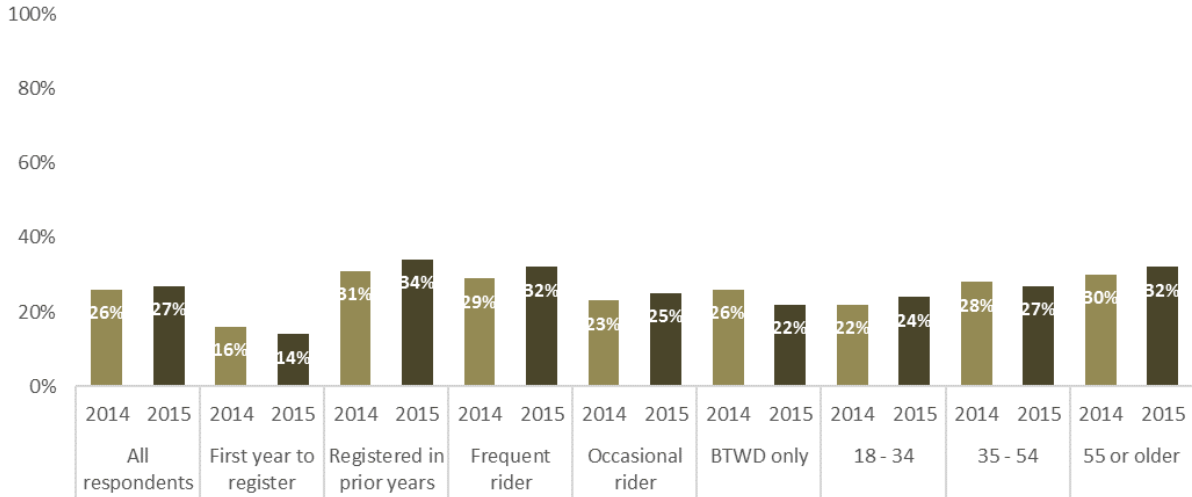
**Exhibit A: Reasons for not participating in BTWD (2015 only)**



**Q8: “Before participating in this survey, were you aware that the Way to Go program organizes and promotes Bike to Work Day?”**

Similar to last year, about one-quarter of respondents were aware that Way to Go organizes and promotes BTWD. We found no statistical differences in awareness between 2014 and 2015.

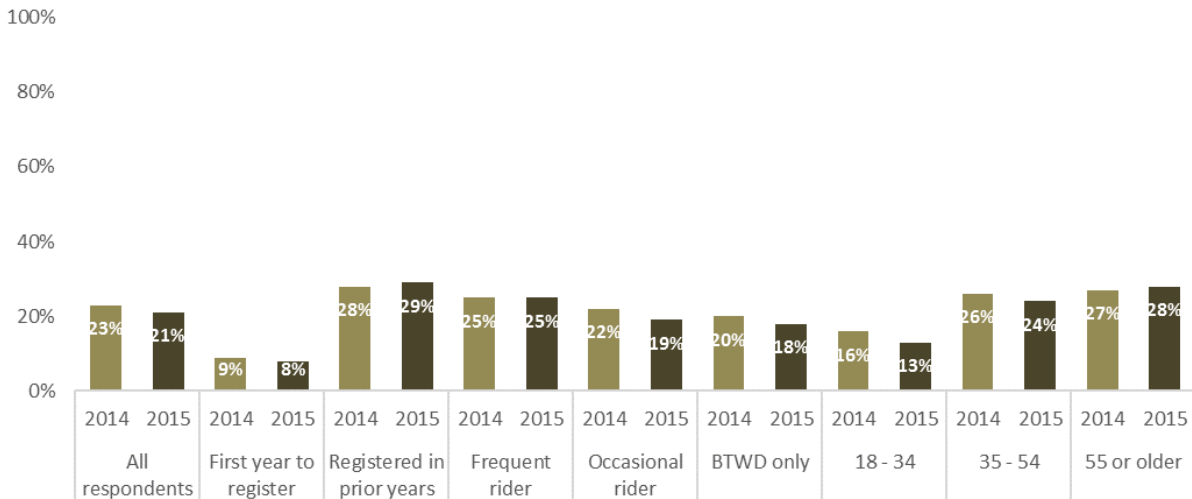
**Exhibit A: Aware Way to Go sponsors BTWD, by year**



**Q9: “Before participating in this survey, were you aware that the Way to Go program is part of the Denver Regional Council of Governments (DRCOG)?”**

Similar to last year, 21 percent of respondents were aware that Way to Go organizes and promotes BTWD. We found no statistical differences in awareness between 2014 and 2015.

**Exhibit A: Aware Way to Go is part of DRCOG, by year**

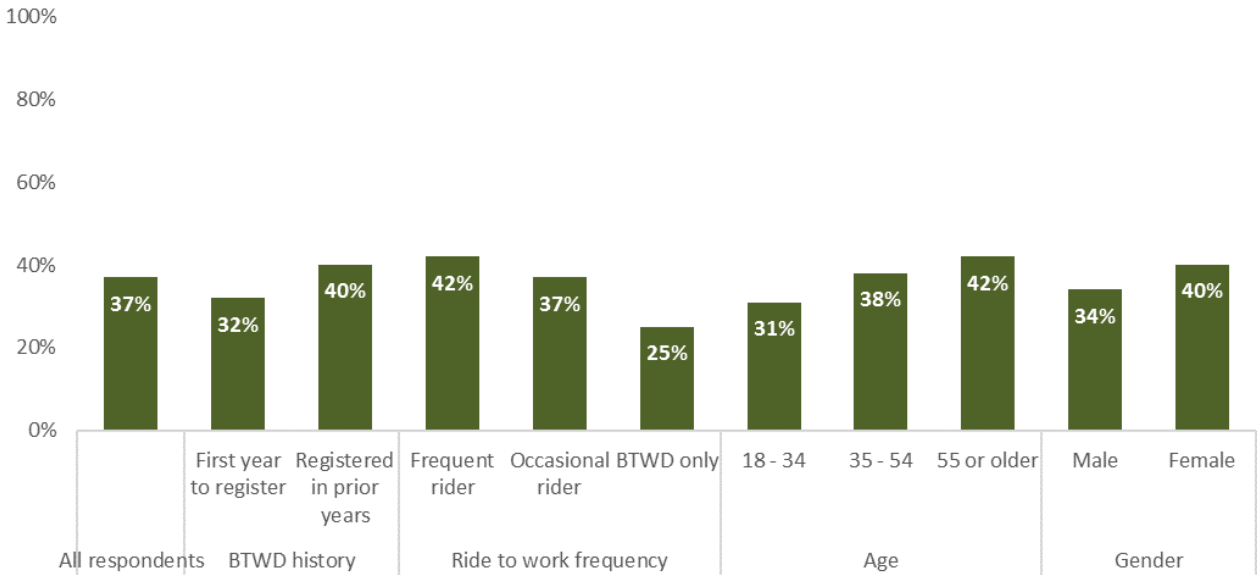


## SPONSORS

### Q17: “Can you recall the name(s) of any Bike to Work Day sponsors for 2015?”

Among all respondents, 37 percent indicated they could recall the name of at least one BTWD sponsor. Frequent bike commuters, older respondents, and those who registered for previous BTWD events were more likely than others to say they could recall a sponsor by name. We found no differences by gender.

Exhibit A: Believe can recall at least one BTWD sponsors



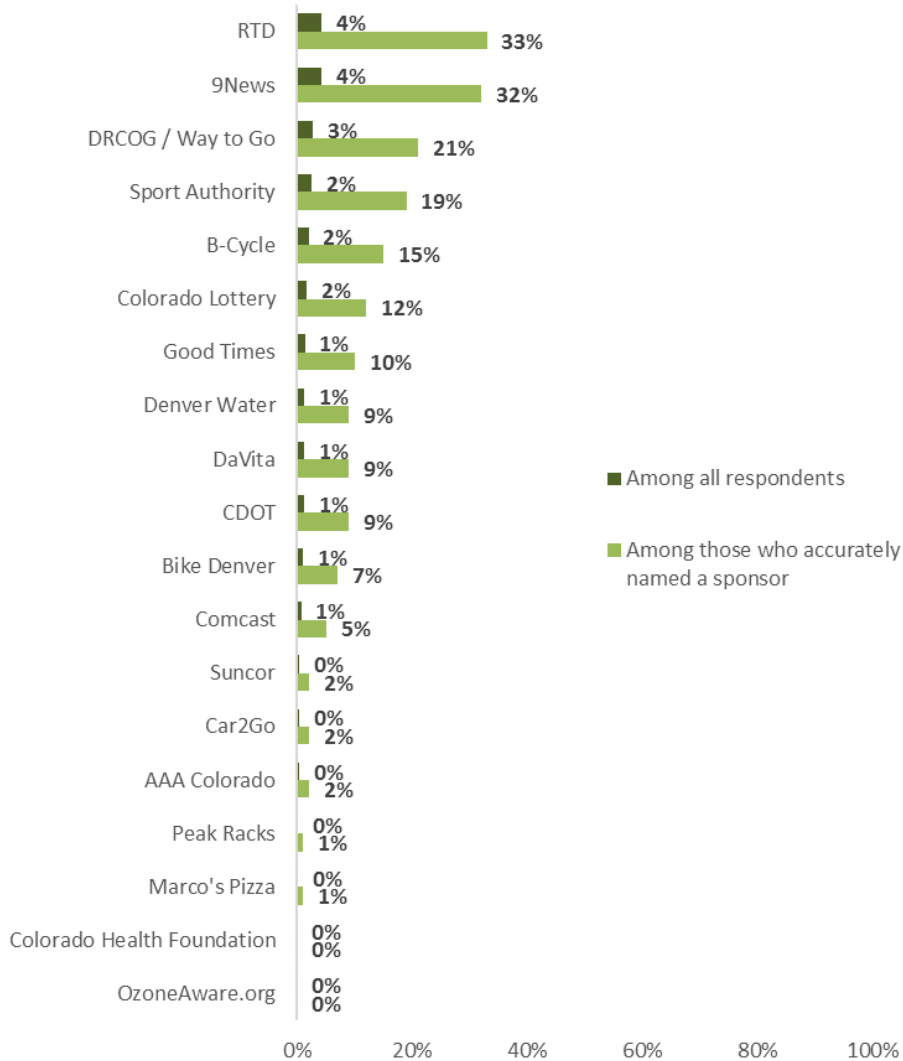


**Q18: “Please type the name(s) of the sponsors you can recall”**

Although more than one-third of all respondents said they could recall the name of a BTWD sponsor, only 36 percent of those respondents (i.e., 12 percent of all respondents) actually did name at least one of the 19 official sponsors in 2015 (Note that although DRCOG is the event organizer, we considered them a sponsor for this analysis). Out of the 153 respondents who did accurately name at least one sponsor (labeled as “Among those who accurately named a sponsor” in the graph below), about one-third mentioned RTD and about the same percentage mentioned 9-News. Among all respondents, however, about four percent mentioned RTD and four percent mentioned 9-News. No respondent recalled The Colorado Health Foundation or OzoneAware.org.

Although the sample size was small, younger respondents (i.e., age 18 to 54) were more likely than older respondents to recall B-Cycle. Males and older respondents were more likely than females and younger respondents, respectively, to recall DRCOG.

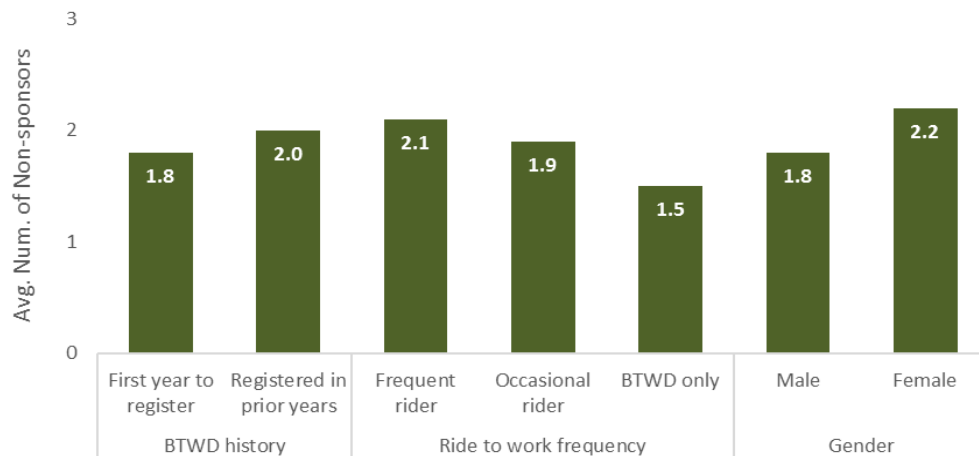
**Exhibit A: Unaided recall of specific BTWD sponsors**



Among respondents who said they could recall at least one sponsor, 87 percent mentioned at least one non-sponsor. Commonly mentioned non-sponsors were Whole Foods, REI, local small businesses such as coffee shops and bike shops, and local governments. Most of these organizations are involved in BTWD as bike stations, recruiters, or coordinating agencies.

Among the respondents who mentioned at least one non-sponsor, frequent bike commuters mentioned more non-sponsors, on average, than did BTWD only respondents. Likewise, females mentioned more non-sponsors than did males. There was no statistical difference by BTWD history in average number of non-sponsors mentioned.

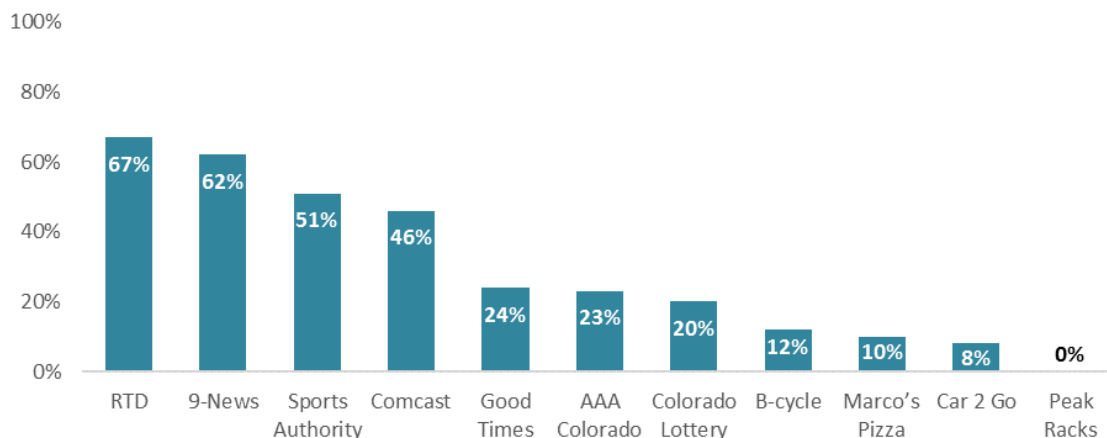
**Exhibit B: Average number of non-sponsors mentioned**



**Q19: “Have you used the products or services of any of these Bike to Work Day sponsors in the past 12 months? Click on all that you have used”**

More than half of respondents have used products or services from RTD, 9-News, and Sports Authority, and almost half have used Comcast. The other sponsors tested, which are mostly smaller companies/organizations, were chosen less frequently.

**Exhibit A: Use of product or service in the past 12 months**

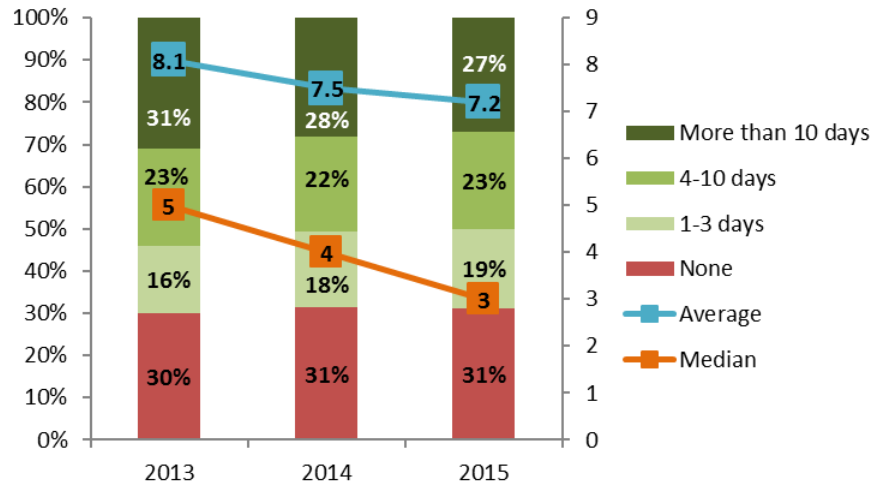


## BICYCLING TO WORK

**Q10: “Thinking about the three months leading up to Bike to Work Day (April, May and June), how many days per month, on average, did you bicycle to work?”** (Please enter 0 if you did not ride to work on any days during this time period)

Pre-event bicycling behavior has declined, on average, compared to 2013. Most of the decrease was among commuters who bike to work more than ten days each month. The cold, rainy and snowy weather in April and May 2014 and 2015 could explain the decrease. There was no statistical change between 2014 and 2015.

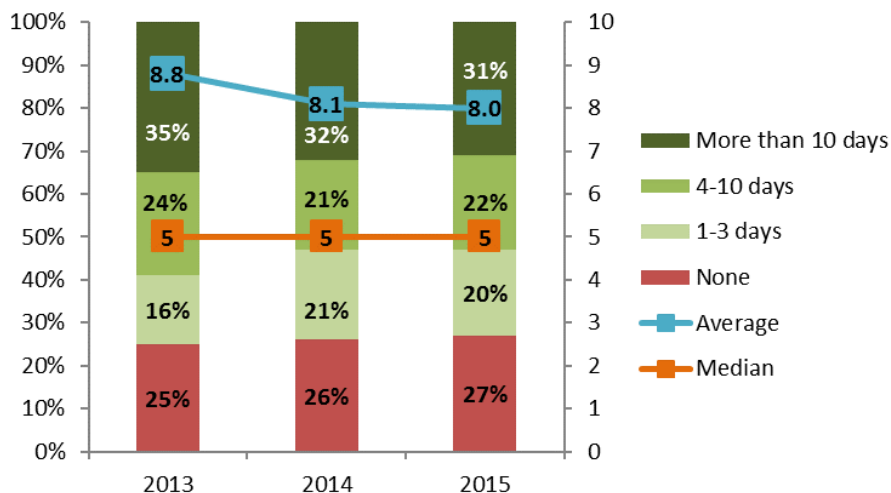
**Exhibit A: Average number of days per month biked to work before BTWD**



**Q11: “Thinking about the three months following Bike to Work Day (July, August and September), how many days per month, on average, did you bicycle to work?”** (Please enter 0 if you did not ride to work on any days during this time period)

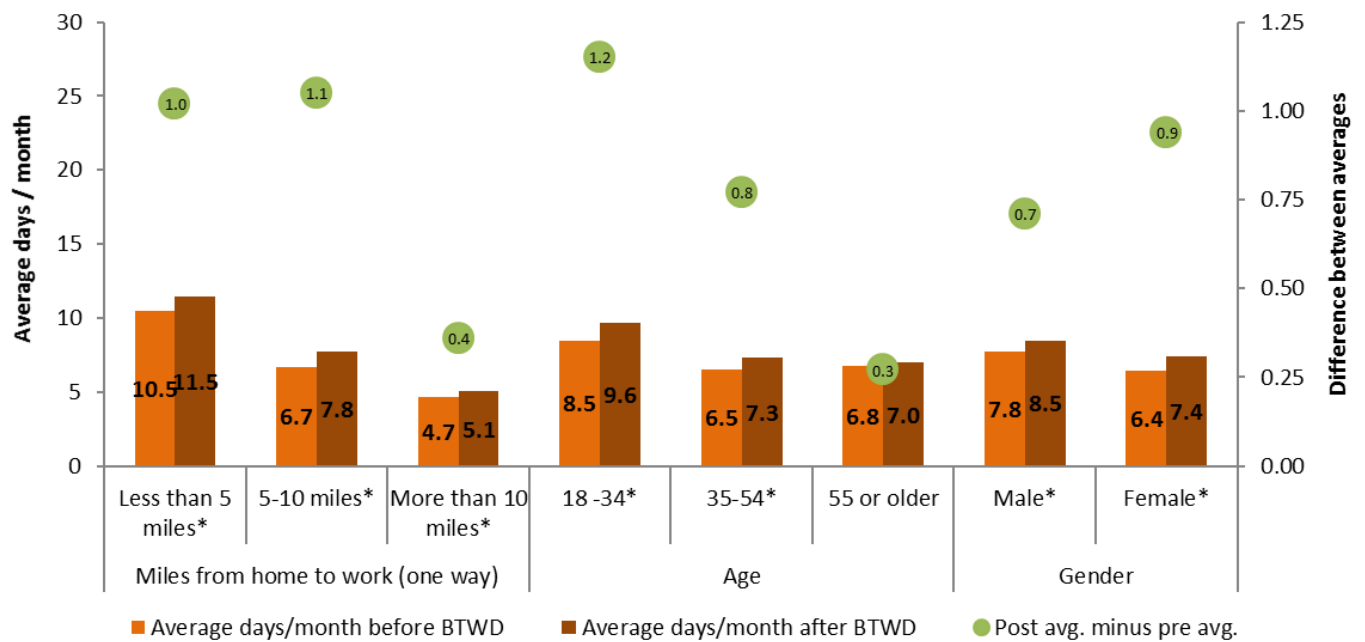
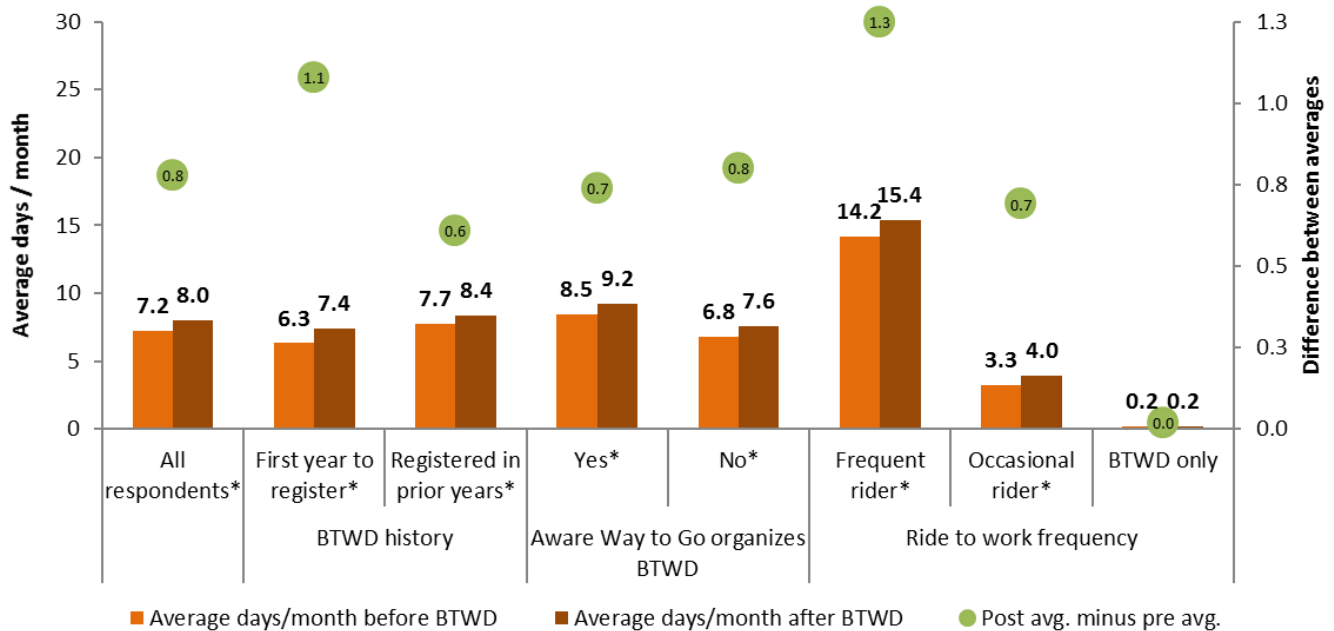
Post-event bicycling to work has decreased since 2013, but we found no statistical differences between 2015 and 2014.

**Exhibit A: Average number of days per month biked to work after BTWD**



Among all respondents in 2015, the average number of days per month participants biked to work statistically increased between the three months prior to BTWD and the three months following BTWD. We also found statistically significant increases across many segments; the largest increases were of frequent riders and riders between 18 and 34. Several respondents mentioned in the final comments section that the rainy spring prevented them from riding more often in April and May.

**Exhibit B: Avg. number of days per month biked to work before and after BTWD (2015 only)**

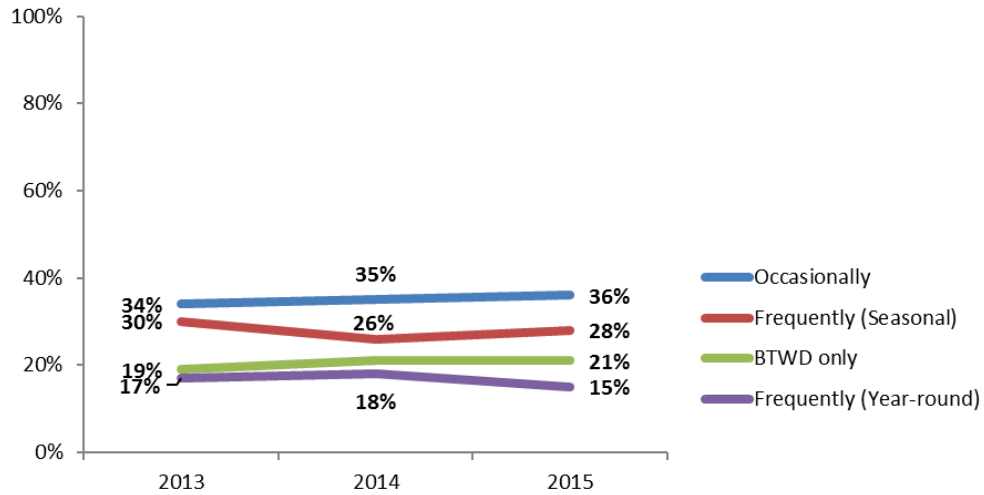


*Asterisks (\*) represent statistically significant differences before and after BTWD*

**Q12: “Please take a moment to think about how often you bicycle to work, and then choose the category that best describes you.”**

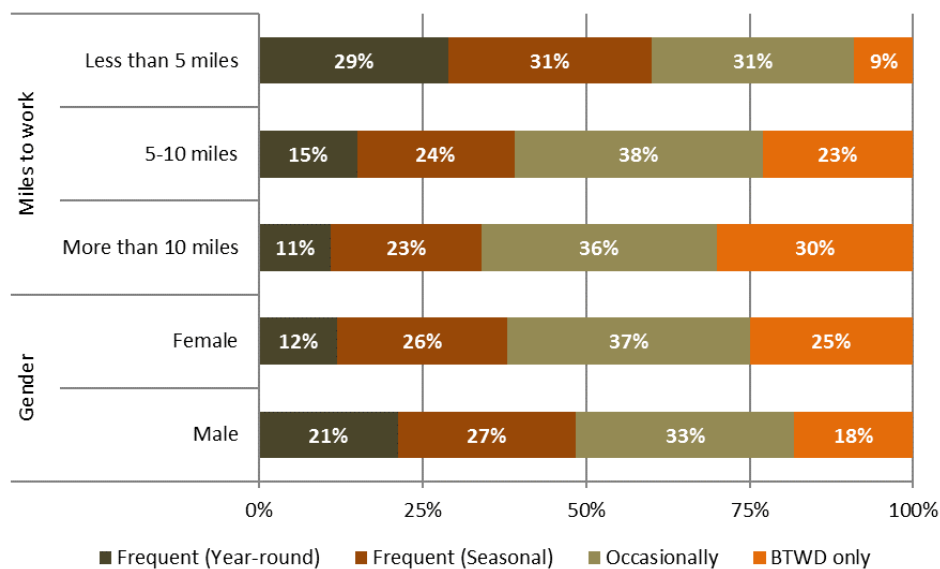
Frequency of bicycling to work behavior among event participants was generally similar this year as it was in 2013 and 2014. However, there was a slight, yet statistically significant, decrease in participants who commute by bike frequently, all year round.

**Exhibit A: Frequency of biking to work**



Respondents who are very likely to re-register for BTWD next year were statistically more likely than others to be frequent commuters (year-round and seasonally), whereas those who are less certain that they will re-register are much more likely to classify themselves as BTWD only commuters. A similar pattern, with less effect, is evident when looking at BTWD history, where those who have registered in prior years are more likely to be frequent riders than are first year registrants.

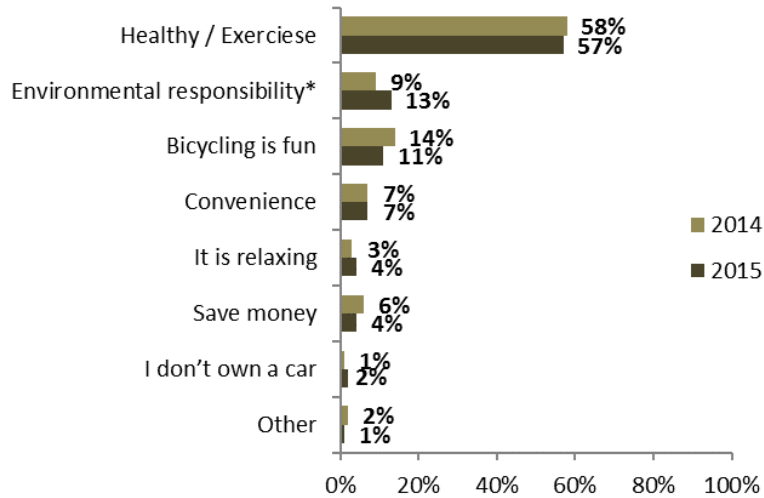
**Exhibit B: Frequency of biking to work, by likely to register next year and BTWD history (2015 only)**



**Q13: “Which ONE of these statements best describes why you bicycle to work on days OTHER THAN Bike to Work Day?”**

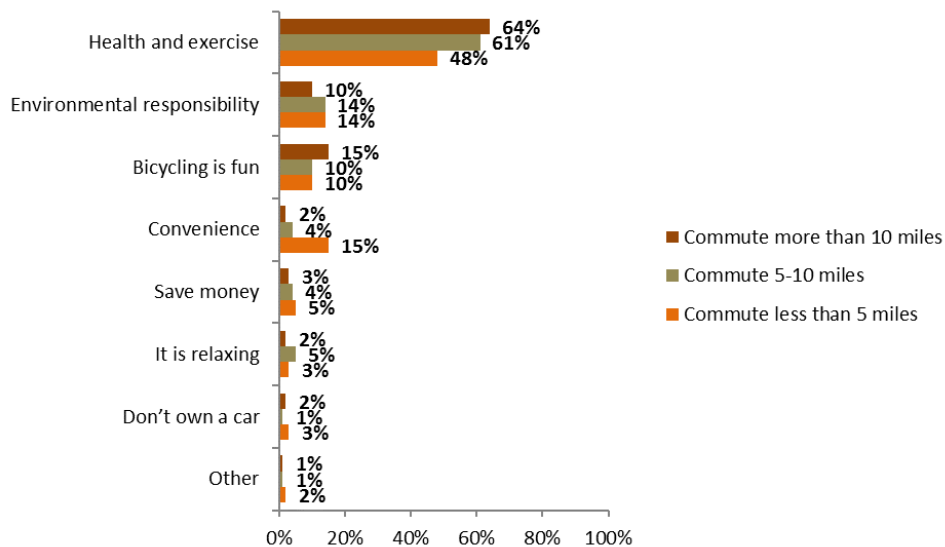
Reasons why commuters bicycle to work on days other than Bike to Work Day continues to be mostly about health and exercise, and this reason did not differ between 2014 and 2015. However, we did find a statistical increase, in 2015, in respondents saying they bike to work for environmental reasons.

**Exhibit A: Reason for biking to work on days other than BTWD**



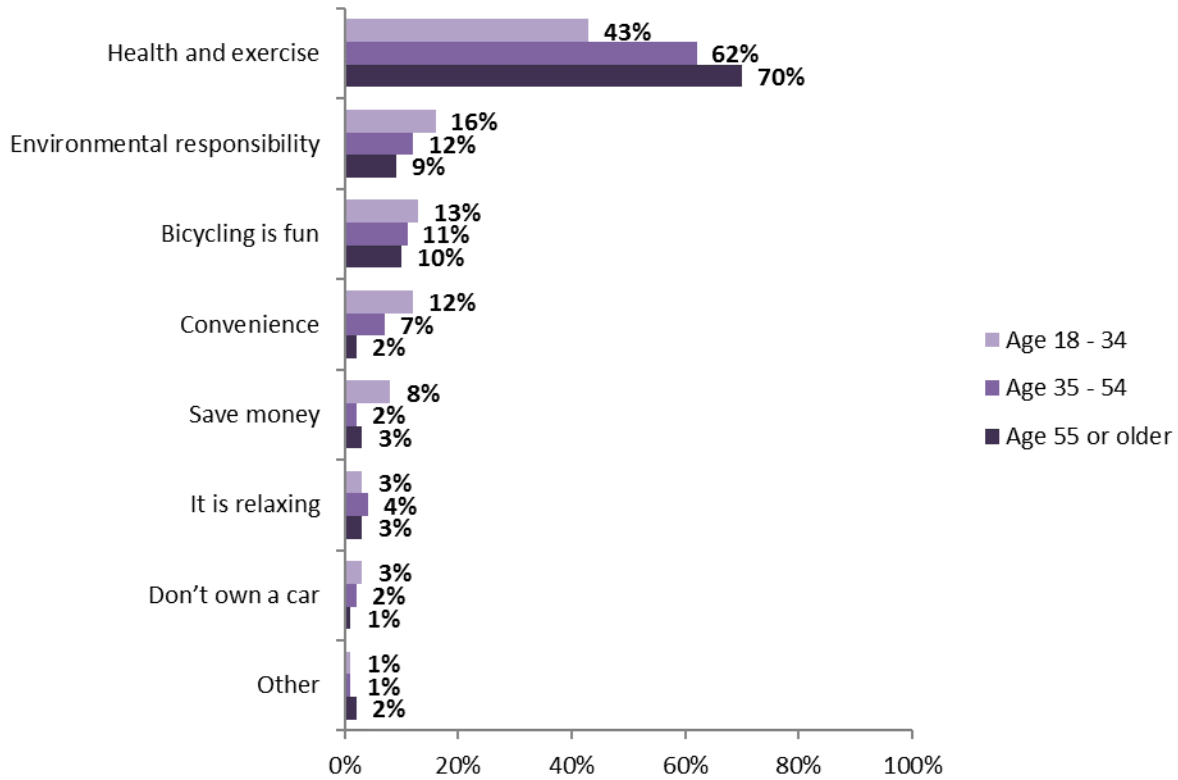
It appears that length of commute relates to reasons for biking to work on days other than BTWD. Respondents with longer commutes are more likely to bike for health or exercise, while those with a shorter commute bike because it is the most convenient way to work.

**Exhibit B: Reason for biking to work on days other than BTWD, by distance to work (2015 only)**



Additionally, age is related to many reasons for biking on other days, especially for health and exercise, where older participants are more likely to bike for this reason. Conversely, younger participants are more likely to bike to work for environmental reasons and for convenience. We found no statistical relationship between age and bicycling is fun as a reason to commute to work.

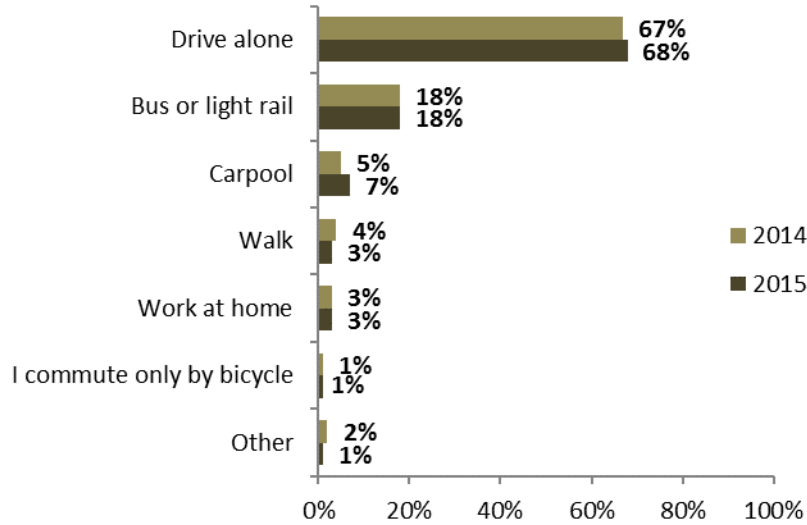
**Exhibit C: Bike to work on days other than BTWD, by age (2015 only)**



**Q14: “On days when you do not ride a bicycle to work, which ONE mode of transportation are you most likely to use for your commute to work?”**

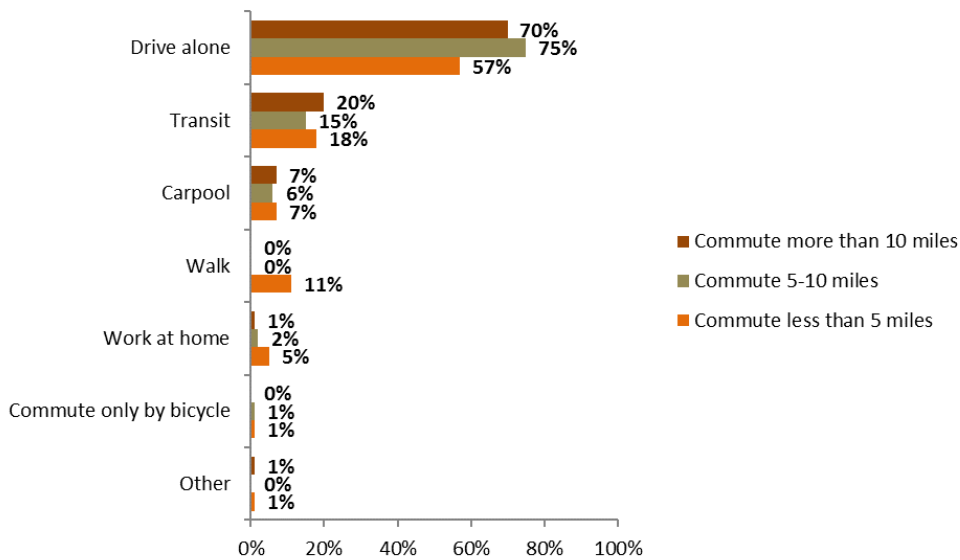
There were few changes in primary commute mode between 2014 and 2015, with the exception of a small but statistically significant increase in the percentage of carpoolers.

**Exhibit A: Primary commute mode when not biking to work**



Distance to work categories are related to driving alone as a primary commute mode, although individual segment analysis found no difference in the percentage who drive alone between respondents with a 5 to 10-mile commute and those with a greater than 10-mile commute.

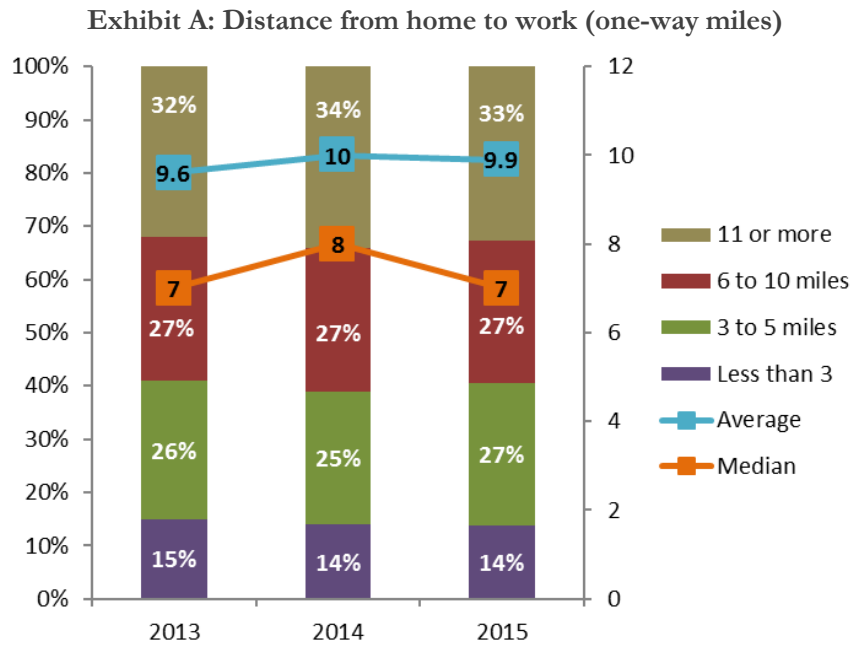
**Exhibit B: Primary commute mode when not biking to work by miles to work (2015 only)**





**Q15: “How many miles do you travel (one way) from your home to work?”** (If you are unsure about the exact mileage, please provide your best estimate.)

In 2015, participants indicated that they traveled an average of 9.9 miles (one-way) to work, which was not statistically different from 2013 or 2014. Half of all participants traveled at least seven miles to work.

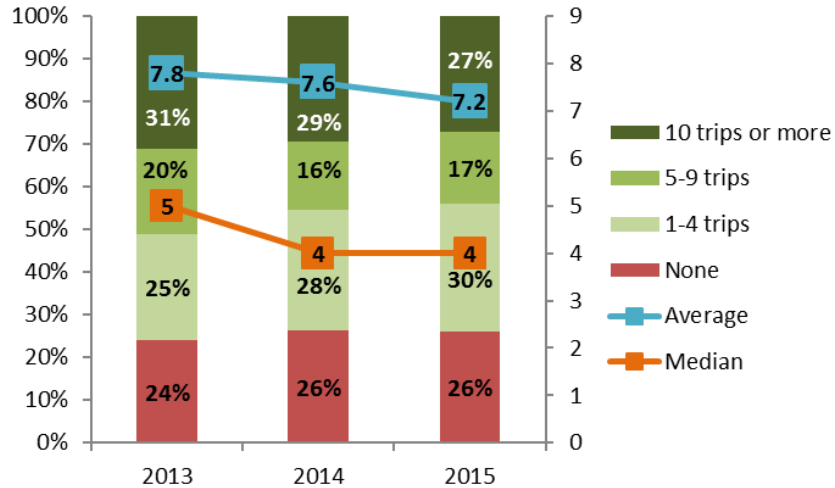


## NON-WORK BICYCLING

**Q20: “During the months of APRIL THROUGH JUNE, how many non-work trips per month, on average, did you make by bicycle instead of driving?”** (Please give us your best estimate, and do not include recreational bicycle rides. Enter 0 if none).

In the three months before Bike to Work Day, participants indicated making an average of 7.2 non-work trips by bicycle per month, which was not significantly different from 2014.

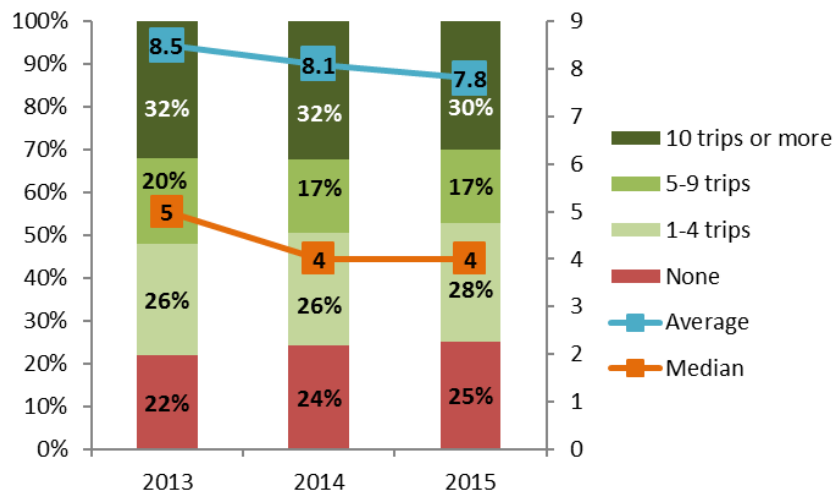
**Exhibit A: Average number of non-work bike trips per month before BTWD**



**Q21: “During the months of JULY THROUGH SEPTEMBER, how many non-work trips per month, on average, did you make by bicycle instead of driving?”** (Please give us your best estimate, and do not include recreational bicycle rides. Enter 0 if none).

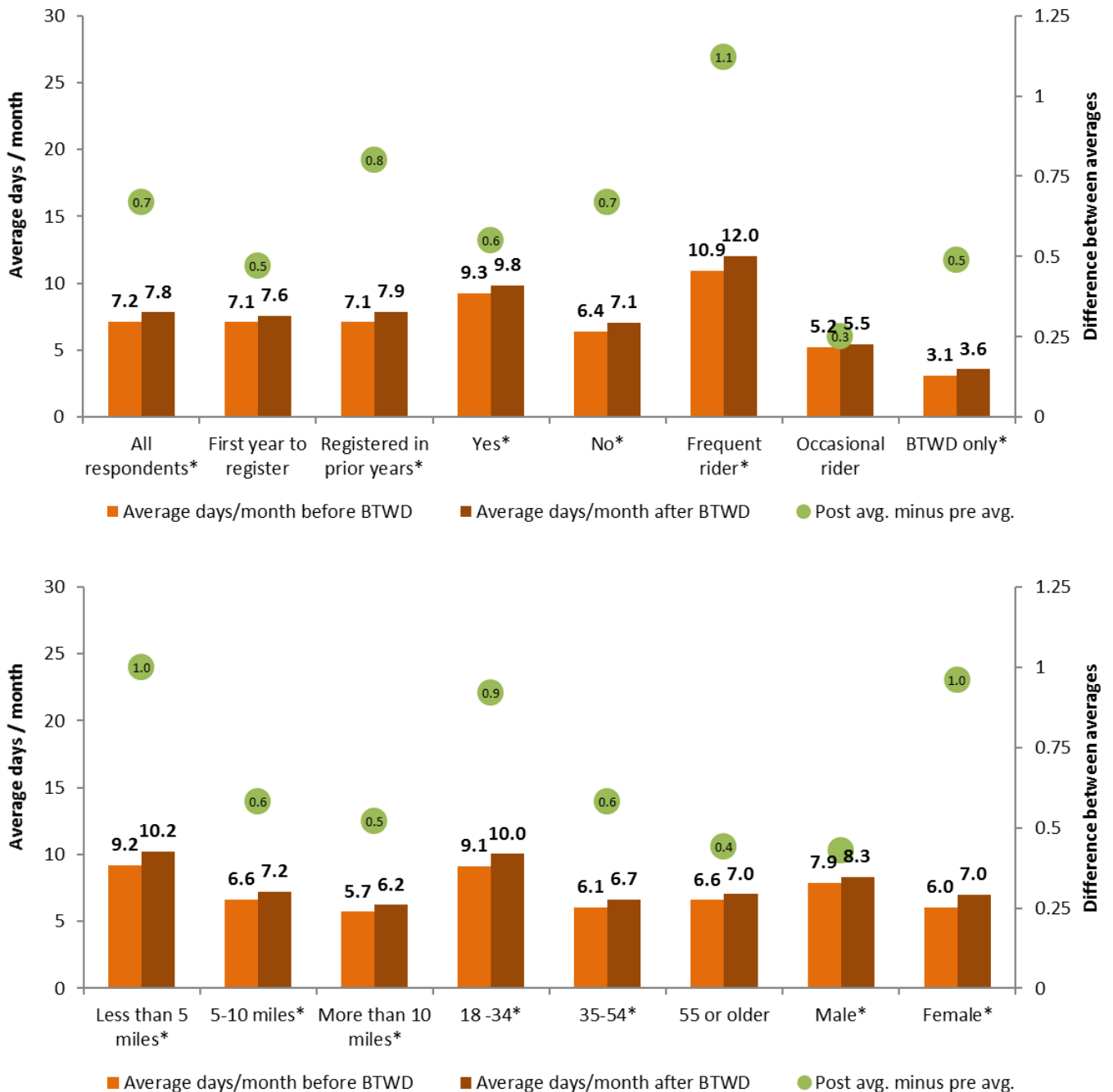
In the three months after Bike to Work Day, participants averaged 7.8 non-work trips by bicycle per month, which was not statistically different than 2014.

**Exhibit A: Average number of non-work bike trips per month after BTWD**



Among all respondents in 2015, the average number of non-work bike trips per month statistically increased between the three months prior to BTWD and the three months following BTWD. We also found statistically significant increases across most segments; the largest increases were of respondents who were frequent riders, those with less than a five-mile commute, females, and 18 to 34 year olds.

**Exhibit B: Average number of non-work bike trips per month before and after BTWD (2015 only)**



*Asterisks (\*) represent statistically significant differences before and after BTWD*

# APPENDIX A: METHODOLOGY

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## SURVEY INSTRUMENT

Key staff from DRCOG and Corona Insights designed the survey instrument in 2012. To facilitate response comparison between years, we included most of the same questions in the 2015 survey, with some modifications to make the survey more relevant. The survey instrument is found in [Appendix B](#).

## SAMPLE AND SURVEY MODE

DRCOG provided Corona Insights with the full database of 2015 Bike to Work Day registrants and their email addresses to use as a sampling frame. To avoid sampling the same individuals that we sampled in 2014, but not change the proportion of repeat participants invited to take the survey, we calculated the percent of individuals who registered in 2014 and 2015. We removed all cases that received a survey in 2014 and registered in 2015. Then, we selected a sample of registrants that represented the proportion of new and repeat registrants.

## SAMPLE SIZE AND RESPONSE RATE

We sent 3,200 email invitations, and we sent two reminder emails to non-responders. Sixty-six emails were invalid, and 1,239 people opened the survey. Thirteen people did not answer any questions, and we excluded these cases from the analysis. In total, we collected 1,226 valid responses, representing 38 percent of the population sampled.

## ANALYSIS

Because repeat Bike to Work Day participants are more likely to respond to the survey than first-time participants, first-time participants tend to be under-represented in the results. To correct for this, we calculated weights based on registration data provided by DRCOG, and we applied these weights to the survey data so that the survey results more closely reflect the entire population of Bike to Work Day participants. All graphs and tables, including demographics tables, display these weighted results.

Data analysis included determining the proportion of responses by year and segments of interest, as well as calculating the averages and medians of numeric questions. For some questions, we assigned numeric codes to response categories, and we used these codes to calculate averages. We used chi-squared tests to test for relationships between categorical variables. We used z-tests and independent sample t-tests to test for statistically significant differences between the 2014 and 2015 data where appropriate. We used paired t-tests to test for statistically significant differences between responses about biking behavior before and after BTWD (i.e., Q10/Q11 and Q20/Q21). A statistically significant finding indicates that we are highly confident that the pattern in the data is reliable and that we would expect to find the same result if we repeated the survey. We are not confident in patterns that are not statistically significant. All statistical tests were deemed statistically significant when the chance of a false-positive result was less than 5 percent.

## **APPENDIX B: SURVEY INSTRUMENT**

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A copy of the survey instrument is provided on the following pages.

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# BTWD SURVEY DESIGN 2015

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DRCOG

## SURVEY GOALS

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The following goals were used to develop the survey.

- Assess BTWD (Bike to work day) participation, including reasons for participating and potential impacts of BTWD on cycling behavior.
- Measure other bicycling behavior, outside of BTWD, including work and non-work trips.
- Investigate extent that prizes can motivate participation.
- Investigate recall of and engagement with sponsors

## SURVEY LOGISTICS

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The following are logistical notes for this survey.

- The sample will be drawn from BTWD participation lists.
- Email invitations (and reminders) will come from Corona Insights.
- Programming notes are in [RED] and research design notes and explanation are in [BLUE].
- Question numbers in [Purple] are used for internal purposes only.

# EMAIL INVITES

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## INITIAL INVITE

{Salutation},

Thank you for participating in Bike to Work Day 2015! To evaluate the impact of Bike to Work Day, the Denver Regional Council of Governments (DRCOG) and its research partner, Corona Insights, would greatly appreciate it if you could take a few minutes to complete a short questionnaire about your experience. It will help us understand your reasons for participating and help us improve Bike to Work Day in the future.

Please click here to begin the survey. [\[SURVEYLINKAUTO\]](#)

The survey will only take a few minutes to complete, and your answers are entirely confidential. Please respond as soon as possible. If you have any trouble accessing the survey, please copy and paste the following address into your web browser, then enter the provided Username and PIN to access the survey.

Survey: {Survey Location}

Username: {Email}

PIN: {PIN}

Thank you in advance for your time and feedback!

Sincerely,

~ Jim Eshelman, Researcher, Denver Regional Council of Governments

~ Matt Bruce, Associate, Corona Insights

*If you have any difficulty in accessing this survey, please contact Matt at (303)894-8246 or [Matt@CoronaInsights.com](mailto:Matt@CoronaInsights.com).*

*The Denver Regional Council of Governments (DRCOG) retained Corona Insights, a Denver-based market research firm, to conduct this survey. Your responses will be sent securely to Corona Insights. Corona Insights received your contact information from DRCOG for the specific purpose of this survey. Your contact information will not be used for any other purpose by Corona Insights, nor will be sold or otherwise distributed. DRCOG and Corona Insights respect your privacy. To view our privacy policy please visit: <http://coronainsights.com/research-privacy-policy/>.*

*If you have additional questions or concerns about this survey or would like to verify its authenticity, please contact Jim Eshelman with the DRCOG at (303) 480-5645.*

*To unsubscribe from future reminders for this survey, please click here [\[LINK\]](#).*

## FOLLOW UP REMINDER 1

Dear {Salutation},

We recently asked if you had a few minutes to provide feedback about Bike to Work Day 2015. We know you are busy, but we really hope you complete the survey, which will help improve Bike to Work Day in the future. Even if you do not regularly bike to work, we would still like to hear from you.

Please click here to begin the survey. [\[SURVEYLINKAUTO\]](#)

This confidential survey will only take a few minutes to complete; please respond as soon as possible. If you have any trouble accessing the survey, please copy and paste the following address into your web browser, then enter the provided Username and PIN to access the survey.

Survey: {Survey Location}

Username: {Email}

PIN: {PIN}

Thank you in advance for your time and feedback!

Sincerely,

~ Jim Eshelman, Researcher, Denver Regional Council of Governments

~ Matt Bruce, Associate, Corona Insights

*If you have any difficulty in accessing this survey, please contact Matt at (303)894-8246 or [Matt@CoronaInsights.com](mailto:Matt@CoronaInsights.com).*

*The Denver Regional Council of Governments (DRCOG) retained Corona Insights, a Denver-based market research firm, to conduct this survey. Your responses will be sent securely to Corona Insights. Corona Insights received your contact information from DRCOG for the specific purpose of this survey. Your contact information will not be used for any other purpose by Corona Insights, nor will be sold or otherwise distributed. DRCOG and Corona Insights respect your privacy. To view our privacy policy please visit: <http://coronainsights.com/research-privacy-policy/>.*

*If you have additional questions or concerns about this survey or would like to verify its authenticity, please contact Jim Eshelman with the DRCOG at (303) 480-5645.*

*To unsubscribe from future reminders for this survey, please click here [\[LINK\]](#).*



## FOLLOW UP REMINDER 2

Dear {Salutation},

This is our final request for you to complete the Bike to Work Day survey, **which will close on Sunday, October, 25**. We really hope you complete this survey so that we can improve Bike to Work Day in the future. Even if you do not regularly bike to work, we would still like to hear from you. Please respond as soon as possible.

Click here to begin the survey. [\[SURVEYLINKAUTO\]](#)

If you have any trouble accessing the survey, copy and paste the following address into your web browser, then enter your Username and PIN to access the survey.

Survey: {Survey Location}

Username: {Email}

PIN: {PIN}

Thank you for helping us!

Sincerely,

~ Jim Eshelman, Researcher, Denver Regional Council of Governments

~ Matt Bruce, Associate, Corona Insights

*If you have any difficulty in accessing this survey, please contact Matt at (303)894-8246 or [Matt@CoronaInsights.com](mailto:Matt@CoronaInsights.com). The Denver Regional Council of Governments (DRCOG) retained Corona Insights, a Denver-based market research firm, to conduct this survey. Your responses will be sent securely to Corona Insights. Corona Insights received your contact information from DRCOG for the specific purpose of this survey. Your contact information will not be used for any other purpose by Corona Insights, nor will be sold or otherwise distributed. DRCOG and Corona Insights respect your privacy. To view our privacy policy please visit: <http://coronainsights.com/research-privacy-policy/>.*

*If you have additional questions or concerns about this survey or would like to verify its authenticity, please contact Jim Eshelman with the DRCOG at (303) 480-5645.*

This is our final reminder.

# SURVEY INSTRUMENT

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## INTRO

Thank you for participating in this brief survey. Please use the buttons below to move through the survey and DO NOT use the "back" button in your web browser.

If you have any technical issues with this survey, please contact Matt Bruce at 303-894-8246 or Matt@coronainsights.com.

Press the "next" button below to begin.

## BIKE TO WORK DAY PARTICIPATION

1. **[Q1] Including this year (2015), how many years have you registered as a Bike to Work Day participant?**
  - a. This was my first year to register.
  - b. 2-4 years
  - c. 5 years or more
  - d. Don't recall
  
2. **[Q26] How did you hear about Bike to Work Day this year? (Select all that apply)** **[RANDOM ORDER, ANCHOR OTHER]**
  - a. Email
  - b. Ad on a web page
  - c. Digital radio
  - d. AM/FM radio
  - e. Television
  - f. Facebook
  - g. Twitter
  - h. Bus ad
  - i. Poster
  - j. Employer
  - k. Bike to Work Day exhibit or table at an event
  - l. Friend/co-worker
  - m. Family member
  - n. Other:\_\_\_\_\_ (please specify)
  
3. **[Q2] Which ONE of the statements below best describes why you decided to register for Bike to Work Day this year.** **[RANDOM ORDER, ANCHOR OTHER]**
  - a. Try bicycle commuting
  - b. Commute more often by bicycle
  - c. Just a fun thing to do
  - d. Compete in the Business Challenge
  - e. Raise awareness and support bicycle commuting

- f. Win prizes
- g. Health/exercise
- h. Other (please describe) \_\_\_\_\_

4. **[Q27]** How likely are you to register for Bike to Work Day next year (2016)?
- a. Very likely
  - b. Somewhat likely
  - c. Just as likely as unlikely
  - d. Somewhat unlikely
  - e. Very unlikely
5. **[Q3]** Which ONE of these statements best describes how Bike to Work Day has influenced your attitude toward bicycle commuting to work or for other types of trips?
- a. Bike to Work Day motivated me to commute more often by bicycle TO AND FROM WORK ONLY.
  - b. Bike to Work Day motivated me to travel more often by bicycle FOR ALL TYPES OF TRIPS.
  - c. Bike to Work Day had no influence on how I use my bicycle.
  - d. After Bike to Work Day, I am less motivated to commute by bicycle than before.
6. **[Q4]** Did you ride a bicycle for any part of your trip to work on Bike to Work Day (June 24<sup>th</sup>) this year?
- a. Yes
  - b. No
7. **[Q28]** **[IF Q4=NO]** What most prevented you from riding to work on Bike to Work Day? (Select only one) **[RANDOM ORDER, ANCHOR OTHER]**
- a. Poor air quality
  - b. Weather conditions, temperature
  - c. Personal reasons
  - d. Work-related reasons
  - e. Did not have time
  - f. Too long of distance to ride
  - g. Issues with bike
  - h. Didn't feel there was a safe route from home to work
  - i. Other (Please specify: \_\_\_\_\_)
8. **[Q6]** Before participating in this survey, were you aware that the Way to Go program organizes and promotes Bike to Work Day?
- a. Yes
  - b. No
9. **[Q7]** Before participating in this survey, were you aware that the Way to Go program is part of the Denver Regional Council of Governments (DRCOG)?
- a. Yes
  - b. No

## BICYCLING TO WORK

10. [Q8] Thinking about the three months leading up to Bike to Work Day (April, May and June), how many days per month, on average, did you bicycle to work? *Please enter 0 if you did not ride to work on any days during this time period.*

Enter a number from 0 up to 30 \_\_\_\_\_

11. [Q9] Thinking about the three months following Bike to Work Day (July, August and September), how many days per month, on average, did you bicycle to work? *Please enter 0 if you did not ride to work on any days during this time period.*

Enter a number from 0 up to 30 \_\_\_\_\_

12. [Q10] Please take a moment to think about how often you bicycle to work, and then choose the category that best describes you:

- I ride to work frequently, all year-round.
- I ride to work frequently in the spring /summer/ early fall months, but less often or not at all in the winter.
- I ride to work occasionally, when it's convenient or the weather is nice.
- I ride to work only when there is an event like Bike to Work Day.

13. [Q11] [IF Q10=A, B, or C] Which ONE of these statements best describes why you bicycle to work on days OTHER THAN Bike to Work Day? [RANDOM ORDER, ANCHOR OTHER]

- It is an environmentally-responsible thing to do
- Bicycling is fun
- It is a healthy activity and a chance for me to get some exercise
- It is relaxing
- It saves money
- It is the most convenient way for me to get to work
- I don't own a car
- Other (please describe) \_\_\_\_\_

14. [Q12] On days when you do not ride a bicycle to work, which ONE mode of transportation are you most likely to use for your commute to work? [RANDOM ORDER, ANCHOR OTHER]

- Drive alone in a motor vehicle for the entire trip. (This would also include riding a motorcycle or scooter to work.)
- Carpool with another adult or have someone drop you off at work.
- Ride a bus or light rail for all or part of the trip.
- Walk the entire way to work.
- Work at home instead of commuting to work.
- I commute only by bicycle and never use any other mode of transportation.
- Other (please specify) \_\_\_\_\_

15. [Q13] How many miles do you travel (one way) from your home to work? *If you are unsure about the exact mileage, please provide your best estimate.*

Enter the number of one-way miles \_\_\_\_\_

## PRIZES

16. [Q29] We would like to know how the chance to win a prize and the value of prizes might influence your interest in Bike to Work Day. Which of these potential prize offerings would most strongly motivate you to register for Bike to Work Day next year (2016)? [RANDOMIZE A AND B, ANCHOR C AND D]
- A chance to win one of many low or moderate value prizes, such as bike lights, gift cards valued at \$25 or less, water bottles, etc.
  - A chance to win one of only a few high value prizes such as bicycles, trips, etc.,.
  - No preference, both are about equal.
  - Not sure.

## SPONSORS

17. [Q30] Can you recall the name(s) of any Bike to Work Day sponsors for 2015?
- Yes
  - No

18. [Q31] [IF Q30=YES] Please type the name(s) of the sponsors you can recall:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

19. [Q32] Have you used the products or services of any of these Bike to Work Day sponsors in the past 12 months? *Click on all that you have used.* [RANDOM ORDER]
- 9-News – Have you watched 9-News or visited 9-News.com?
  - AAA Colorado
  - Car 2 Go
  - Colorado Lottery
  - Comcast
  - Denver B-cycle
  - Good Times Burgers & Frozen Custard
  - Marco's Pizza
  - Peak Racks

- j. RTD
- k. Sports Authority

## NON-WORK BICYCLING

Please think for a moment about the types of non-work trips that you make for things such as shopping, running errands, dining, entertainment, or going to school. (Note: this does not include any bike trips for recreation purposes).

20. [Q16] During the months of APRIL THROUGH JUNE, how many non-work trips per month, on average, did you make by bicycle instead of driving? *Please give us your best estimate, and do not include recreational bicycle rides (enter 0 if none).*
- \_\_\_\_\_

21. [Q17] During the months of JULY THROUGH SEPTEMBER, how many non-work trips per month, on average, did you make by bicycle instead of driving? *Please give us your best estimate, and do not include recreational bicycle rides (enter 0 if none).*
- \_\_\_\_\_

## DEMOGRAPHICS

These last few questions are about you and your household. This information will help us understand the characteristics of people who participate in Bike to Work Day and to classify responses. All of your responses to this survey are confidential and will be reported in group form only.

22. [Q20] Which category best describes your occupation? [RANDOM ORDER]

- a. Professional/Managerial/Administrative
- b. Sales/Clerical/Service
- c. Laborer/Craftsman/Foreman
- d. Other (please specify) \_\_\_\_\_
- e. I prefer to not answer this question

23. [Q21] What is the highest level of education you have completed?

- a. 0-11 years, no diploma
- b. High school graduate or GED
- c. Some college, no degree
- d. Associate's degree
- e. Bachelor's degree
- f. Graduate degree
- g. I prefer to not answer this question

24. [Q22] Which of these age categories best describes you?

- a. 18 -24
- b. 25-34
- c. 35-44
- d. 45-54

- e. 55-64
- f. 65 years or older

25. **[Q23]** Which of the categories below best reflects your household's total annual income from all sources?

- a. Less than \$25,000
- b. \$25,000 - \$49,999
- c. \$50,000 - \$99,999
- d. \$100,000 - \$149,999
- e. \$150,000 or more
- f. Don't know
- g. I prefer to not answer this question.

26. **[Q24]** What is your gender?

- a. Male
- b. Female
- c. I prefer to not answer this question

27. **[Q25]** Is there anything else you would like to tell DRCOG about Bike to Work Day?

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