



# **DON'T TRASH ARIZONA**

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## **LITTER EVALUATION SURVEY**

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Prepared for:



# TABLE OF CONTENTS

<u>Section:</u>	<u>Page #:</u>
<b>Study Overview</b> .....	1
<b>Key Findings and Recommendations</b> .....	2
<b>Executive Summary</b> .....	4
<b>I. Introduction</b> .....	7
A. Background and Methodology .....	7
B. Significance Testing and Sub-Group Analysis .....	8
C. Demographics .....	9
<b>II. Driver Characteristics</b> .....	11
A. Driving Habits .....	11
B. Litterbag Use .....	12
C. Smokers .....	13
D. Truck Drivers .....	14
<b>III. Litter Awareness and Behavior</b> .....	17
A. Perception of the Problem along Freeways .....	17
B. Personal Littering .....	19
C. Littering Circumstances .....	20
D. Reasons for Littering when Driving .....	21
E. Personal Experience with Specific Littering Situations .....	22
<b>IV. Campaign Awareness</b> .....	24
A. Awareness of Campaign .....	24
B. <i>Don't Trash Arizona</i> Awareness .....	27
C. No cups cans or butts! <i>Don't Trash Arizona</i> Awareness .....	28
D. Trash Talk Awareness .....	29
E. Awareness of Litter Resources .....	32
F. Likelihood to Report Littering .....	34
G. Additional Litter Resources .....	35
<b>V. Profiles of Litterers</b> .....	36
<b>Supplemental Results for Males aged 18 to 34</b>	Appendix A
<b>Questionnaire</b>	Appendix B



## STUDY OVERVIEW

In August 2006, the Maricopa Association of Governments (MAG) launched a litter prevention and education program known as *Don't Trash Arizona*. The purpose of the program is to reduce litter on the regional freeway system by developing a strategy to increase public awareness and change behavior. The scope of work for the program additionally mandated that an evaluative process be included to measure the success of the program.

First, “secondary” research was conducted to review existing litter campaigns, not only in other regions and states, but globally. This was accomplished through online research and targeted interviews with managers of litter campaigns in other states.

The secondary research found that litterers were predominately single males, aged 18 to 24—with a secondary tier of litterers aged 25 to 34. They tend to be smokers, eat/buy fast food two times per week or more, frequent bars and nightclubs, and drive pickup trucks. According to the Transportation Research Board, 55 percent of littering is deliberate, while 45 percent occurs “accidentally” when items blow or fall off vehicles. Littering most often takes place when drivers are alone, and many reported that they did not consider small items like cigarettes and candy wrappers to be litter.

Following the secondary research, a benchmark survey was conducted in December 2006 to determine initial attitudes and awareness of litter issues in Arizona and to evaluate littering behavior.

A follow-up, evaluative survey was then conducted in July 2008 at the end of the first two years of the campaign in order to determine if any changes in awareness, attitudes or behavior were realized. Annual surveys have been conducted in subsequent years, focusing on Maricopa County residents. Follow up studies have been conducted in August for the past 8 years - August 2008, August 2009, August 2010, August 2011, August 2012, August 2013, August 2014 and the focus of this current report is for data collected in August 2015.

Communication strategies are informed each year based on the survey results. These strategies primarily target the 18 to 34 male demographic, with a secondary demographic of key influencers to them, primarily women of varied ages. Messages targeted toward both accidental and deliberate littering are included, and a variety of strategies and tactics are employed utilizing public relations, paid advertising, special events, school outreach, distribution of informational materials and the development of value-added partnerships. The survey includes questions to help evaluate the effectiveness of various tactics and campaign messaging, so that outreach efforts can be refined each year for best results.

## KEY FINDINGS AND RECOMMENDATIONS

- Overall, there was a 15% decrease in reported littering between 2014 and 2015 among the general population.
- The perception that litter along Maricopa County freeways is a moderate or big problem dropped to 60% among the general population. This represents the lowest level of concern measured to date and is significantly lower than five of the prior eight study years. This perception was noted among both the nontarget and target (males 18 to 34) populations.
- The campaign's target audience, males ages 18 to 34, continues to see and remember the *Don't Trash Arizona* campaign at a higher rate than the general population. Awareness of the campaign among the target audience increased to 66%, representing a significant increase over the 60% measured in 2013.
- Similarly, the campaign slogan, "No Cups, Cans or Butts...*Don't Trash Arizona*," is recalled by 38% of males 18-34. This is up significantly from the 25% measured in 2013 and is also significantly higher than the recall among the general population (20%).
- There was a significant decline in the percentage of people who admitted they have thrown small items such as candy wrappers or scrap paper out of the car (down 40% from 10% in 2014 to 6% this year). However, the percentage of people admitting they have tossed cigarette butts on the ground (8%), or left debris on the side of the road following a vehicle problem (13%) remains elevated over 2013 figures.
- The proportion of admitted litterers among 18-34 year old males (target) held steady this year; however, there was a 9% increase in the proportion of accidental litterers, which pushed the total percentage of target group litterers to 94% in 2015 (up from 90% last year).
- The online campaign presence appears to be having an impact as those aware of the campaigns were significantly more likely to report seeing the associated slogans online.
- The most-commonly littered items continue to be food and organic material (50%), followed by small pieces of paper and other food wrappers.

Based on the above findings, recommendations include the use of targeted messaging, as well as messaging that reinforces key points, to continue to increase awareness of the negative impacts of freeway littering and positively change the behaviors of motorists.

Recommended strategies include:



- Advertising to key demographics: Continue use of targeted advertising to the male 18-34 demographic using platforms such as ReachLocal, Pandora and social media. Updated messaging should include accidental litter, as an increase in that behavior was reflected in the survey.
- Social media advertising: Develop additional shareables to target specific littering behaviors noted in the report among the target demographic, including tossing food and organic material, wrappers and paper scraps, as well as the occurrence of accidental littering. Utilize increased demographic targeting (smokers, owners of trucks, etc.) to reach potential offenders via Facebook and Twitter.
- Mobile: Both traditional and social media advertising should employ an increased focus on mobile-friendly applications in 2016 to support the consumption habits of the target demographic as well as the findings of the *Don't Trash Arizona* website analytics, which continue to indicate a majority of site visitors arrive via mobile device.
- Public relations: Media outreach should support key messaging for both the target demographic and the general population and focus on accidental littering, the truth about food and organic material, and the uptick in cigarette butt litter, as noted in the survey.
- Partnerships: *Don't Trash Arizona* should continue to source additional defined event or campaign-specific partnerships with like-minded organizations and research the value of attendance at key events to further expand its reach.



## EXECUTIVE SUMMARY

Results for the 2015 Litter Evaluation Survey are based on 401 fifteen-minute telephone interviews with Maricopa County residents. The margin of error for the survey is approximately  $\pm 5\%$  at a 95% confidence level.

This year, the survey was again conducted by using a supplemental cell phone database in addition to “land line” telephone calls, due to the increasing number of respondents with cell-phone-only access. This report primarily focuses on the general population study results. A separate summary report containing data from the target audience oversample (males aged 18 to 34 who participated by phone and web) follows in Appendix A.

Below are some key findings of the general population survey.

### Driver Characteristics

- In 2015, 39% of residents surveyed reported driving in a 4-door sedan, while 20% reported driving sport utility vehicles and 13% reported driving pickup trucks. (*Table 2, Page 11*)
- Seven in ten (71%) residents surveyed reported they have a litterbag or can for use in their vehicles, which is consistent with recent years. Among those who do not currently have a litterbag or can in their vehicles, two-thirds (66%) reported they would consider using one in the future. (*Graph, Page 12*)
- A small proportion of residents surveyed indicated they smoke (12%, which is comparable with recent years). More than half (54%) of smokers indicated they dispose of cigarettes by using an ashtray in their vehicles, which is down slightly from last year but still significantly higher than 2013. (*Table 3, Page 13*)
- More than four in five (82%) pickup truck drivers reported they secure items in the back of their pickup truck “always” (61%) or “most of the time” (21%), which is similar to prior years. (*Table 5, Page 14*)
- The large majority (86%) of residents who mentioned they ride in a vehicle that transports items in a trailer or luggage rack at least a few times a year indicated they “always” secure the load they are hauling. (*Graph, Page 16*)



## Litter Awareness and Behavior

- Three in five (60%) residents surveyed indicated they believe litter along Maricopa County freeways is a “big” or “moderate” problem, which represents the lowest level of concern measured to date and is significantly lower than five of the prior eight years (66% to 77% between 2006 and 2014). (*Graph, Page 17, Table 6, Page 18*)
- Seven in ten (71%) residents surveyed indicated they have not littered in the past year. This is a significant increase from the 62% recorded in 2014 and represents a 15% decrease in reported littering. (*Table 7, Page 19*)
- Among those who reported littering, food/organic material continues to be the most common type of litter mentioned (50%), followed by small pieces of paper (27%) and other food wrappers (12%). (*Table 7, Page 19*)
- Nearly half (45%) of residents who indicated they littered in the past year reported they did so while driving or riding in a vehicle. The most common reason mentioned for littering when driving continues to be lack of a convenient trash receptacle (mentioned by 14%). (*Table 8, Page 20 and Table 9, Page 21*)
- Similar to recent years, residents reported the most common littering situation they have experienced in the past three months is trash falling out of a vehicle (26%), followed by having problems with a vehicle and leaving debris on the roadside (13%). As seen in past studies, residents aged 18 to 34 are consistently more likely than older residents to report experiencing any given scenario except for leaving debris related to a car problem or being present for a litter-related ticket or warning. (*Tables 10a and 10b, Pages 22-23*)

## Campaign Awareness

- More than one fourth (29%) of residents indicated they had seen advertising related to litter or littering in the past three months. Residents ages 18 to 34 were significantly more likely than older residents to indicate awareness (37% vs. 25%). (*Graph, Page 24*)
- The top message recalled by those aware of recent litter-related advertising continues to be “Don’t litter/Keep Arizona Clean” (mentioned by 22%). When asked for the main slogan used in the advertising, residents were most likely to mention “you will be fined for littering” (mentioned by 5%), followed by 3 percent of respondents who mentioned several additional slogans: littering is unlawful, keep our freeways beautiful, and Arizona Clean and Beautiful. (*Tables 11 and 12, Pages 25-26*)
- Half of all residents surveyed indicated they have heard the slogan “Don’t Trash Arizona” (50% aided + unaided). This is similar to last year’s recall of 52%, continuing a positive trend over 2012 and 2013. Residents aged 18 to 34 were more likely to indicate awareness than those ages 55+ (58% vs. 42%). (*Graph, Page 27*)
- The proportion of residents indicating awareness (unaided or aided) of “No cups, cans or butts! Don’t Trash Arizona” held steady in 2015 at 20%. There were no significant demographic differences among those aware of this slogan. (*Graph, Page 28*)



- When prompted, nearly one in ten residents (9%) recognized the slogan for *Don't Trash Arizona* that included the words "Trash Talk." (*Graph, Page 29*)
- Residents familiar with "*Don't Trash Arizona*" or "No cups, cans or butts! *Don't trash Arizona*" reported seeing and/or hearing the slogan from a variety of sources. The most relevant finding was that residents were significantly more likely to report seeing the slogans online in 2015 (6% up from 1% last year). (*Table 13, Page 30*)
- Approximately two thirds (65%) of residents who were aware of *Don't Trash Arizona* advertising were unable to name a sponsor for the advertisements (consistent with recent years). (*Table 14, Page 31*)
- One in ten (10%) residents surveyed reported familiarity with the litter hotline. A similar proportion (9%) of residents reported familiarity with DontTrashArizona.com (down from 11% in 2014). Of note, 6% of residents with recognition of the DontTrashArizona.com website indicated they had visited the site (compared to 0% last year). (*Graphs, Pages 32-33*)
- Consistent with last year, nearly one quarter (23%) of residents surveyed indicated they would be "very likely" to report someone littering in the future. (*Table 15, Page 34*)
- The most commonly mentioned preferred method of gathering information about litter/littering continues to be the Internet (mentioned by 56%). Residents aged 18 to 34 were more likely than those aged 55 and older to mention the Internet (64% vs. 48%). (*Table 16, Page 35*)

### Profile of Litterers

- The proportion of admitted litterers in the general population survey declined again this year (26%, trending down from 29% last year and significantly lower than 35% in 2013 and 33% in 2012). The proportion of accidental litterers was down one percentage point to 46%. In 2015 non-litterers comprised 27% of the sample, which is within the normal range measured over the past seven years (24% to 29% since 2008). (*Graph, Page 36*)



## I. INTRODUCTION

### A. Background and Methodology

The Maricopa Association of Governments (MAG), through its consultant, Fingerpaint, commissioned WestGroup Research of Phoenix to conduct a telephone study with residents aged 18 and older living in Maricopa County. The purpose of the study was to evaluate overall awareness of and attitudes toward litter issues, explore littering behavior, and to compare responses to the December 2006 benchmark and subsequent annual studies.

For surveys prior to 2011, interviewing was conducted using a Random Digit Dial (RDD) database comprised of “landline” phone numbers from targeted zip codes. In each subsequent year, interviewing was conducted using both a Random Digit Dial (RDD) with landline phone numbers, as well as a supplemental cell phone database. Cell phone sample is necessary both to speak with cell-phone only residents and to ensure accurate representation in the sample from younger residents. It is reported that approximately 40% of residents in Maricopa County live in cell-phone only households and an additional 20% live in cell-phone-mostly households.

WestGroup reviewed 2013 Census data as reported by the US Census website American Fact Finder to reevaluate the age distribution of Maricopa County residents ages 18+. Due to shifts in the population over time, the following age and gender quotas were used in 2014 and 2015 to ensure an accurate representation of Maricopa County residents. This is a slight shift from previous years’ quotas; however, it should be noted that the overall profile of residents in terms of income, education, etc. did not shift significantly with the change in age quotas. It also should be noted that some shifts in response percentages may be impacted by the distribution change, particularly those questions related to littering behavior as the younger age group historically has always deviated greatly from the older age groups in this area.

Age	% of sample
18 to 34 years old	33%
35 to 54 years old	33%
55+ years old	34%
Male	50%
Female	50%

Results are based on 401 fifteen-minute telephone interviews conducted with 200 male and 201 female residents. The margin of error for the survey is approximately  $\pm 5\%$  at the 95% confidence level.



Note: where appropriate, data tables will show data back to as far as 2011 for tracking questions due to limited space. Graphical visualization of data may include historical data as far back as 2006.

## B. Significance Testing and Sub-Group Analysis

Throughout this report, symbols (▼or▲) or superscript letters (<sup>ABC</sup>) next to certain 2015 data indicate that the number is significantly different at the 95% confidence interval than the corresponding figure in 2014 or in the case of the oversample target data, 2013. (The 2015 oversample target group data is only directly comparable to 2013 because the dual data collection methodology of phone and web were used in these two years to reach enough 18-34 year old males to meet the quota of 200. In 2014, the data was collected only via telephone.)

For example, in the table below, the 15 percent for “yes” means that the percentage of 2015 residents who answered “yes” is significantly lower than the percentage of 2014 residents who gave that same answer. In yearly tracking charts and tables, the current year’s results are only compared in this manner to the previous year’s results for the same question, except for within the target population tracking where data from 2015 will be compared to 2013 since the same methodology was used in both of those years (phone and web data collection).

Response	2015 n=401	2014 n=401
Yes	15%▼	35%

Data was analyzed by the following demographic subgroups:

- Gender: male, female
- Age: < 35, 35-54, 55+
- Ethnicity: Caucasian, Non-Caucasian
- Education: High school or less, some college, college graduate or more
- Income: annual household incomes of < \$50,000, between \$50,000-\$100,000, and > \$100,000
- Target demographic: males aged 18 to 34 vs. all other residents



## C. Demographics

Per established quotas, the gender composition of the survey was evenly split along gender (50% females and 50% males). Generally, the demographic profile of respondents in 2015 was comparable to 2014.

**Table 1a: Respondent Demographics**

Characteristic	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>Gender</b>					
Male	50%	50%	50%	50%	50%
Female	50%	50%	50%	50%	50%
<b>Age**</b>					
18 to 34	33%	33%	28%	28%	28%
35 to 54	33%	34%	43%	43%	43%
55+	34%	33%	30%	29%	29%
Average	43.7 yrs	43.5 yrs	44.0 yrs	43.8 yrs	43.8 yrs
<b>Marital Status</b>					
Married	51%	50%	54%	53%	53%
Single	33%	33%	33%	30%	30%
Widowed	4%	4%	4%	5%	6%
Divorced	7%	8%	6%	7%	7%
Separated	<1%	<1%	2%	2%	1%
Refused	4%	4%	1%	3%	3%
<b>Education</b>					
Less than high school	3%	4%	6%	5%	6%
High school graduate	17%	18%	15%	18%	17%
Some college	29%▼	36%	36%	34%	35%
College graduate	27%	23%	28%	25%	24%
Graduate degree	20%	17%	15%	15%	15%
<b>Ethnicity</b>					
White	69%	68%	72%	68%	72%
Hispanic	14%	16%	14%	16%	12%
African American	4%	5%	5%	4%	4%
Native American	2%	2%	2%	2%	1%
Asian	3%	2%	2%	2%	3%
Other/Refused	8%	7%	5%	9%	8%

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

\*\*Age categories condensed in 2011.



**Table 1b: Respondent Demographics**

Characteristic	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>Household Income</b>					
<\$10,000	4%	4%	8%	8%	10%
\$10-\$20,000	5%	8%	7%	7%	7%
\$20-\$30,000	8%	11%	8%	7%	8%
\$30-\$40,000	11%	7%	11%	9%	8%
\$40-\$50,000	6%	6%	7%	7%	6%
\$50-\$60,000	8%	8%	8%	4%	7%
\$60-\$75,000	7%	10%	6%	7%	9%
\$75-\$100,000	13%	8%	8%	12%	10%
\$100,000+	21%	17%	21%	18%	16%
Refused	17%	21%	16%	20%	20%
Average	67,372	61,855	\$62,303	\$61,989	\$58,838
<b>Employment Status</b>					
Full-time	54%	50%	48%	51%	45%
Part-time	9%	13%	10%	8%	10%
Unemployed	6%	6%	9%	10%	12%
Retired	17%▼	23%	19%	18%	22%
Housespouse	4%	2%	9%	6%	4%
Student	4%	4%	4%	4%	4%
<b>Profession</b>					
White collar/Management	26%▲	19%	21%	23%	23%
Other professional	28%	24%	25%	25%	16%
Blue collar	12%	11%	14%	11%	15%
Education	8%	11%	11%	10%	8%
Trade	8%	9%	9%	8%	10%
Self-employed	8%	8%	11%	7%	6%
Clerical/admin	5%	7%	8%	10%	9%
<b>Language spoken at home</b>					
English only	71%	74%	72%	72%	72%
Spanish only	<1%	--	1%	1%	1%
Mostly Spanish but some English	<1%	1%	2%	3%	1%
Equally in both languages	5%	5%	4%	3%	4%
Mostly English but some Spanish	12%	10%	11%	12%	11%
English and other language	8%	7%	9%	7%	8%
Refused	3%	3%	1%	3%	3%

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



## II. DRIVER CHARACTERISTICS

### A. Driving Habits

In 2015, 39% of residents surveyed reported driving in a 4-door sedan, while 20% reported driving sport utility vehicles and 13% reported driving pickup trucks. These figures are similar to those recorded in 2014, with the exception of a corresponding fluctuation in the percent selecting 4-door Sedan and car (unspecified).

**Table 2: Type of Vehicle**

Top vehicle responses	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
Sedan (4-door)	39%	45%	40%	44%	36%
Sports utility	20%	17%	19%	14%	18%
Pickup truck	13%	13%	14%	16%	13%
Car (unspecified)	8%▲	2%	1%	1%	10%
Coupe (2-door)	6%	6%	8%	7%	4%
Van/mini-van	6%	8%	8%	7%	7%
Don't drive	4%	5%	6%	5%	7%
Motorcycle	<1%	1%	1%	1%	1%

Q7: What type of vehicle do you most often drive or ride in?

Note: Question wording modified in 2011 to an open-ended question instead of a list that was read to residents.

Note: response categories with less than 1% mentions in 2015 not included in this table unless relevant to tracking.

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

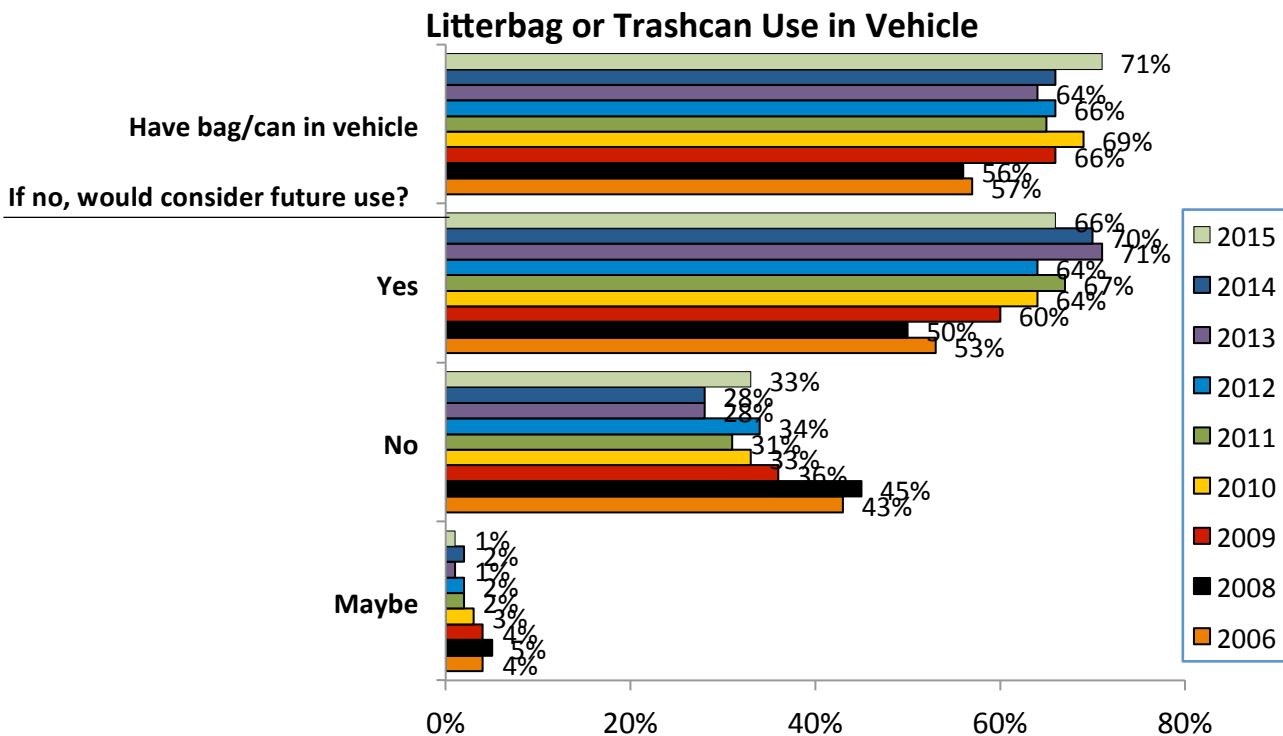
## B. Litterbag Use

**Seven in ten (71%) residents surveyed reported they have a litterbag or can for use in their vehicles, which is consistent with recent years.** Those more likely to say “yes” include:

- General population vs. male residents aged 18-34 (71% vs. 56%).
- Residents who have seen advertisements related to litter or littering vs. residents who haven't (76% vs. 65%).

**Among those who do not currently have a litterbag or can in their vehicles, two-thirds (66%) reported they would consider using one in the future. This is consistent with the 70% recorded in 2014.** Those more open to using a litterbag or can in their vehicles include:

- Female residents vs. male residents (84% vs. 59%).
- Non-Caucasian residents vs. Caucasian residents (83% vs. 65%).
- Those with a high school education or less vs. college graduates (82% vs. 62%).
- Those with annual household incomes of less than \$50,000 vs. those with annual household incomes of \$100,000 or more (86% vs. 61%).



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602; 2010 n=601; 2009 n=637; 2008 n=744; 2006 n=748

Q18: Do you have a litter bag or trash can in your vehicle?

Q19: [If no in Q18] Would you consider keeping a litter bag or trash can in your vehicle?



## C. Smokers

**A small proportion of residents surveyed indicated they smoke (12%, which is comparable with recent years).** Residents more likely to indicate they smoke include:

- Residents aged 35-54 vs. younger residents (19% vs. 6%).
- Those with a high school education or less vs. those with higher education (22% vs. 10%).

**More than half (54%) of smokers indicated they dispose of cigarettes by using an ashtray in their vehicles, which is down slightly from last year but still significantly higher than in 2013.**

**Table 3: Smoking Habits and Disposing of Cigarette Butts**  
Among those indicating they smoke

Response	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>Smoker</b>	12%	14%	14%	14%	17%
	<i>n=50</i>	<i>n=58</i>	<i>n=65</i>	<i>n=83</i>	<i>n=101</i>
Ashtray in vehicle	54%	64%	40%	51%	43%
Don't smoke in the car	16%	21%	25%	16%	2%
It varies	14%	3%	11%	12%	7%
Something else in vehicle	12%	10%	18%	18%	10%
Other means of disposal	4%	--	--	--	--
Throwing out window	--	2%	6%	4%	13%
Don't know/refused	--	--	--	--	25%

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Q9: Do you smoke?

Q10: [If yes in Q9] When you are in a vehicle, do you USUALLY dispose of cigarette butts...?

Note: Prior to 2012, "Don't smoke in the car" was not a pre-coded response category.

## D. Truck Drivers

As noted earlier, 13% of residents surveyed reported driving a pickup truck, which is consistent with recent years. Those more likely to report driving a pickup truck include:

- Male residents vs. female residents (22% vs. 4%).
- Residents aged 35-54 vs. younger residents (20% vs. 8%).
- Those who did not graduate college vs. college graduates (21% vs. 9%).

**Table 4: Pickup Truck Drivers**

Response	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
Drive pickup truck	13%	13%	14%	16%	13%

Q7: What type of vehicle do you most often drive or ride in?

More than four in five (82%) pickup truck drivers reported they secure items in the back of their pickup truck “always” (61%) or “most of the time” (21%), which is similar to prior years. The proportion reporting they “always” secure their loads rebounded to a more normal level this year after decreasing significantly in 2014.

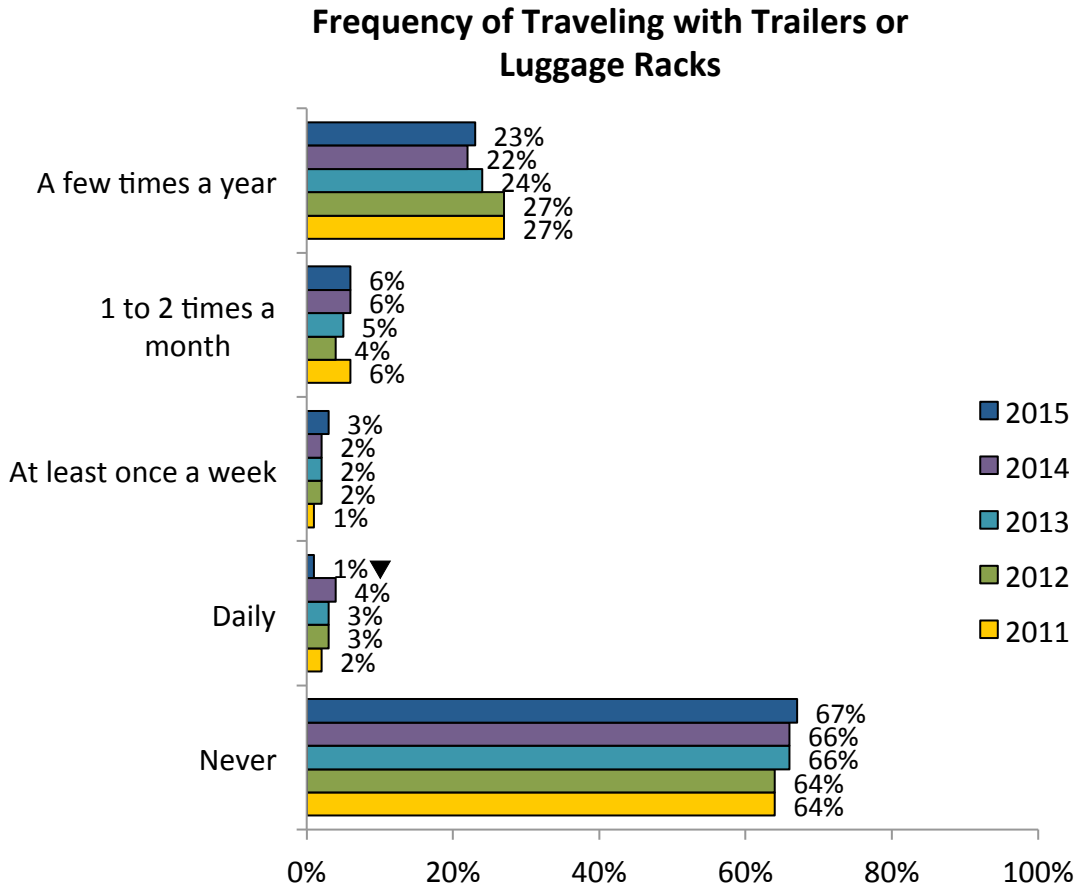
**Table 5: How often Truck Drivers Secure Loads**

Frequency	2015 n=49	2014 n=52	2013 n=64	2012 n=86	2011 n=54
<b>NET likely (Always + Most)</b>	83%	73%	88%	81%	73%
Always	61%	42%	77%	71%	54%
Most of the time	21%	31%	11%	10%	19%
Sometimes	12%	12%	6%	6%	12%
Rarely	--	--	1%	6%	3%
Never	2%	2%	3%	5%	5%
Don't know	4%	14%	2%	2%	7%

Q15: When putting items into the bed of your truck, how often, on average, do you secure your load (either with ties, bungees, a tarp, etc.)?

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Two thirds (67%) of residents surveyed indicated they “never” drive in a vehicle that hauls items in an open-air trailer or strapped to a luggage rack, which is consistent with figures recorded in recent years. Nearly one quarter (23%) reported doing so “a few times a year,” while 6% reported doing so at least one to two times per month.



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602

Q16: How often do you drive or ride in a vehicle that transports items that are not carried within the vehicle or trunk, such as hauling items in an open-air trailer or strapped to a luggage rack or trunk?

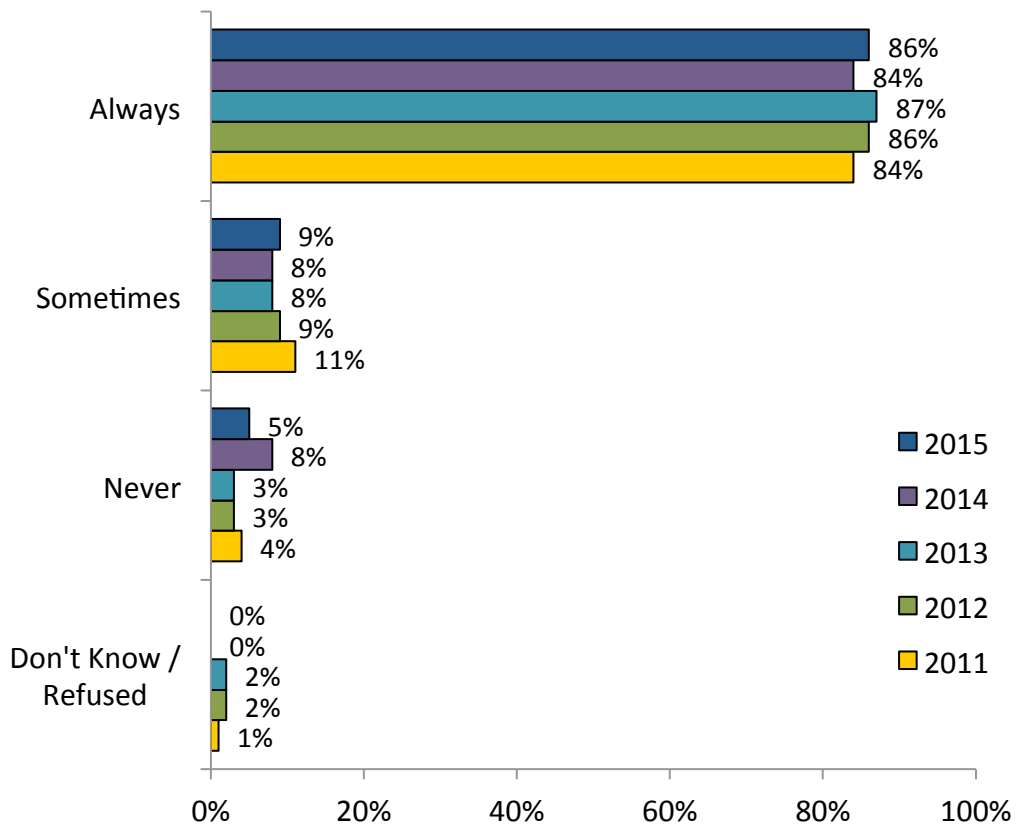
Note: Question added in 2010.

▲▼Indicates significant difference compared to 2014 at 95% confidence level.



The majority (86%) of residents who mentioned they ride in a vehicle that transports items in a trailer or luggage rack at least a few times a year indicated they “always” secure the load they are hauling. This remains stable as it is within a few percentage points of this measurement for the four previous years.

### How Often Those with Trailers or Luggage Racks Secure Loads



Open-air trailer/luggage rack users: 2015 n=132; 2014 n=136; 2013 n=155; 2012 n=218; 2011 n=219  
 Q17: [If more than 'never' in Q16] On average, how often do you secure the load that you are hauling (either with ties, bungees, a tarp, etc.?)

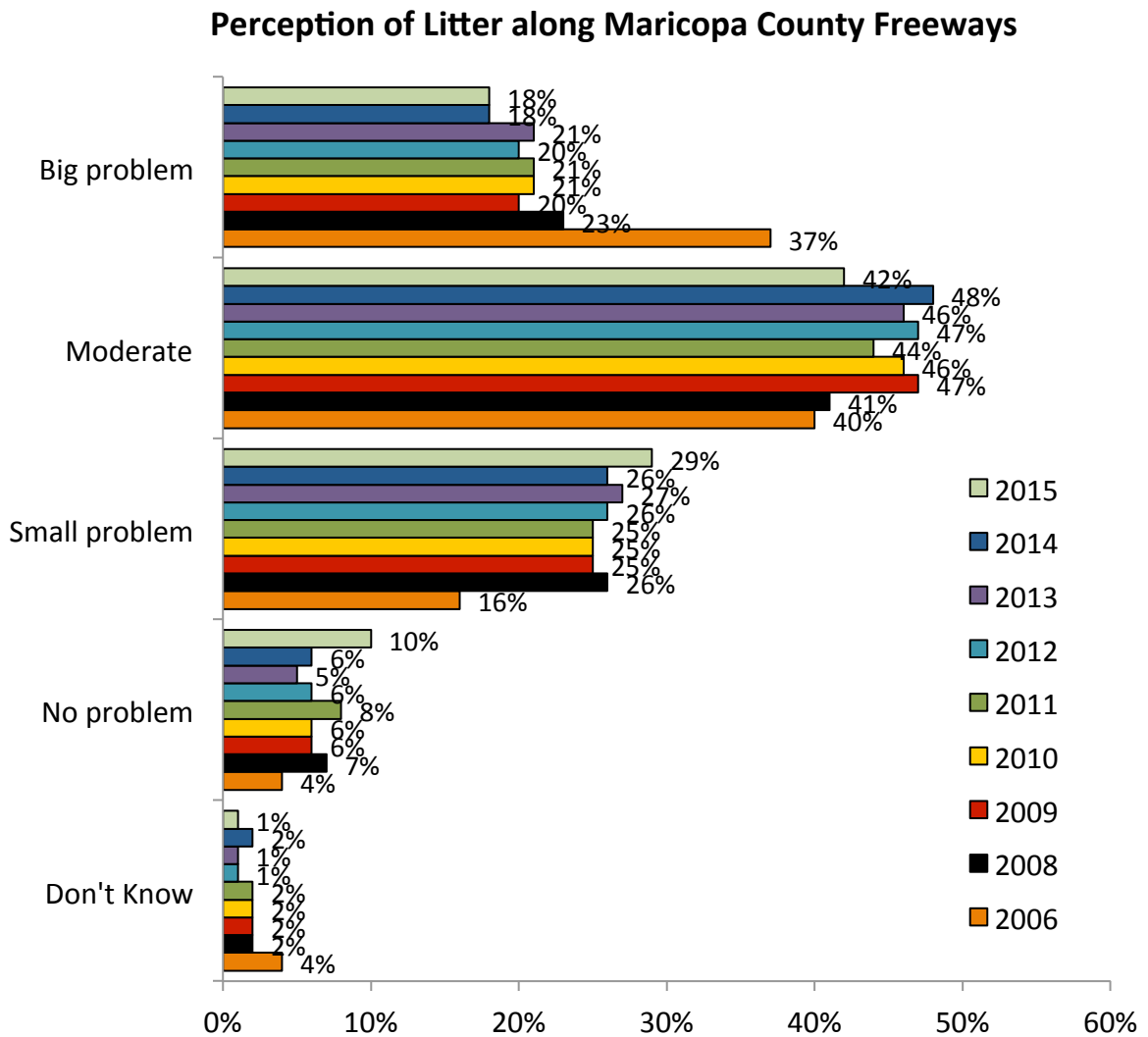
Note: Data is not completely comparable from 2010 to 2011/2012 – in 2010, users were offered ‘sometimes’ and ‘most of the time’, which for comparison purposes were combined as ‘sometimes’ on the chart above. Likewise, in 2010, users were offered ‘rarely’ and ‘never,’ which for comparison purposes were combined as ‘never’ on the chart above.



### III. LITTER AWARENESS AND BEHAVIOR

#### A. Perception of Litter as Problem along Freeways

Three in five (60%) residents surveyed believe litter along Maricopa County freeways is a “big” or “moderate” problem. This represents the lowest level of concern measured to date and is significantly lower than the big/moderate percentages for five of the prior eight years (66% to 77% between 2006 and 2014). Those with litter advertising awareness are significantly more likely than those who do not recall any advertising to view litter as a problem (68% big or moderate vs. 51%).



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602; 2010 n=601; 2009 n=637; 2008 n=744; 2006 n=748

Note: In 2009 question was changed to “Maricopa County” where previously it was “in your county.”



**Table 6: Freeway Litter as a Problem in Maricopa County**

Rating	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>Big + Moderate problem</b>	<b>60%</b>	<b>66%</b>	<b>67%</b>	<b>67%</b>	<b>65%</b>
Big problem	18%	18%	21%	20%	21%
Moderate problem	42%	48%	46%	47%	44%
Small problem	29%	26%	27%	26%	25%
Not a problem at all	10%	6%	5%	6%	8%
Don't know	1%	2%	1%	1%	2%

Q8: In your opinion, how big of a problem is litter along freeways in Maricopa County? Would you say it is a...



## B. Personal Littering

**Seven in ten (71%) residents surveyed indicated they have not littered in the past year.** This is a significant increase from the 62% recorded in 2014. **Among those who reported littering items, food/organic material continues to be the most common type of litter mentioned by residents (50%), followed by small pieces of paper (27%) and other food wrappers (12%).** Those more likely to indicate they have not littered in the past year include:

- Residents aged 35 and older vs. younger residents (79% vs. 52%).
- Males (76% vs. 66% of females).
- Those with no advertising recall (79% vs. 66% of those who recalled an ad about littering).

**Table 7: Items Personally Discarded as Litter – Total Responses**

Top Items Mentioned	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>Have not littered in past year.</b>	<b>71%▲</b>	<b>62%</b>	<b>61%</b>	<b>65%</b>	<b>70%</b>
	(n=115)	(n=151)	(n=176)	(n=211)	(n=181)
Food/organic material	50%	39%	36%	40%	41%
Small pieces of paper	27%	25%	31%	31%	29%
Other food wrappers	12%	12%	8%	13%	10%
Cigarette butts	6%	3%	7%	5%	12%
Paper/newspaper/napkins	4%	3%	1%	--	3%
Don't know	11%▼	23%	9%	8%	4%

Q12: Can you think of items that you yourself might have discarded as litter (by litter we mean items you did not put in a trash receptacle) in the past year? (Multiple responses allowed.)

Note: items with less than 3% responses in 2015 not included in this table

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

### C. Littering Circumstances

Nearly half (45%) of residents who indicated they littered in the past year reported they did so while driving or riding in a vehicle. This is similar to figures recorded in recent years and is the predominant scenario mentioned by admitted litterers. The proportion reporting that they just “threw it” or “got rid of it anywhere they could” remains elevated compared to compared to 2013 (8% vs. 10% last year and 3% the year prior).

**Table 8: Littering Situation – Total Responses**  
Among those who indicated they have littered in the past year

Top situations	2015 n=115	2014 n=151	2013 n=176	2012 n=211	2011 n=181
Driving/riding/traveling in vehicle.	45%	46%	52%	46%	47%
Walking outside	10%	7%	14%	10%	11%
Just threw it/got rid of it anywhere I could	8%	10%	3%	6%	6%
Opened door/window–flew out	6%	5%	4%	4%	4%
In a parking lot	6%	3%	--	1%	--
No trash can around	4%	5%	5%	6%	5%
Cleaning out car	3%	1%	4%	8%	2%
Don't consider it litter if it's biodegradable	3%	1%	1%	--	2%
Camping/hiking	2%	1%	--	1%	--
Don't know/can't remember	15%	18%	10%	15%	12%

Q13: To the best of your knowledge, what were the general circumstances in terms of where and what you were doing when you discarded litter? Any other circumstances?

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Note: items with less than 1% responses in 2015 not included in this table.



## D. Reasons for Littering When Driving

While a strong percentage continues to back off their earlier claim to have littered while they were driving (30%), **the most common reason mentioned for littering when driving continues to be lack of a convenient trash receptacle (mentioned by 14%, consistent with 2014)**. This year a significantly higher percentage of admitted litterers explained their behavior by saying “it was out of habit” (7% vs. 0% to 1% in prior years).

**Table 9: Reasons for Littering when Driving – Total Responses**  
Among those who indicated they have littered in the past year

Top responses	2015 n=115	2014 n=151	2013 n=176	2012 n=211	2011 n=181
I don't litter when driving.	30%	24%	34%	38%	33%
No trash receptacles are convenient.	14%	15%	15%	13%	10%
I don't want to keep it in my car.	12%	5%	6%	8%	8%
It's easy.	10%	5%	7%	4%	5%
I only litter food scraps – they are biodegradable.	9%	12%	12%	11%	13%
It was an accident/unintentional.	9%	5%	7%	9%	9%
It was out of habit/I don't think about it.	7%▲	1%	1%	--	--
I'm lazy.	5%	3%	2%	1%	3%
I don't care.	4%	--	1%	1%	--
I don't consider throwing out gum, small wrappers, and cigarette butts litter.	3%	5%	4%	3%	4%
Other	6%	6%	2%	3%	<1%
Don't know.	13%	21%	6%	9%	9%

Q14: Why do you litter WHEN DRIVING? (Multiple responses allowed.)

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Note: items with less than 1% responses in 2015 not included in this table.



## E. Personal Experience with Specific Littering Situations

Residents were read a list of nine specific littering situations and were asked to indicate if they had personally experienced that littering situation in the past three months, more than three months ago, or had never experienced that specific situation.

Similar to recent years, the most common littering situation residents have experienced in the past three months is trash falling out of a vehicle (26%), followed by having problems with a vehicle and leaving debris on the roadside (13%). After a significant increase in 2014, this year residents were significantly less likely to report throwing candy wrappers or scraps of paper out the window (6% down from 10% and still elevated over 2011-2013). See Tables 10a and 10b for a detailed breakout.

As seen in past studies, residents aged 18 to 34 are consistently more likely than older residents to report experiencing any given scenario except for leaving debris related to a car problem or being present for a litter-related ticket or warning.

**Table 10a: Personal Experience with Littering Scenarios**

Scenario	Past 3 months	3+ months	Never
Someone in a vehicle you were in threw trash out in an area that had no litter – 2015	7%	10%	83%
2014	7%	12%	81%
2013	6%	12%	82%
2012	6%	10%	84%
2011	6%	15%	79%
You or someone you were with got a ticket or warning for littering - 2015	1%	1%	98%
2014	1%	2%	97%
2013	8%	14%	78%
2012	9%	10%	81%
2011	8%	12%	80%
Rather than keep a beverage container in the car, you, or someone in a vehicle you were in, threw out a can or bottle – 2015	3%	8%	89%
2014	4%	8%	88%
2013	13%	9%	78%
2012	14%	10%	76%
2011	14%	9%	77%
Someone in a vehicle you were in threw trash out in an area that already had lots of litter – 2015	7%	11%	82%
2014	8%	12%	80%
2013	8%	11%	81%
2012	7%	14%	79%
2011	7%	14%	79%

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



**Table 10b: Personal Experience with Littering Scenarios (Continued)**

Rating	Past 3 months	3+ months	Never
Someone in a vehicle you were in threw out a can, bottle or litter out onto the side of the road – 2015	5%	13%	82%
2014	4%	10%	86%
2013	5%	12%	83%
2012	5%	13%	82%
2011	7%	13%	80%
Rather than keep a cigarette butt in the car, you or someone in the vehicle you were in threw the cigarette butt out the window – 2015	8%	14%	78%
2014	8%	10%	82%
2013	<1%	2%	98%
2012	1%	2%	97%
2011	1%	2%	97%
You threw out a small item from your vehicle like a candy wrapper, scrap paper, etc. – 2015	6%▼	11%	83%
2014	10%	9%	81%
2013	2%	10%	88%
2012	4%	8%	88%
2011	3%	11%	86%
You had problems with a vehicle and left debris like tire, part of a tire, or other stuff on the roadside – 2015	13%	8%	79%
2014	13%	12%	75%
2013	5%	12%	83%
2012	5%	13%	82%
2011	7%	13%	80%
You noticed that some trash fell out of a pickup or other vehicle you were driving or riding in – 2015	26%	20%	53%
2014	31%	20%	49%
2013	25%	20%	55%
2012	28%	21%	52%
2011	24%	21%	55%

Q11: I am going to read you a few statements pertaining to your litter awareness. For each of the following statements, please respond by telling me if this is something you "Have experienced within the past 3 months," "Have experienced over 3 months ago," or "Have never experienced."

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



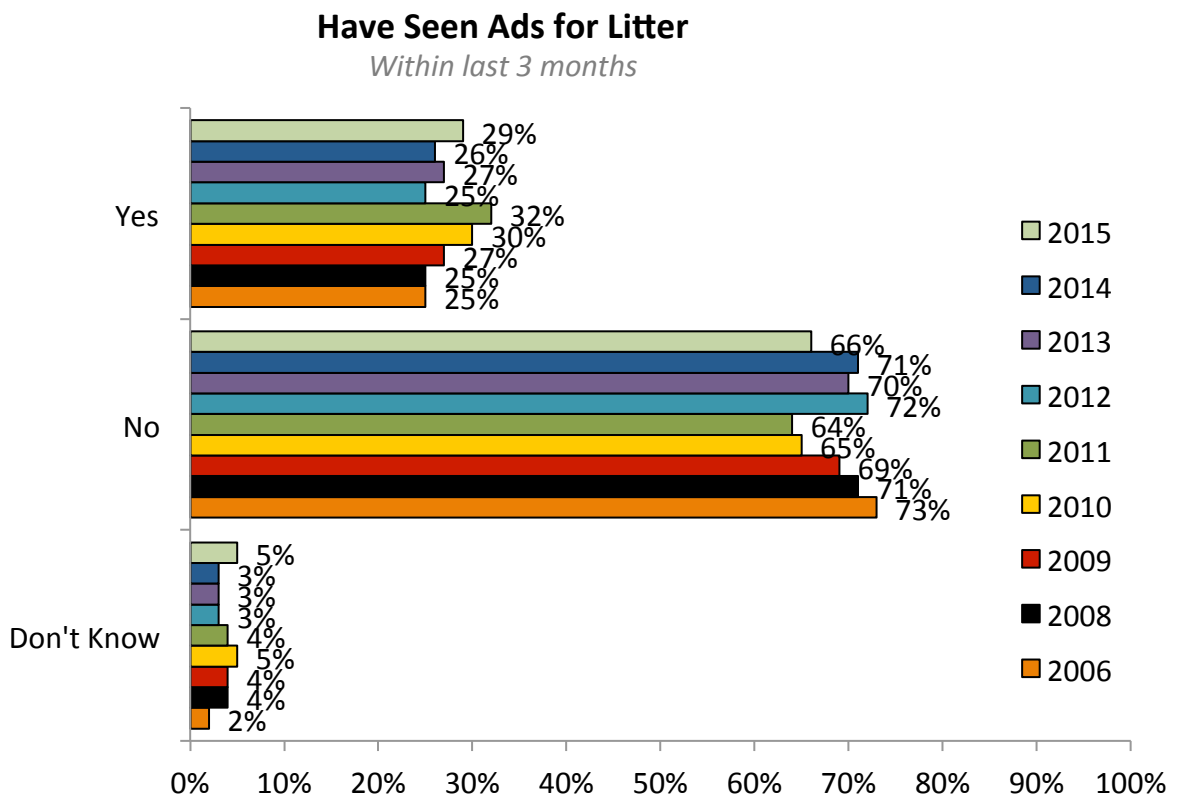
## IV. CAMPAIGN AWARENESS

### A. Awareness of Campaign

#### 1. General Awareness

More than one fourth (29%) of residents indicated they had seen advertising related to litter or littering in the past three months. This is consistent with figures recorded in the last two years. Those more likely to say “yes” include:

- Those aged 18 to 34 vs. older residents (37% vs. 25%).
- Those with annual household incomes of less than \$50,000 vs. those with higher annual household incomes (38% vs. 26%).



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602; 2010 n=601; 2009 n=637; 2008 n=744; 2006 n=748

Q20: In the past three months, have you seen, heard or read any advertisements related to litter or littering?



## 2. Recalled Messages and Slogans

Among those who indicated they had seen or heard advertising related to litter in the past three months, the hierarchy of recalled messages was generally similar to 2014. Although not statistically relevant, it is important to note that this year “Don’t Trash Arizona” was only mentioned by 2% of residents compared to 7% last year.

The top message recalled continues to be “Don’t litter/keep Arizona clean” (mentioned by 22%). This year a similar percentage recalled seeing a sign or billboard along the road (20% up from 11% last year).

**Table 11: Recalled Messages of Litter-Related Advertising**

Among those who indicated they remember seeing ads related to litter or littering in the past 3 months.

Top Responses	2015 n=118	2014 n=104	2013 n=121	2012 n=150	2011 n=194
Don’t litter/Keep Arizona clean.	22%	19%	29%	24%	18%
It was a sign along the road/billboard.	20%	11%	13%	15%	12%
Littering is unlawful/can get a ticket.	10%	7%	4%	4%	5%
A hamburger wrapper being a 500 dollar fine/ a five hundred dollar burger.	8%	8%	6%	5%	2%
Saw on TV/commercial/public service announcement.	8%	7%	2%	3%	8%
The fines.	6%	6%	16%	19%	16%
Use ashtray/cigarettes cause fires.	5%	5%	11%	6%	5%
Recycling information.	2%	1%	4%	3%	4%
“Pack it in pack it out.”	2%	--	--	--	--
Heard on radio.	2%	6%	2%	1%	7%
Clean up efforts/Adopt a Highway.	2%	1%	1%	1%	2%
Litter is bad for the environment/bad for wildlife.	2%	2%	2%	1%	2%
Just because it’s a freeway doesn’t mean you are free to litter on it.	2%	3%	7%	9%	7%
Don’t Trash Arizona.	2%	7%	--	2%	5%
People littering out of their vehicle.	1%	2%	2%	1%	1%
Call a number to report littering.	1%	--	--	1%	1%
Put litter in its place/use the trash.	--	3%	5%	3%	--
“No cups, cans or butts.”	--	3%	2%	--	--
Make the earth greener/go green.	--	2%	2%	1%	3%
Don’t know.	6%	6%	8%	14%	13%

Q21: [If yes in Q20] What specifically do you remember about the ads related to litter or littering?

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Note: response categories with less than 2% mentions in 2015 not listed in this table, unless relevant to tracking or campaign.



Among those who indicated they had seen or heard litter-related advertising in the past three months, the “slogan” residents were most likely to report was “you will be fined for littering” (mentioned by 5%), followed by 3% mentions for littering is unlawful, keep our freeways beautiful, and Arizona Clean and Beautiful. Of note, more than one-half (53%) reported they did not recall the main slogan of the advertising. This is consistent with the last few years. After a significant increase in 2014, unaided recall of “Don’t Trash Arizona” returned to a level consistent with prior years.

**Table 12: Main Slogan of Recalled Advertising**  
Among those who indicated they remember seeing ads related to litter or littering in the past 3 months

Top Responses	2015 n=118	2014 n=104	2013 n=121	2012 n=150	2011 n=194
Do not litter.	12%	12%	12%	15%	22%
You will be fined.	5%	5%	2%	5%	3%
Littering is unlawful.	3%	1%	2%	4%	3%
Keep our freeways clean.	3%	2%	2%	5%	3%
Arizona Clean and Beautiful.	3%	4%	--	2%	2%
Don’t Trash Arizona.	2%▼	12%	3%	3%	2%
Keep Arizona Beautiful.	2%	-	2%	2%	1%
Give a hoot, don’t pollute/Don’t pollute.	2%	3%	2%	1%	1%
\$500 fine for a hamburger wrapper.	2%	1%	1%	1%	1%
“Pack it in pack it out.”	2%	--	1%	1%	--
No cups, cans or butts.	1%	4%	2%	1%	--
Don’t know	53%	52%	57%	55%	56%

Q22: [If yes in Q20] What was the main slogan used in the ads?

Note: response categories with less than 2% mentions in 2015 not listed in this table, unless relevant to tracking or campaign.

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

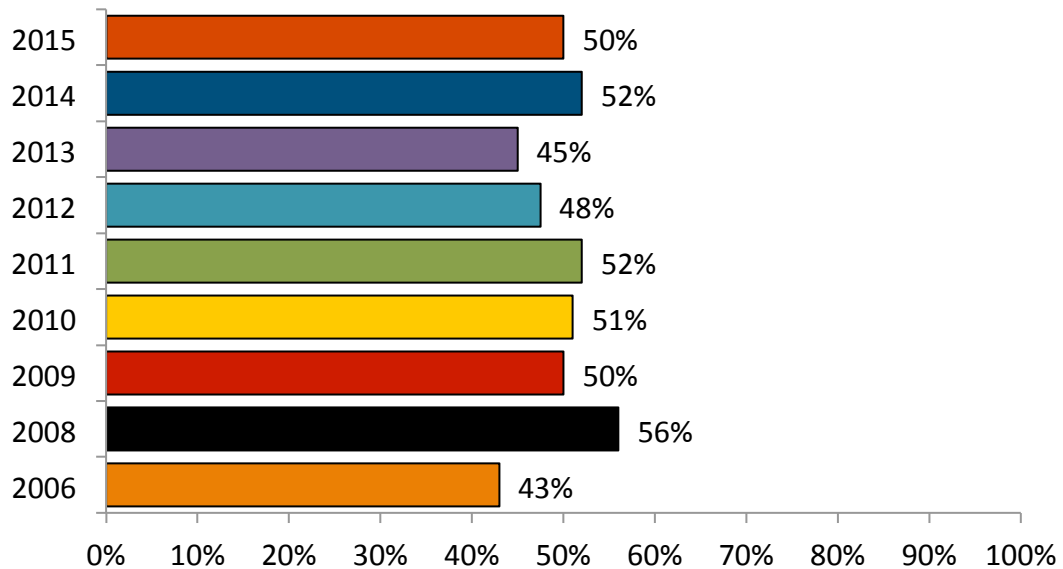


## B. “Don’t Trash Arizona” Awareness

Half (50%) of residents surveyed indicated they have heard the slogan “Don’t Trash Arizona” in either an aided or unaided fashion. This is virtually the same as last year and again suggests the declining trend seen in 2012 and 2013 has been reversed. Those most likely to be aware of the slogan include:

- Non-Caucasians (62% vs. 46%).
- Those aged 18 to 34 vs. those aged 55 and older (58% vs. 42% and compared to 52% for those ages 35-54).
- Those with annual household incomes of less than \$50,000 vs. those with annual household incomes of \$100K or more (55% vs. 41%).

**Total Awareness**  
**Have Heard Slogan: “Don’t Trash Arizona”**  
*Aided + Unaided*



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602; 2010 n=601; 2009 n=637; 2008 n=744; 2006 n=748

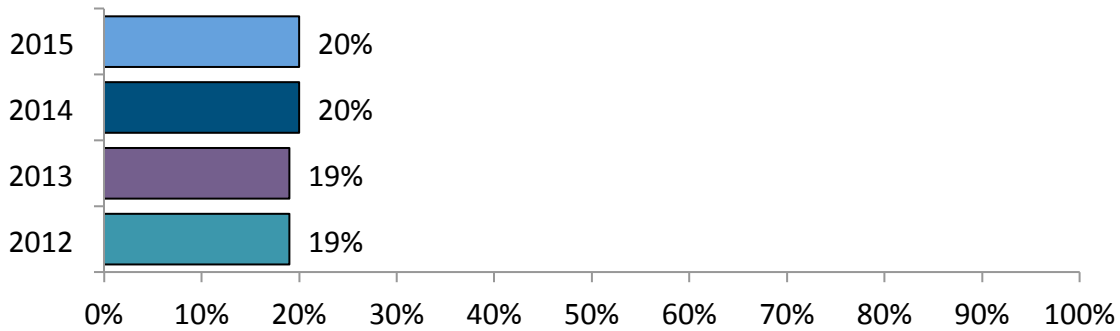
Q22: [If yes in Q20] What was the main slogan used in the ads?

Q23: [If not mentioned in Q22] Have you seen or heard the slogan, “Don’t Trash Arizona?”

**C. “No cups, cans or butts! *Don’t Trash Arizona*” Awareness**

The proportion of residents indicating awareness (unaided or aided) of “No cups, cans or butts! *Don’t Trash Arizona*” held steady in 2015 at 20%. There were no significant demographic differences among those aware of this slogan.

**Total Awareness  
Have Heard Slogan:  
“No cups, cans or butts! *Don’t Trash Arizona*”**  
*Aided + Unaided*



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600

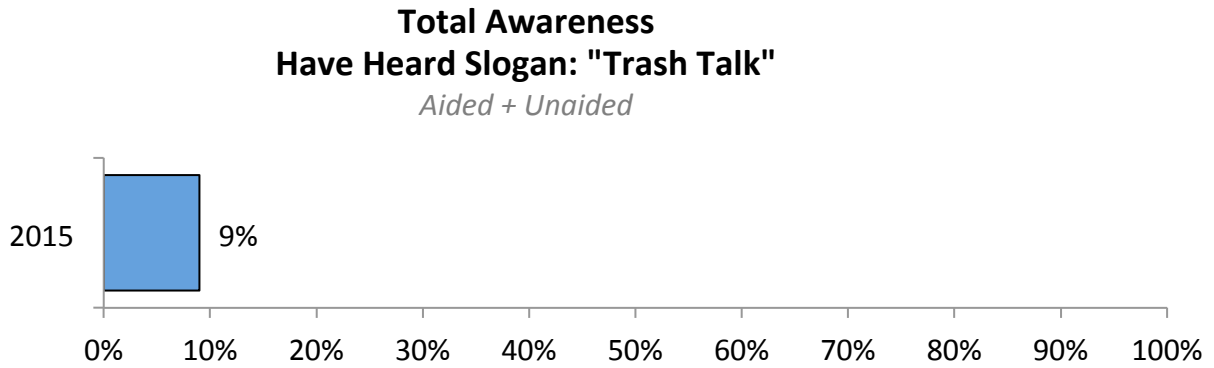
Q22: [if yes in Q20] What was the main slogan used in the ads?

Q24B: [if not mentioned in Q22] Have you seen or heard the slogan, “No cups, cans or butts! *Don’t Trash Arizona*?”



**D. “Trash Talk” Awareness**

Nearly one in ten residents (9%) recognized the slogan for *Don’t Trash Arizona* that included the words “Trash Talk,” though none of them had recalled it unprompted (0% unaided awareness). There were no significant demographic differences among those aware of “Trash Talk.”



2015 n=401

\* New Question in 2015

Q22: [If yes in Q20] What was the main slogan used in the ads?

Q24B: [if not mentioned in Q22] Have you seen or heard the slogan for *Don't Trash Arizona* that included the words "Trash Talk?"



Residents who were familiar with “Don’t Trash Arizona” or “No cups, cans or butts! Don’t trash Arizona” reported seeing and/or hearing the slogan from a variety of sources, and the most common sources mentioned included billboards (27%), street or highway signs (26%), and television (22%). After a significant decline last year, mentions of streets/highway signs rebounded to a level similar to 2013. Perhaps the most relevant finding is that residents were significantly more likely to report seeing the slogans online (6% up from 1% last year).

Note: in years prior to 2012, source recognition was asked about only for the slogan “Don’t Trash Arizona.”

**Table 13: Where Saw Don’t Trash Arizona Slogan**  
Total responses among those indicating they had heard the slogan

Top Media	2015 n=227	2014 n=219	2013 n=232	2012 n=321	2011 n=313
Billboards	27%	30%	25%	21%	21%
Street/highway signs	26%▲	17%	25%	23%	19%
Television	22%	23%	19%	25%	36%
Radio	14%	20%	16%	16%	24%
Online	6%▲	1%	2%	1%	<1%
Parks/National Parks	2%	1%	1%	3%	1%
Events around the Valley	1%	1%	1%	<1%	--
Newspaper	1%	2%	7%	4%	5%
Friends/family/word-of-mouth	1%	2%	--	1%	--
Don’t know	16%	17%	18%	22%	18%

Q25: [if mentioned in Q22, or ‘yes’ in Q23 or Q24] Where have you seen, heard or read the slogans, “Don’t Trash Arizona” or “No cups, cans or butts: Don’t Trash Arizona” or “trash talk”?

Note: response categories with less than 2% mentions in 2015 not listed in this table, unless relevant to tracking.

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



Approximately two thirds (65%) of residents who were aware of Don't Trash Arizona advertising were unable to name a sponsor for the advertisements (consistent with recent years). Only two people (1% of those aware of the slogan) correctly mentioned the Maricopa Association of Governments. This is up from only one person in 2014.

**Table 14: Who Sponsors *Don't Trash Arizona* Slogan**  
Among those indicating they had heard the slogan

Top mentioned sponsors	2015 n=227	2014 n=219	2013 n=232	2012 n=321	2011 n=313
State/local government	12%	10%	11%	12%	13%
ADOT	11%	11%	6%	8%	8%
Sanitation Department	2%	1%	2%	1%	3%
City of Phoenix	1%	1%	3%	2%	2%
Maricopa Association of Governments	1%	<1%	3%	--	<1%
Maricopa County (unspecified)	<1%	1%	2%	--	--
Don't know	65%	68%	68%	69%	70%

Q26:[If mentioned in Q22, or 'yes' in Q23 or Q24] Who sponsors the Don't Trash Arizona advertisements?

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.

Note: response categories with less than 1% mentions in 2015 not listed in this table unless relevant to tracking or campaign.



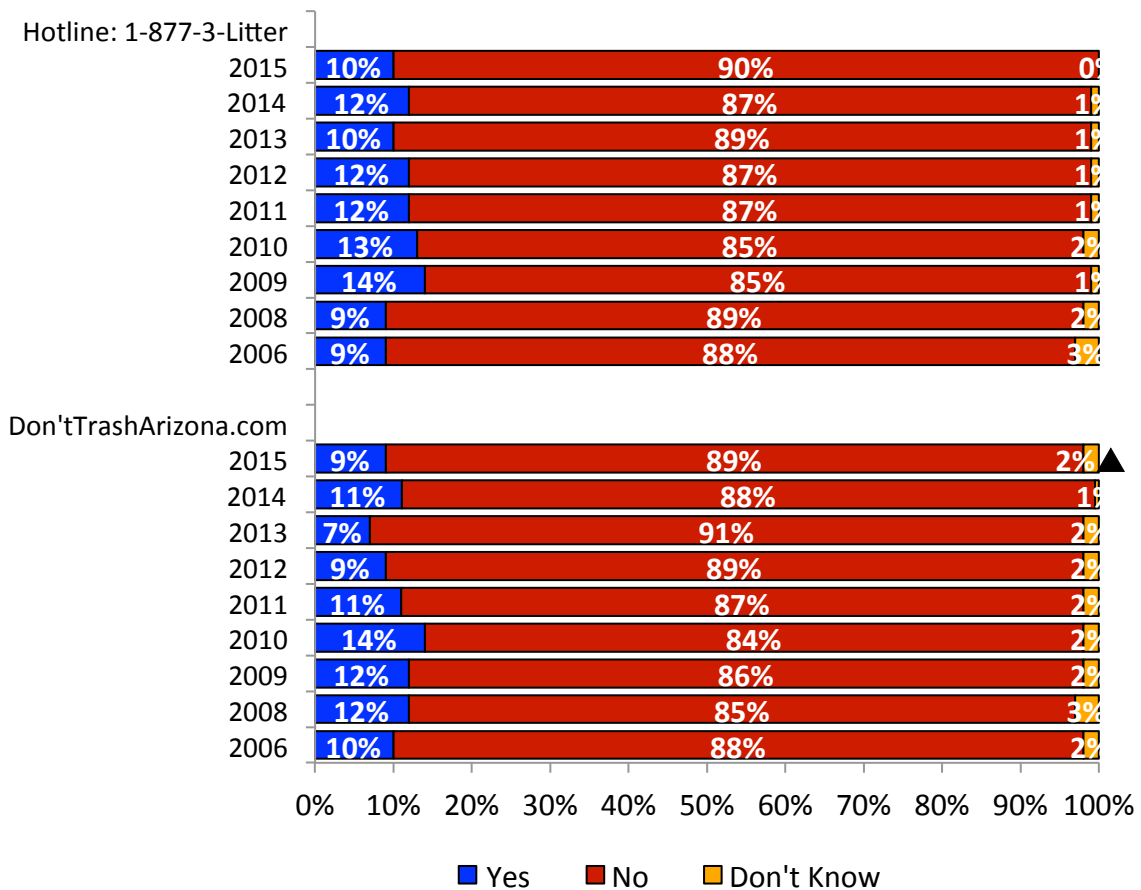
**E. Awareness of Litter Resources**

One in ten (10%) residents surveyed reported familiarity with the litter hotline. This is similar to figures recorded in recent years. A similar proportion (9%) of residents reported familiarity with DontTrashArizona.com (down from 11% in 2014).

Caucasians were significantly more likely than minority residents to report they have heard about the Litter Hotline (12% vs. 5%).

Younger and older residents were significantly more likely than those ages 35 to 54 to recognize the DontTrashArizona.com website (12% vs. 2%). Awareness of the website was also higher among those with lower annual household incomes (12% earning less than \$50,000 vs. 4% earning \$100K+).

**Aided Awareness – Litter Resources**



2015 n=401; 2014 n=401; 2013 n=451; 2012 n=600; 2011 n=602; 2010 n=601; 2009 n=637; 2008 n=744; 2006 n=748

Q27: Have you heard of www.DontTrashArizona.com?

Q29: Have you heard about the Litter Hotline, 1-877-3-Litter, where you can report someone who litters?

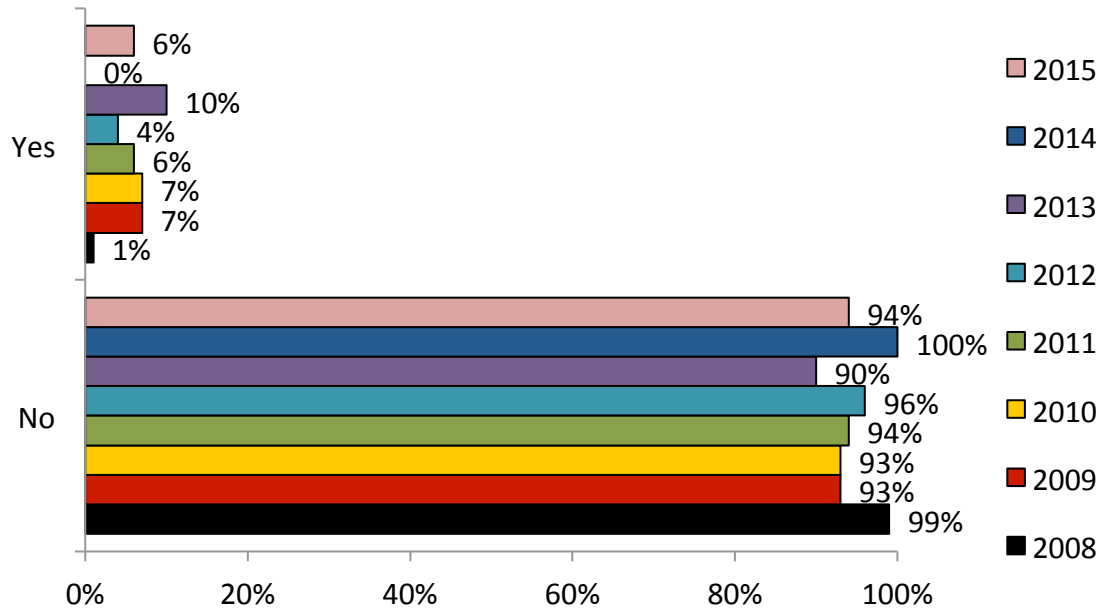
▲▼ Indicate significant difference compared to 2014 at 95% confidence level



This year, two (6%) of the residents with recognition of the DontTrashArizona.com website indicated they have actually visited the site (compared to 0% or none last year).

### Don't Trash Arizona Website Visitation

Have you ever visited the *Don't Trash Arizona* website?



2015 n=35; 2014 n=44; 2013 n=30; 2012 n=53; 2011 n=67; 2010 n=83; 2009 n=73; 2008 n=72

Q28: [If 'yes' in Q27] Have you ever visited the "Don't Trash Arizona Website"?



## F. Likelihood to Report Littering

Consistent with last year, nearly one quarter (23%) of residents surveyed indicated they would be “very likely” to report someone littering in the future. An additional one-third (34%) reported being “somewhat likely” to report litter violations in the future pushing the total “likely to report” percentage to 57%. Residents aged 35 and older were significantly more likely than younger residents indicate they would be “very likely” to report someone for littering (28% vs. 14%).

**Table 15: Likelihood to Report Littering**

Likelihood	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
<b>NET likely (Very + somewhat)</b>	<b>57%</b>	<b>62%</b>	<b>62%</b>	<b>59%</b>	<b>61%</b>
Very likely	23%	23%	28%	24%	28%
Somewhat likely	34%	39%	34%	35%	33%
Not very likely	25%	24%	23%	26%	25%
Not at all likely	16%	12%	12%	12%	12%
Don't know	2%	2%	3%	2%	2%

*Q30: If you were to see someone litter, how likely are you to report this behavior to the Litter Hotline or the website in the future?*



## G. Additional Litter Resources

The most commonly mentioned preferred method of gathering information about litter/littering continues to be the Internet (mentioned by 56%). Residents aged 18 to 34 were more likely than those aged 55 and older to mention the Internet (64% vs. 48% and compared to 56% of those 35 to 54). Additionally, these younger residents were significantly more likely than those 35 and older to say they would visit DontTrashArizona.com (23% vs. 12%). In contrast, residents 55 and older are more likely to say they “don’t know” where they would go for information (21% vs. 10% of 35-54 year olds and 4% of 18 to 34 year olds).

**Table 16: Source for Litter/Littering Information**

Top Sources	2015 n=401	2014 n=401	2013 n=451	2012 n=600	2011 n=602
Internet (general)	56%	53%	50%	47%	46%
Don't Trash AZ website	16%	17%	15%	18%	18%
Google	4%	4%	--	--	--
ADOT/highway dept.	3%	2%	3%	2%	2%
The “city”	3%	4%	6%	8%	7%
Police/ highway patrol/DPS	2%	4%	3%	3%	2%
Litter hotline	1%▼	4%	4%	5%	5%
Don't know	12%	10%	15%	15%	15%

Q31: If you wanted to find out more information about litter or littering, where would you go or who would you contact to find that information?

Note: Response categories with less than 2% mentions in 2015 not listed in this table unless relevant to tracking or campaign.

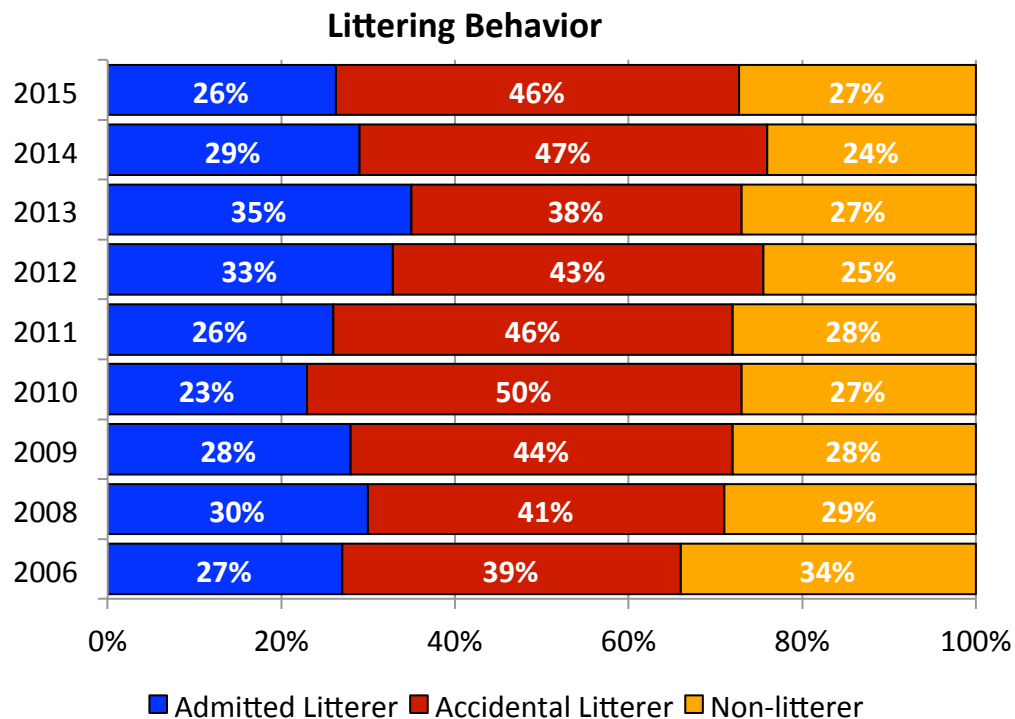
▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



## V. PROFILES OF LITTERERS

Residents were segmented into three categories based on their reported littering behavior.

- **“Admitted Litterers”** are defined as those who specifically mentioned items that they recall littering (26% of the total population mention an item in response to the question “can you think of items that you yourself might have discarded as litter in the past year?”).
  - **“Accidental Litterers”** are defined as residents who indicated they had never littered themselves, but reported being in a vehicle when littering occurred (46% of the total population indicated they did not litter anything in the question reference above, but did indicate they had experienced one or more of the littering scenarios in the past 3 months or past year).
  - **“Non-Litterers”** are those who indicated they had never littered themselves and also indicated they had never experienced other littering situations (27% of the total population).
- **The proportion of admitted litterers in the general population survey declined again this year (26%, trending down from 29% last year and significantly lower than 35% in 2013 and 33% in 2012). The proportion of accidental litterers was down one percentage point (46%), therefore, in 2015, non-litterers comprised 27% of the sample, which is within the normal range measured over the past seven years (24% to 29% since 2008). Note: In 2014, the decrease in non-litterers was at least in part attributed to the higher representation of residents 18 to 34 in the sample in 2014, but this year the age distribution is the same as last year and the non-litter proportion is the same as in 2013.**



**Table 17a: Demographic Comparison Based on Littering Behavior**

Characteristic	2015			2014		
	Admitted Litterers n=106 A	Accidental Litterers n=185 B	Non-Litterers n=110 C	Admitted Litterers n=118 A	Accidental Litterers n=189 B	Non-Litterers n=94 C
<b>Gender</b>						
Male	41%	55% <sup>A</sup>	51%	54% <sup>C</sup>	55% <sup>C</sup>	35%
Female	59% <sup>B</sup>	45%	49%	46%	45%	65% <sup>AB</sup>
<b>Age</b>						
18 to 34	59% <sup>BC</sup>	29% <sup>C</sup>	15%	43% <sup>C</sup>	35% <sup>C</sup>	17%
35 to 54	26%	37%	33%	47% <sup>BC</sup>	26%	31%
55+	15%	34% <sup>A</sup>	52% <sup>AB</sup>	10%	39% <sup>A</sup>	52% <sup>AB</sup>
Average	36.0 yrs	44.5 yrs <sup>A</sup>	49.7 yrs <sup>AB</sup>	38.1 yrs	44.0 yrs <sup>A</sup>	49.4 yrs <sup>AB</sup>
<b>Marital Status</b>						
Married	41%	51%	58% <sup>A</sup>	49%	48%	54%
Single	52% <sup>BC</sup>	31% <sup>C</sup>	19%	41% <sup>C</sup>	32%	27%
Widowed	--	4%	7%	--	6%	7%
Divorced	3%	9% <sup>A</sup>	7%	8%	8%	7%
Separated	1%	1%	--	1%	1%	--
Don't know or Refused	3%	4%	9%	1%	5%	4%
<b>Education</b>						
Less than high school	2%	4%	1%	2%	4%	5%
High school graduate	19%	18%	12%	24%	16%	14%
Some college	26%	30%	32%	41%	33%	37%
College graduate	32%	27%	22%	20%	26%	21%
Graduate degree	20%	17%	26%	14%	16%	22%

<sup>ABC</sup> Indicates significantly higher than corresponding sub-group in the same year

▲▼ Indicates significant difference compared to 2014 at 95% confidence level.



Table 17b: Demographic Comparison Based on Littering Behavior

Characteristic	2015			2014		
	Admitted Litterers n=106 A	Accidental Litterers n=185 B	Non-Litterers n=110 C	Admitted Litterers n=118 A	Accidental Litterers n=189 B	Non-Litterers n=94 C
<b>Ethnicity</b>						
White	67%	70%	68%	58%	73% <sup>A</sup>	70%
Hispanic	21% <sup>BC</sup>	12%	10%	25% <sup>BC</sup>	11%	14%
African-American	5%	3%	4%	7%	3%	7%
Asian	3%	3%	4%	2%	1%	3%
Native American	<1%	3%	1%	2%	3%	--
Other	<1%	4%	4%	3%	1%	2%
Refused	3%	5%	9% <sup>A</sup>	3%	8%	4%
<b>Household Income</b>						
<\$10,000	4%	6%	2%	4%	5%	4%
\$10-\$20,000	5%	5%	6%	10%	7%	6%
\$20-\$30,000	6%	10%	7%	12%	12%	7%
\$30-\$40,000	19% <sup>BC</sup>	8%	6%	4%	9%	6%
\$40-\$50,000	4%	8%	4%	6%	7%	4%
\$50-\$60,000	9%	8%	6%	9%	7%	7%
\$60-\$75,000	6%	9%	6%	15% <sup>B</sup>	6%	10%
\$75-\$100,000	14%	11%	15%	9%	10%	4%
\$100,000+	20%	20%	24%	21% <sup>B</sup>	12%	24% <sup>B</sup>
Refused	13%	15%	24% <sup>AB</sup>	9%	25% <sup>A</sup>	27% <sup>A</sup>
<b>Employment</b>						
Full-time	62% <sup>C</sup>	56% <sup>C</sup>	43%	59% <sup>C</sup>	49%	38%
Part-time	13%	9%	6%	18% <sup>B</sup>	10%	13%
Retired	3%	17% <sup>A</sup>	32% <sup>AB</sup>	6%	29% <sup>A</sup>	35% <sup>A</sup>
House-spouse	3%	5%	4%	2%	2%	3%
Student	10% <sup>BC</sup>	2%	2%	10% <sup>BC</sup>	1%	3%
Unemployed	7%	7%	6%	4%	6%	7%
<b>Household Language*</b>						
English only	69%	72%	73%	75%	70%	81% <sup>B</sup>
Spanish only	--	--	1%	--	--	--
Mostly Spanish + some English	1%	1%	--	2%	1%	1%
Equally in Spanish and English	9% <sup>B</sup>	3%	4%	9%	4%	4%
Mostly English + some Spanish	15%	12%	9%	8%	11%	11%
English + Other	5%	9%	7%	5%	10% <sup>C</sup>	3%
Refused	1%	3%	6%	1%	5% <sup>A</sup>	--

<sup>ABC</sup> Indicates significantly higher than corresponding sub-group in the same year

▲ ▼ Indicates significant difference compared to 2014 at 95% confidence level.



**APPENDIX A**

**SUPPLEMENTAL RESULTS FOR  
MALES AGED 18 TO 34**

## BACKGROUND

Beginning in 2013, WestGroup Research began oversampling the target audience (males aged 18 to 34) until a threshold of n=200 was achieved. Those results were pulled out separately in order to monitor changes within the target audience as well as to see results versus residents not in the target audience.

Statistical testing is applied when appropriate for each group relative to its corresponding 2014 and/or 2013 figure(s). However, it is important to note that, in 2015 and 2013, the oversample included web surveys in addition to telephone surveys, in order to hit the target of n=200. In 2014, all males aged 18 to 34 included in the oversample were reached by telephone. Therefore, for some questions, there were slight methodological differences and, as a result, statistical testing cannot always be applied between 2015 and 2014. Thus, 2015 Target data is *always* compared to 2013 and *only sometimes* compared to 2014. Statistical significance is indicated with the <sup>ABCDE</sup> designation with the notation made on the higher percentage and the letter of the significantly lower column shown for reference. Because there was no impact on Non-Target data, 2015 is always and only compared to 2014. Target 2015 is compared to Non-Target 2015 when appropriate (i.e. mixed methodology used on Target sample does not impact results) and significant differences are indicated by a **bold** number for the significantly higher figure and an underline for the corresponding significantly lower figure.

## DRIVER CHARACTERISTICS

**Table A2: Type of Vehicle – Target vs. Non-Target**

Top vehicle types mentioned	2015 Target n=200 A	2014 Target n=202	2013 Target n=200 C	2012 Target n=100	2015 Non-Target n=353 D	2014 Non-Target n=325 E	2013 Non-Target n=385
Sedan (4-door)	39%	50%	42%	48%	39%	42%	40%
Pickup truck	20%	11%	16%	19%	12%	14%	14%
Sports utility	15%	10%	14%	9%	21%	18%	20%
Coupe (2-door)	12%	9%	13%	8%	5%	5%	7%
Van/mini-van	2%	8%	4%	10%	6%	9%	8%
Don't drive	4%	5%	4%	3%	4%	4%	6%
Car (unspecified)	4% <sup>C</sup>	2%	1%	1%	9% <sup>E</sup>	1%	1%
Motorcycle	2%	2%	2%	1%	1%	2%	1%
Don't know/ refused	2%	1%	2%	--	1%	2%	1%

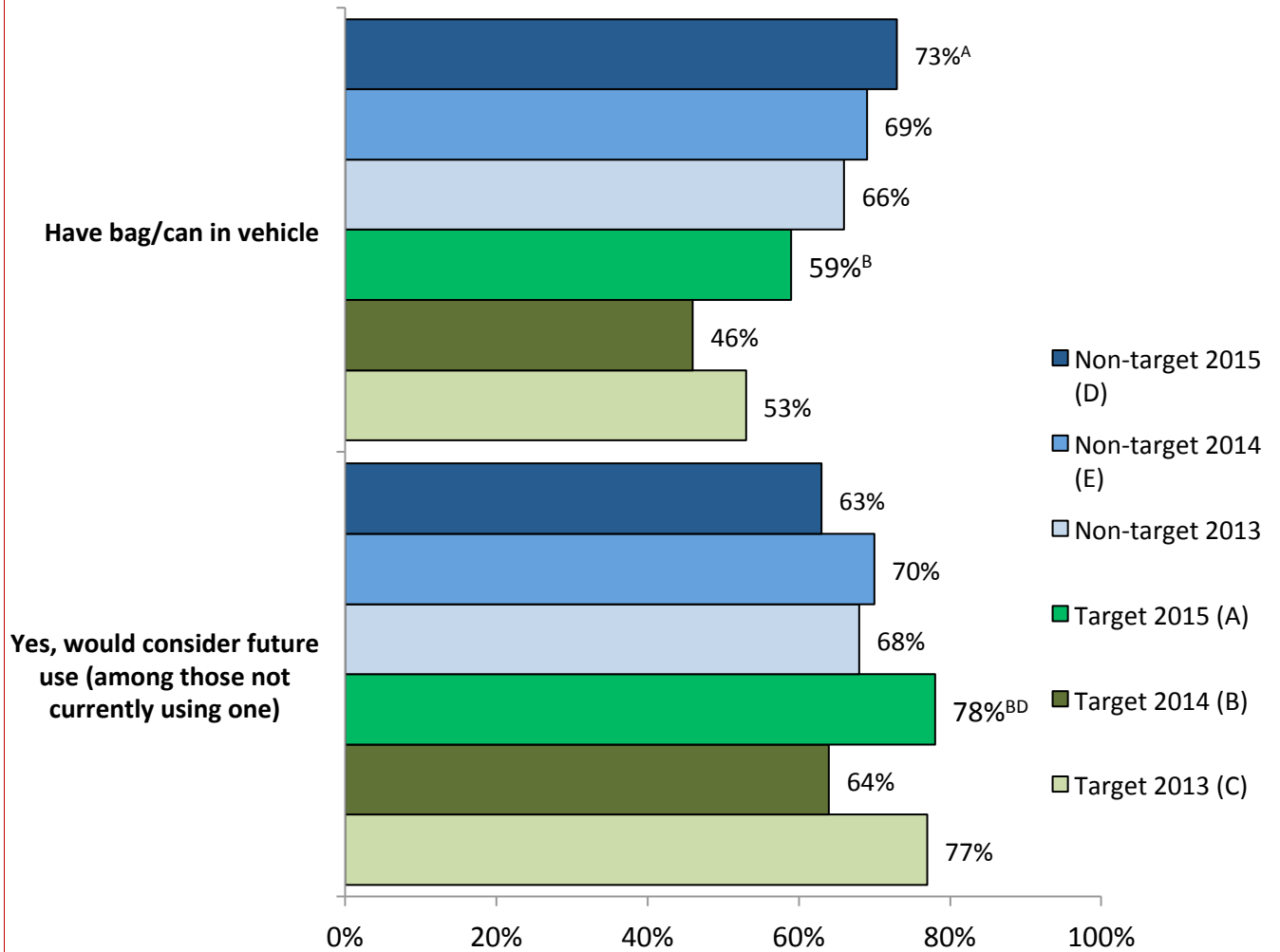
Q7: What type of vehicle do you most often drive or ride in?

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



### Litterbag or Trashcan Use in Vehicle



Non-target: 2015 n=353; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200;

Q18: Do you have a litter bag or trash can in your vehicle?

Q19: [If no in Q18] Would you consider keeping a litter bag or trash can in your vehicle?

\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

ABCDE Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A4: Smoking Habits and Disposing of Cigarette Butts - Target vs. Non-Target**

Response	2015 Target n=200 A	2014 Target n=202 B	2013 Target n=200 C	2012 Target n=200	2015 Non-Target n=353 D	2014 Non-Target n=325 E	2013 Non-Target n=385
<b>Smoker</b>	14%	27% <sup>A</sup>	13%	16%	13%	12%	14%
	<i>n=28</i>	<i>n=54</i>	<i>n=26</i>	<i>n=16</i>	<i>n=47</i>	<i>n=39</i>	<i>n=55</i>
Ashtray in vehicle.	47%	43%	27%	44%	55%	62%	40%
It varies.	18%	11%	23%	6%	11%	3%	9%
Don't smoke in the car.	14%	22%	12%	12%	17%	20%	27%
Throwing out window.	14%	20%	19%	19%	--	3%	2%
Something else in vehicle.	7%	2%	19%	19%	13%	13%	20%
Some other means of disposal.	--	2%	--	--	4%	--	2%
Don't know/refused.	--	--	--	--	--	--	--

Q9: Do you smoke?

Q10: [If yes in Q9] When you are in a vehicle, do you USUALLY dispose of cigarette butts...?

\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

**Table A5: How often Truck Drivers Secure Loads – Target vs. Non-Target**

Frequency	2015 Target n=39 A	2014 Target n=21 B	2013 Target n=31 C	2012 Target n=18	2015 Non-Target n=39 D	2014 Non-Target n=44 E	2013 Non-Target n=54
<b>NET likely (Always + Most)</b>	<b>89%</b>	<b>81%</b>	<b>87%</b>	<b>78%</b>	<b>82%</b>	<b>73%</b>	<b>85%</b>
Always	69% <sup>B</sup>	38%	68%	61%	64%	43%	72%
Most of the time	20%	43%	19%	17%	18%	30%	13%
Sometimes	8%	5%	13%	11%	10%	11%	7%
Rarely	--	--	--	6%	--	--	2%
Never	3%	9%	--	6%	3%	2%	4%
Don't Know	--	5%	--	--	5%	14%	2%

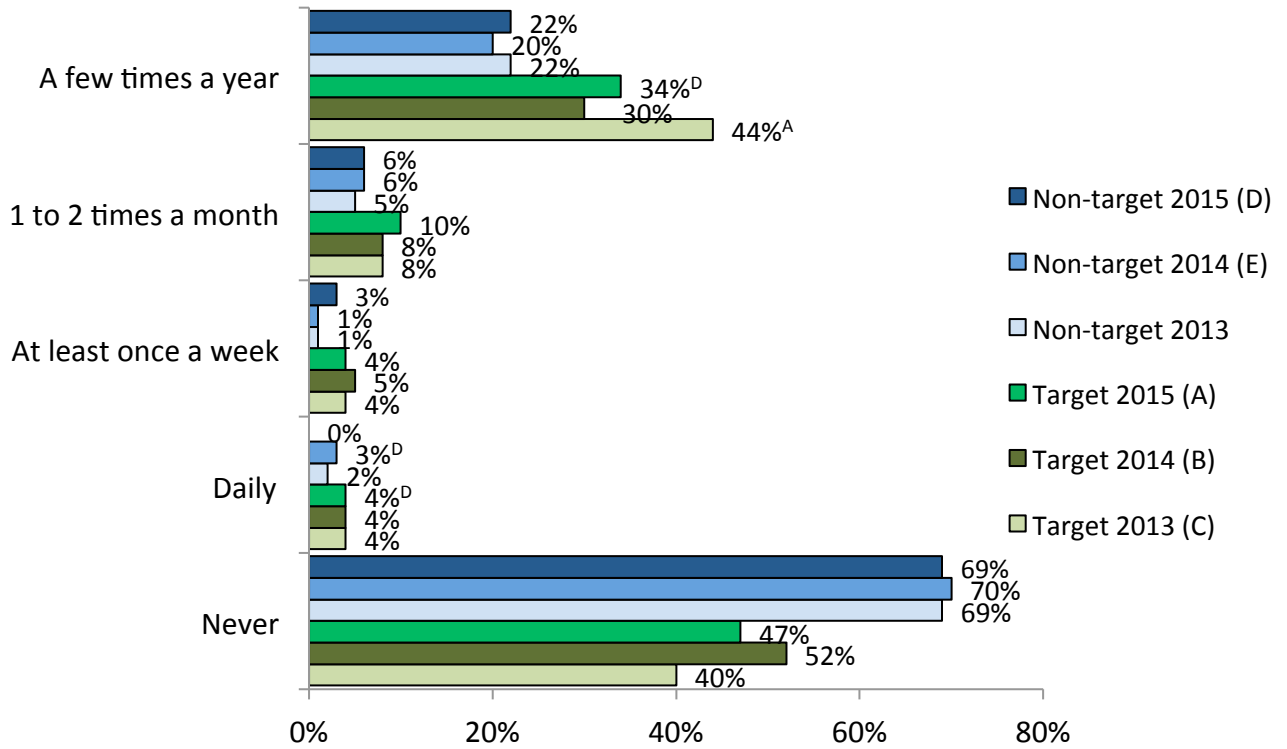
Q15: When putting items into the bed of your truck, how often, on average, do you secure your load (either with ties, bungees, a tarp, etc.)?

\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



### Frequency of Traveling with Trailers or Luggage Racks



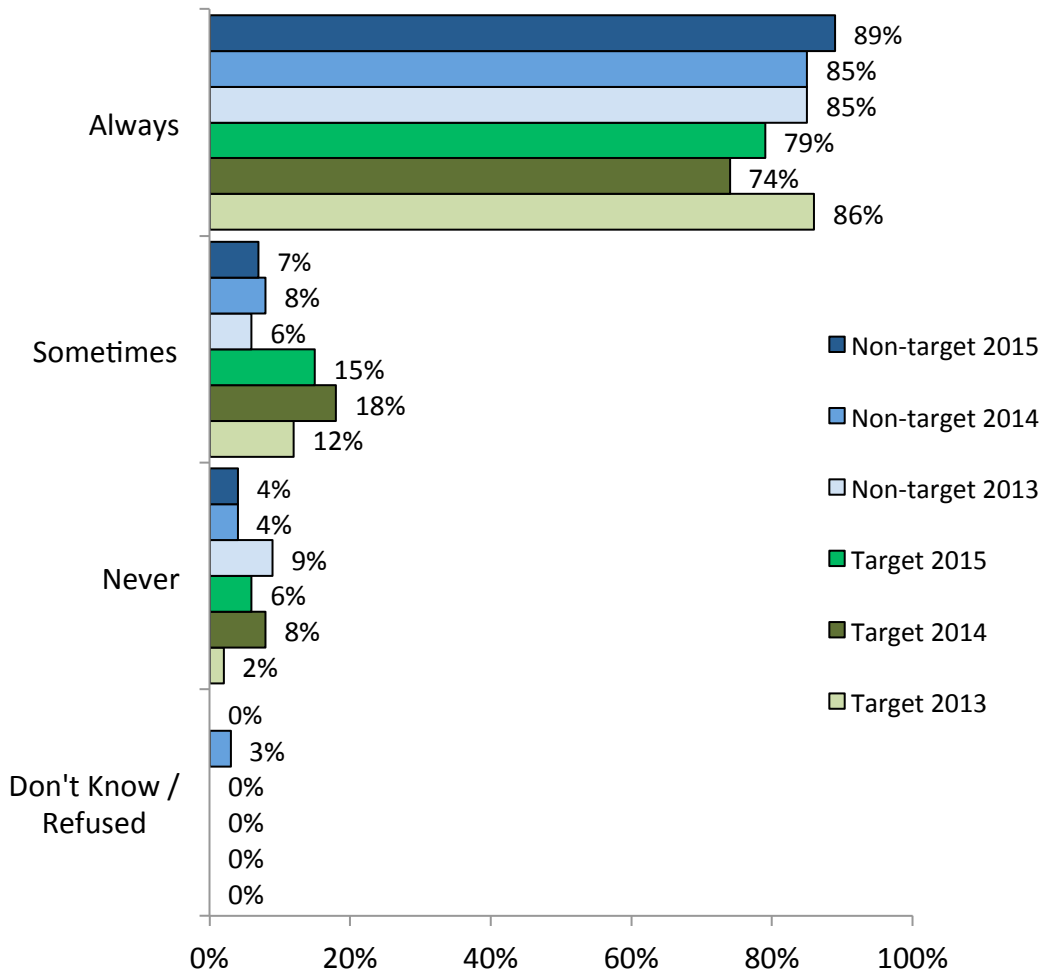
Non-target: 2015 n= 353; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200; Q16: How often do you drive or ride in a vehicle that transports items that are not carried within the vehicle or trunk, such as hauling items in an open-air trailer or strapped to a luggage rack or trunk?

\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



### How Often Those with Trailers or Luggage Racks Secure Loads



Non-target: 2015 n=108; 2014 n=99; 2013 n=120 | Target: 2015 n=106; 2014 n=97; 2013 n=120;  
 Q17: [If more than 'never' in Q16] On average, how often do you secure the load that you are hauling (either with ties, bungees, a tarp, etc.?)

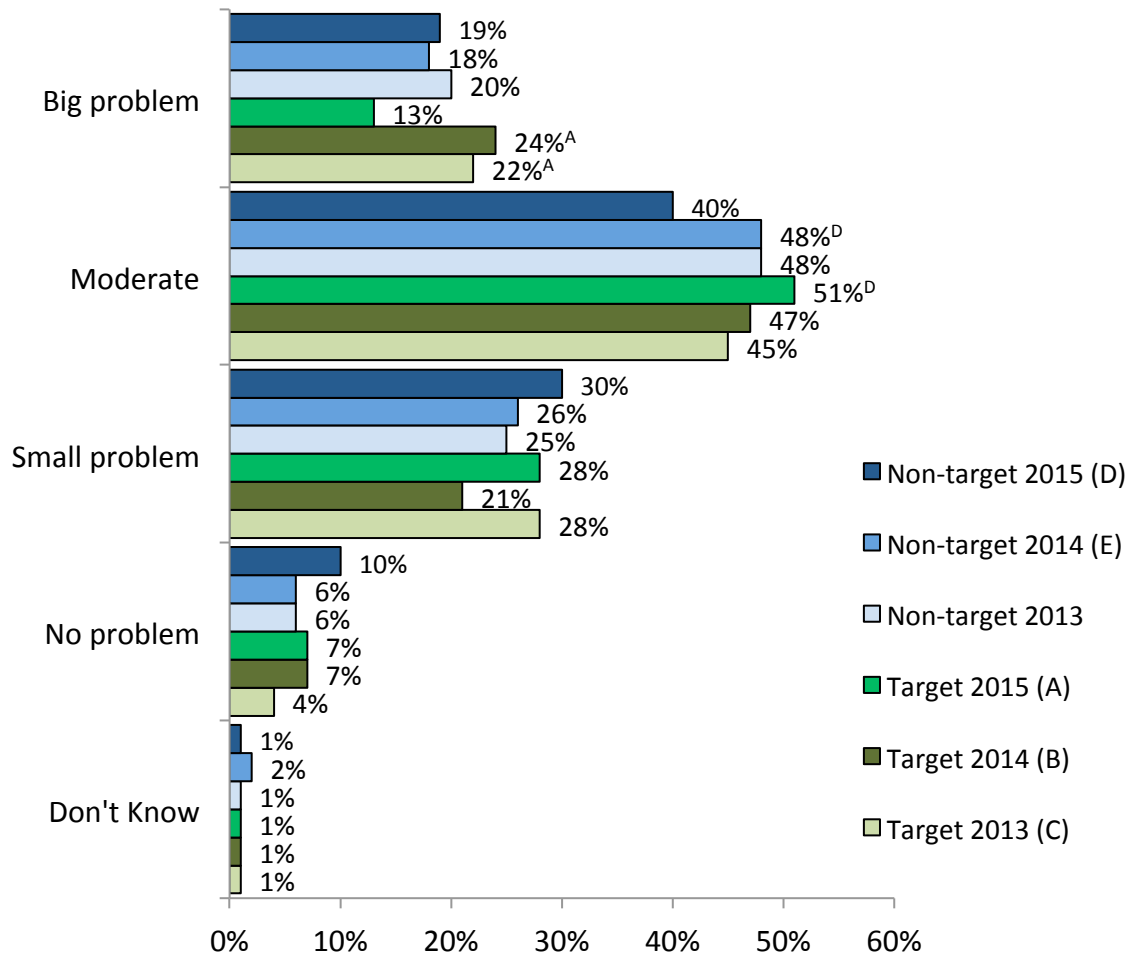
\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014 (No statistical difference).

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



# LITTER AWARENESS AND BEHAVIOR

## Perception of Litter along Maricopa County Freeways



Non-target: 2015 n=353; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200; Q8: *In your opinion, how big of a problem is litter along freeways in Maricopa County? Would you say it is a...*

\* Stat Testing: Target 2015 vs. Target 2014 and 2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A7: Items Personally Discarded as Litter – Target vs. Non-Target**

Top Items Mentioned	2015 Target n=200 A	2014 Target n=202	2013 Target n=200 C	2012 Target n=100	2015 Non-Target n=353 D	2014 Non-Target n=325 E	2013 Non-Target n=385
<b>Have not littered in past year.</b>	<b>36%</b>	<b>40%</b>	<b>32%</b>	<b>46%</b>	<b>74%<sup>E</sup></b>	<b>66%</b>	<b>66%</b>
Food/organic material	24%	14%	24%	15%	14%	14%	13%
Small pieces of paper	22%	21%	26%	21%	6%	7%	10%
Cigarette butts	8%	9%	8%	5%	1%	<1%	2%
Other food wrappers	6%	10%	12%	12%	4%	4%	3%
Don't know	2%	10%	2%	5%	2%	8% <sup>E</sup>	4%

Q12: Can you think of items that you yourself might have discarded as litter (by litter we mean items that you did not put in a trash receptacle) in the past year?

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

**Table A8: Littering Situation – Target vs. Non-Target**  
Among those who indicated they have littered in the past year

Top situations	2015 Target n=127 A	2014 Target n=121	2013 Target n=137 C	2012 Target n=54	2015 Non-Target n=93 D	2014 Non-Target n=110 E	2013 Non-Target n=129
Driving/riding/traveling in vehicle.	41%	36%	59% <sup>A</sup>	41%	50%	44%	54%
Walking outside.	13%	13%	18%	17%	8%	7%	8%
Opened door/window–flew out.	12%	4%	4%	4%	5%	4%	3%
In a parking lot.	10% <sup>C</sup>	9%	2%	--	4%	1%	--
No trash can around.	9% <sup>C</sup>	9%	3%	11%	4%	6%	7%
Just threw it/anywhere I could.	7%	6%	2%	7%	8%	10%	3%
Cleaning out car.	3%	3%	2%	4%	2%	2%	5%
Don't know/can't remember.	6%	19%	8%	15%	16%	19%	11%

Q13: To the best of your knowledge, what were the general circumstances in terms of where and what you were doing when you discarded litter? Any other circumstances?

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A9: Reasons for Littering when Driving –Target vs. Non-Target  
Among those who indicated they have littered in the past year**

Top Responses	2015 Target n=127 A	2014 Target n=121	2013 Target n=137 C	2012 Target n=54	2015 Non-Target n=93 D	2014 Non-Target n=110 E	2013 Non-Target n=129
I don't litter when driving.	26%	27%	23%	32%	29%	22%	35%
I only litter food scraps / they are biodegradable.	16%	4%	20%	9%	10%	14%	12%
It was an accident/unintentional.	14%	3%	15%	9%	9%	4%	7%
It's easy.	13%	8%	10%	--	10% <sup>E</sup>	3%	5%
No trash receptacles are convenient.	13%	9%	14%	11%	15%	16%	13%
I don't want to keep it in my car.	9%	12%	12%	11%	12%	7%	7%
I'm lazy.	3%	11%	2%	--	5%	4%	2%
I don't consider throwing out gum, small wrappers, cigarette butts litter.	2%	5%	7%	2%	2%	4%	4%
It was out of habit/don't think about it.	2%	2%	2%	--	8% <sup>E</sup>	1%	1%
Don't know.	37%	12%	29%	15%	15%	9%	7%

Q14: Why do you litter when DRIVING?

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A10a: Personal Experience with Littering Scenarios – Target vs. Non-Target**

Scenario	Past 3 months	3+ months	Never
Someone in a vehicle you were in threw trash out in an area that had no litter – Target 2015 (A)	17% <sup>D</sup>	26% <sup>D</sup>	57%
Target 2014 (B)	21%	23%	56%
Target 2013 (C)	14%	30%	56%
Target 2012	13%	14%	73%
Non-target 2015 (D)	4%	9%	87% <sup>A</sup>
Non-target 2014 (E)	6%	10%	84%
Non-target 2013	4%	9%	87%
You or someone you were with got a ticket or warning for littering – Target 2015 (A)	<1%	2%	97% <sup>BC</sup>
Target 2014 (B)	4% <sup>A</sup>	4%	92%
Target 2013 (C)	20% <sup>A</sup>	24% <sup>A</sup>	56%
Target 2012	23%	9%	68%
Non-target 2015 (D)	1%	1%	98%
Non-target 2014 (E)	<1%	2%	98%
Non-target 2013	6%	13%	81%
Rather than keep a beverage container in the car, you, or someone in a vehicle you were in, threw out a can or bottle – Target 2015 (A)	8% <sup>D</sup>	20% <sup>CD</sup>	72%
Target 2014 (B)	19% <sup>A</sup>	18%	64%
Target 2013 (C)	16% <sup>A</sup>	13%	71%
Target 2012	20%	13%	67%
Non-target 2015 (D)	3%	6%	91% <sup>A</sup>
Non-target 2014 (E)	3%	7%	91%
Non-target 2013	12%	8%	80%
Someone in a vehicle you were in threw trash out in an area that already had lots of litter – Target 2015 (A)	14% <sup>D</sup>	23% <sup>D</sup>	63%
Target 2014 (B)	18%	21%	61%
Target 2013 (C)	12%	28%	60%
Target 2012	12%	18%	69%
Non-target 2015 (D)	6%	11%	83% <sup>A</sup>
Non-target 2014 (E)	8%	10%	82%
Non-target 2013	7%	8%	85%
Someone in a vehicle you were in threw out a can, bottle or litter out onto the side of the road – Target 2015 (A)	12% <sup>D</sup>	28% <sup>D</sup>	60%
Target 2014 (B)	20% <sup>A</sup>	25%	55%
Target 2013 (C)	14%	31%	55%
Target 2012	9%	20%	71%
Non-target 2015 (D)	4%	12% <sup>E</sup>	84% <sup>A</sup>
Non-target 2014 (E)	3%	7%	90% <sup>D</sup>
Non-target 2013	4%	9%	86%

Q11: I am going to read you a few statements pertaining to your litter awareness. For each of the following statements, please respond by telling me if this is something you "Have experienced within the past 3 months," Have experienced over 3 months ago," or "Have never experienced."

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.  
<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A10b: Personal Experience with Littering Scenarios – Target vs. Non-Target**

Scenario	Past 3 months	3+ months	Never
Rather than keep a cigarette butt in the car, you or someone in the vehicle you were in threw the cigarette butt out the window – Target 2015 (A)	21% <sup>D</sup>	16% <sup>C</sup>	63%
Target 2014 (B)	28%	17%	55%
Target 2013 (C)	--	2%	98% <sup>A</sup>
Target 2012	--	3%	97%
Non-target 2015 (D)	6%	14%	80% <sup>A</sup>
Non-target 2014 (E)	5%	10%	85%
Non-target 2013	--	1%	99%
You threw out a small item from your vehicle like a candy wrapper, scrap paper, etc. – Target 2015 (A)	16% <sup>CD</sup>	21% <sup>D</sup>	63% <sup>B</sup>
Target 2014 (B)	30% <sup>A</sup>	20%	50%
Target 2013 (C)	8%	28%	64%
Target 2012	11%	11%	78%
Non-target 2015 (D)	6%	9%	85% <sup>A</sup>
Non-target 2014 (E)	7%	7%	86%
Non-target 2013	1%	8%	91%
You had problems with a vehicle and left debris like tire, part of a tire, or other stuff on the roadside – Target 2015 (A)	17%	16% <sup>D</sup>	67% <sup>C</sup>
Target 2014 (B)	22%	12%	66%
Target 2013 (C)	14%	31% <sup>A</sup>	55%
Target 2012	9%	20%	71%
Non-target 2015 (D)	13%	7% <sup>E</sup>	80% <sup>A</sup>
Non-target 2014 (E)	12%	12% <sup>D</sup>	76%
Non-target 2013	4%	9%	87%
You noticed that some trash fell out of a pickup or other vehicle you were driving in – Target 2015 (A)	36% <sup>D</sup>	33% <sup>BCD</sup>	31%
Target 2014 (B)	44%	19%	37%
Target 2013 (C)	39%	23%	38%
Target 2012	30%	22%	48%
Non-target 2015 (D)	26%	19%	56%
Non-target 2014 (E)	30%	19%	51%
Non-target 2013	23%	20%	56%

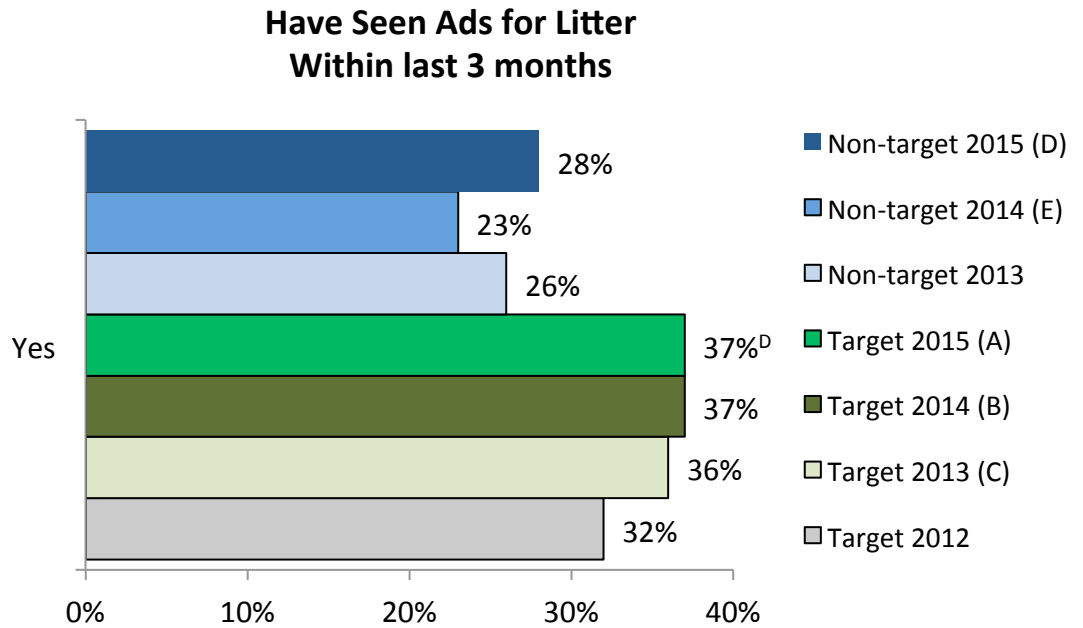
Q11: I am going to read you a few statements pertaining to your litter awareness. For each of the following statements, please respond by telling me if this is something you "Have experienced within the past 3 months," Have experienced over 3 months ago," or "Have never experienced."

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



# CAMPAIGN AWARENESS



Non-target: 2015 n=353; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200; 2012 n=100

Q20: *In the past three months, have you seen, heard or read any advertisements related to litter or littering?*

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

**Table A11: Recalled Messages of Litter-Related Advertising – Target vs. Non-Target**

Among those who indicated they remember seeing ads related to litter or littering in the past 3 months

Top Responses	2015 Target n=75 A	2014 Target n=74 B	2013 Target* n=73 C	2012 Target n=32	2015 Non-target n=98 D	2014 Non-target n=75 E	2013 Non-target n=100
Don't litter/keep Arizona clean.	17%	11%	25%	25%	18%	24%	28%
It was a sign along the road/billboard.	11%	16%	12%	16%	20% <sup>E</sup>	5%	13%
Littering is unlawful/can get a ticket.	8%	5%	6%	3%	10%	7%	4%
Use ashtray/cigarettes cause fires.	7%	12%	15%	3%	5%	15%	10%
The fines.	5%	4%	15% <sup>A</sup>	9%	7%	5%	17%
People were dumping big items.	5%	--	--	--	--	--	--
Saw on TV.	5%	3%	3%	3%	6%	9%	2%
A hamburger wrapper being a 500 dollar fine/ a five hundred dollar burger.	5%	8%	4%	9%	8%	5%	5%
Littering/dumping in the desert.	4%	--	--	--	--	1%	2%
Don't Trash Arizona.	4%	8%	8%	3%	1%	5%	--
Recycling information.	4%	--	4%	6%	2%	1%	4%
Heard on radio.	3%	11% <sup>A</sup>	8%	--	2%	4%	2%
No cups, cans or butts.	1%	8% <sup>A</sup>	4%	--	--	--	2%
Don't know.	9%	10%	3%	12%	7%	4%	10%

Q21: What specifically do you remember about the ads related to litter or littering?

Note: Response categories with less than 3% mentions in 2015 not listed in this table unless relevant to tracking or campaign.

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A12: Main Slogan of Recalled Advertising – Target vs. Non-Target**  
Among those who indicated they remember seeing ads  
related to litter or littering in the past 3 months

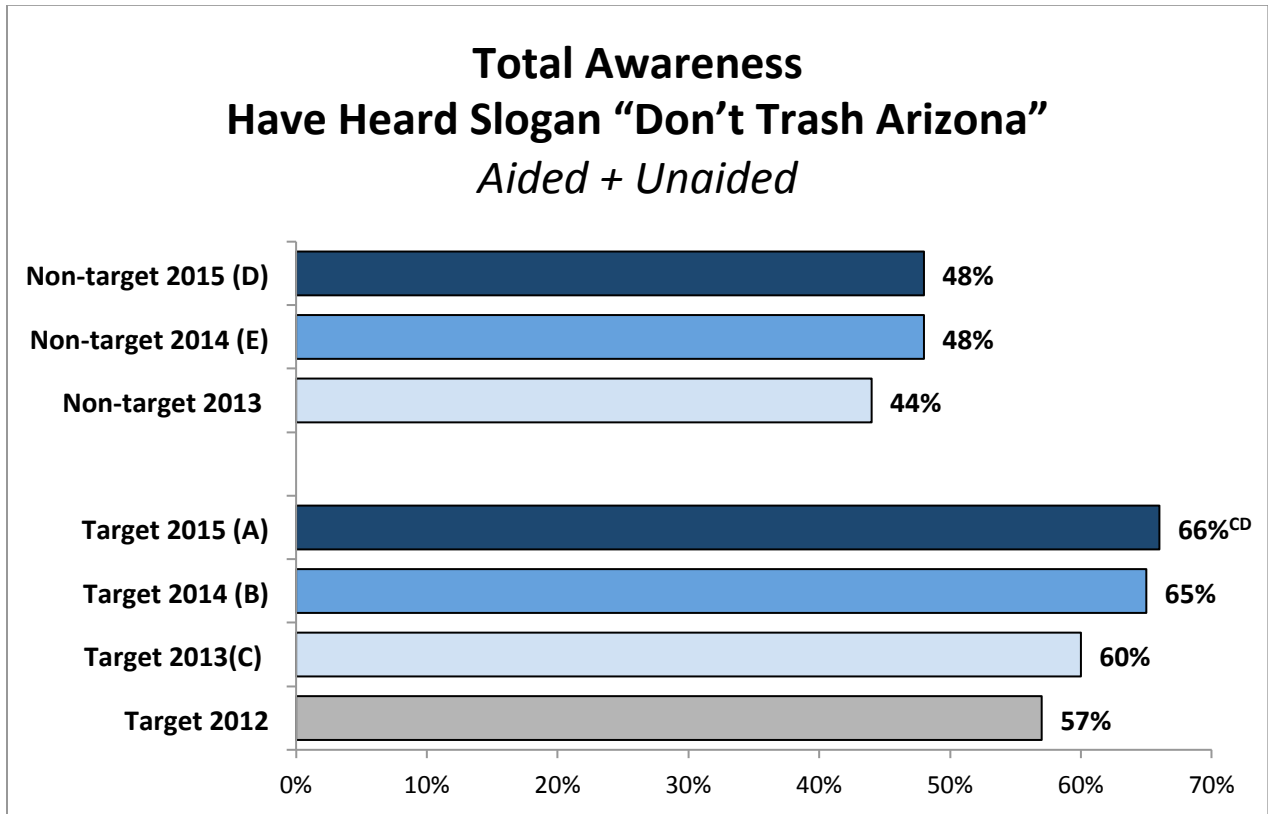
Top Responses	2015 Target n=75 A	2014 Target n=74	2013 Target n=73 C	2012 Target n=32	2015 Non-target n=98 D	2014 Non-target n=75 E	2013 Non-target n=100
Don't Trash Arizona.	19%	12%	23%	3%	2%	11% <sup>D</sup>	3%
Keep our freeways clean.	15%	--	7%	3%	1%	3%	2%
Do not litter.	11%	7%	14%	12%	13%	13%	12%
Littering is unlawful.	9%	--	10%	9%	4%	1%	--
No cups cans or butts.	8%	8%	10%	3%	--	1%	2%
Adopt a highway.	8%	--	7%	--	--	--	--
You will be fined.	5%	--	6%	6%	5%	7%	2%
Keep Arizona Beautiful.	3%	1%	15% <sup>A</sup>	3%	2%	--	2%
Arizona Clean & Beautiful.	1%	5%	3%	--	4%	3%	--
Don't know.	37%	50%	41%	59%	52%	52%	59%

Q22: What was the main slogan used in the ads?

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.





Non-target: 2015 n=353 ; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200; 2012 n=100

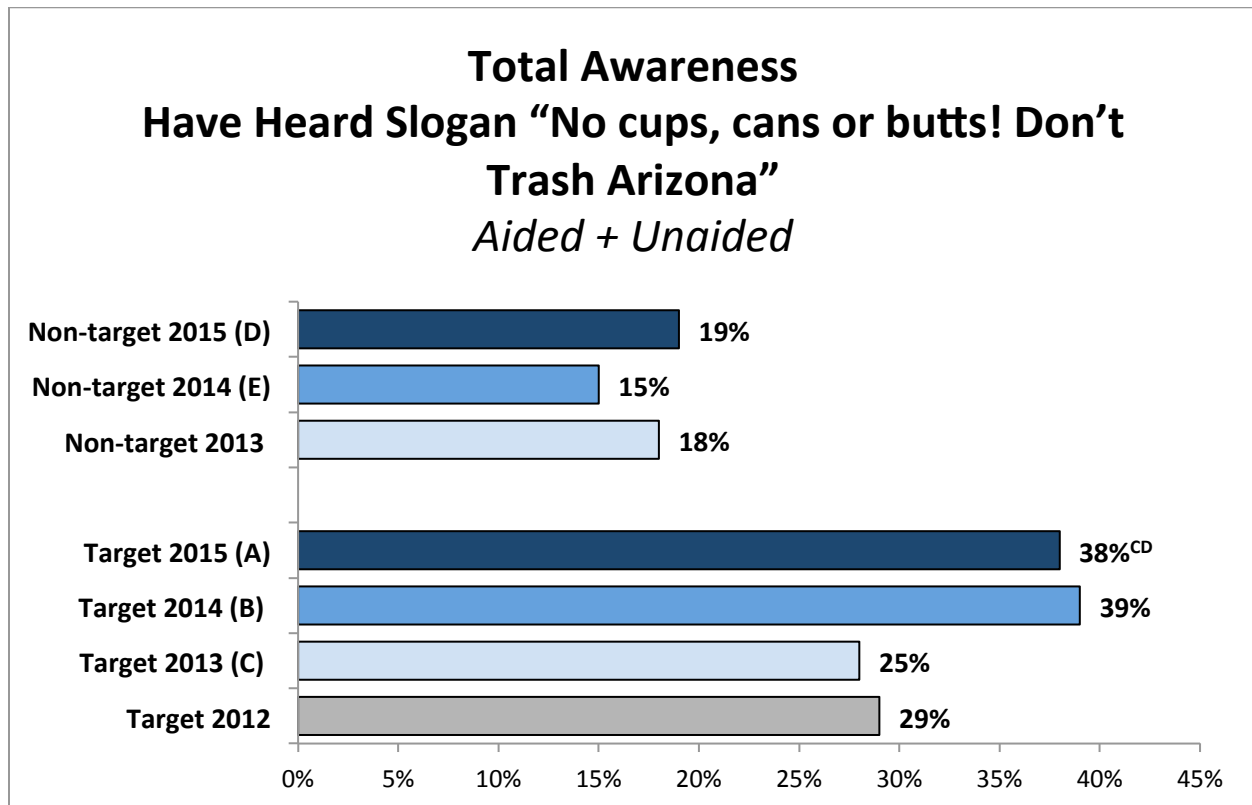
Q22: [If yes in Q20] What was the main slogan used in the ads?

Q23: [if not mentioned in Q22] Have you seen or heard the slogan, “Don’t Trash Arizona?”

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

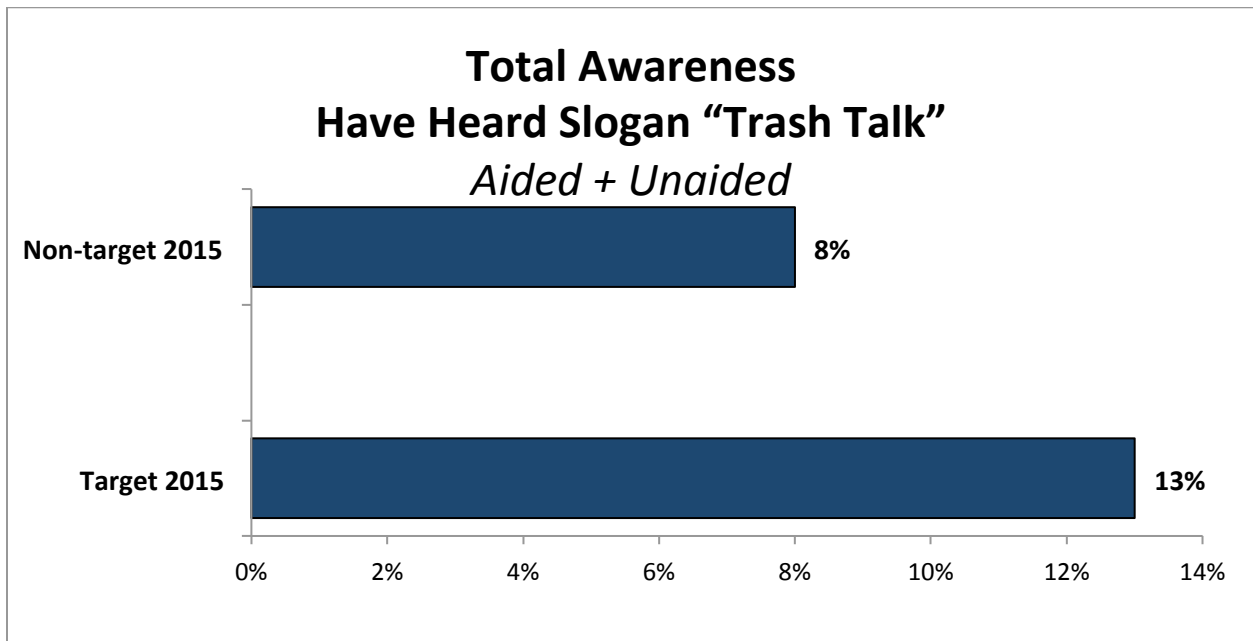




Non-target: 2015 n=353 ; 2014 n=325; 2013 n=385 | Target: 2015 n=200; 2014 n=202; 2013 n=200; 2012 n=100  
 Q22: [If yes in Q20] What was the main slogan used in the ads?

Q24: [if not mentioned in Q22] Have you seen or heard the slogan, “No cups, cans or butts! Don’t Trash Arizona?”

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014. <sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



Non-target: 2015 n=353 ; | Target: 2015 n=200

Q22: [If yes in Q20] What was the main slogan used in the ads?

Q23: [if not mentioned in Q24] Have you seen or heard the slogan for Don't Trash Arizona that included the words "Trash Talk?"

\* Stat Testing: Target 2015 vs. Non-Target 2015 (No statistical difference).

**Table A13: Source of *Don't Trash Arizona* Slogan Awareness – Target vs. Non-Target**  
Total responses among those indicating they had heard the slogan

Top media sources	2015 Target n=138 A	2014 Target n=142	2013 Target n=127 C	2012 Target n=66	2015 Non-target n=194 D	2014 Non-target n=162 E	2013 Non-target n=192
Billboards	41%	43%	40%	18%	26%	25%	22%
Television	31%	27%	36%	20%	20%	21%	18%
Street/highway signs	25%	12%	21%	21%	24%	17%	27%
Radio	25%	31%	32%	21%	14%	18%	14%
Light Rail	9%	--	--	--	1%	1%	--
Newspaper	2%	2%	2%	--	1%	2%	2%
Online	2%	2%	1%	3%	6% <sup>E</sup>	1%	21%
Friends/Family/Word of mouth	2%	1%	--	2%	1%	2%	--
Bus signs	1%	3%	1%	--	1%	--	1%
Don't know	6%	11%	9%	21%	17%	19%	20%

Q25: [if mentioned in Q22, or 'yes in Q23 or Q24] Where have you seen, heard or read the slogans, "Don't Trash Arizona" or "No cups, cans or butts: Don't Trash Arizona" or "trash talk"?

Note: Response categories with less than 2% mentions in 2015 not listed in this table unless relevant to tracking.

\* Stat Testing: Target 2015 vs. Target 2013, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

**Table A14: Awareness of Litter Resources – Target vs. Non-Target**

Aided awareness	2015 Target n=200 A	2014 Target n=202 B	2013 Target n=200 C	2012 Target n=100	2015 Non-target n=353 E	2014 Non-target n=325 E	2013 Non-target n=385
<i>Litter Hotline, 1-877-3-Litter</i>							
Yes	13%	13%	12%	10%	9%	11%	10%
No	86%	85%	87%	90%	90%	88%	89%
Don't know / No answer	1%	2%	1%	--	<1%	1%	2%
<i>www.donttrasharizona.com</i>							
Yes	18% <sup>E</sup>	17%	17%	11%	8%	9%	6%
No	78%	80%	81%	89%	89% <sup>A</sup>	91%	92%
Don't know / No answer	4%	3%	2%	--	3% <sup>E</sup>	<1%	2%

Q27: Have you heard of [www.DontTrashArizona.com](http://www.DontTrashArizona.com)?

Q29: Have you heard about the Litter Hotline, 1-877-3-Litter, where you can report someone who litters?

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**Table A15: Likelihood to Report Littering – Target vs. Non-Target**

Likelihood	2015 Target n=200 A	2014 Target n=202 B	2013 Target n=200 C	2012 Target n=100	2015 Non-target n=353 D	2014 Non-target n=325 E	2013 Non-target n=385
<b>NET likely (Very + somewhat)</b>	<b>39%</b>	<b>43%</b>	<b>49%</b>	<b>46%</b>	<b>59%</b>	<b>63%</b>	<b>64%</b>
Very likely	12%	11%	13%	11%	24% <sup>A</sup>	25%	31%
Somewhat likely	27%	32%	36%	35%	35%	38%	33%
Not very likely	38% <sup>D</sup>	29%	32%	34%	23%	23%	22%
Not at all likely	22%	24%	16%	18%	16%	12%	11%
Don't know	1%	4%	3%	2%	2%	2%	3%

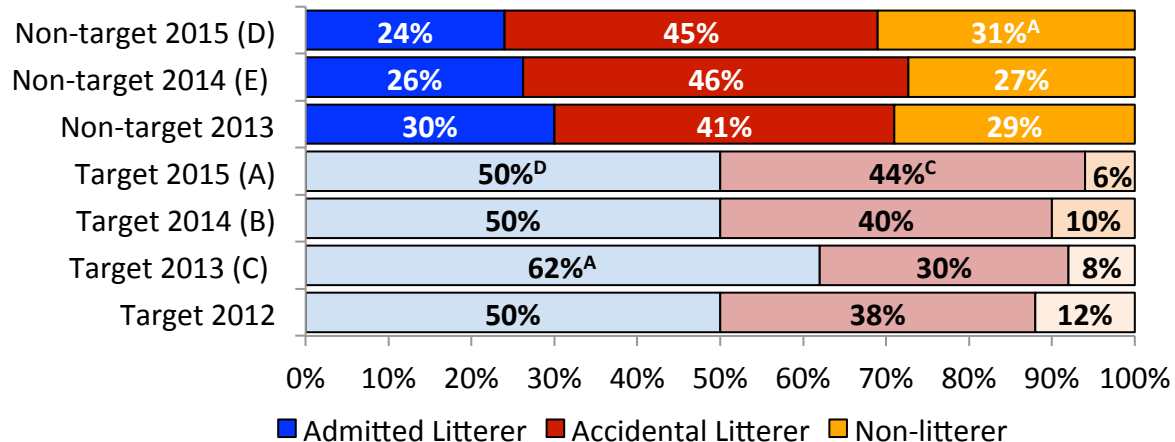
Q30: If you were to see someone litter, how likely are you to report this behavior to the Litter Hotline or the website in the future?

\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.

## PROFILES OF LITTERERS

### Littering Behavior



\* Stat Testing: Target 2015 vs. Target 2014/2013, Target 2015 vs. Non-Target 2015, Non-Target 2015 vs. Non-Target 2014.

<sup>ABCDE</sup> Indicates significantly higher percentage than the column indicated at 95% confidence level.



**APPENDIX B**

**QUESTIONNAIRE**



**Client:** Maricopa Association of Governments  
**Subject:** Litter Survey 2015  
**Date:** July 2015

### Introduction

Hello, my name is \_\_\_\_\_, and I am calling from WestGroup Research an independent research company. We are conducting a brief survey on the topic of litter and would appreciate your input. All information given will remain confidential. No sales calls will result from this interview.

1. First, are you or is any member of your family currently employed in any of the following...? READ LIST; IF YES TO ANY: THANK AND TERMINATE
  - a. Advertising or marketing research
  - b. Arizona Department of Transportation
  - c. Maricopa Association of Governments
  - d. A professional waste collection or recycling company
  - e. The waste management industry
  
2. Please tell me which of the following age categories includes your age? Please stop me when I read the correct category. READ LIST; ALLOW ONLY ONE RESPONSE
  - a. Under 18 TERMINATE
  - b. 18 to 34
  - c. 35 to 54
  - d. 55+
  - e. Refused TERMINATE
  
3. *If "Under 18" or "Refused," continue with:* May I please speak to someone in the household who is between the ages of 18 and 65?
  
4. Do you live in Maricopa County? If no, ask to speak to someone who does.
  
5. RECORD GENDER (DO NOT ASK; RECORD BY OBSERVATION)
  - a. Male
  - b. Female
  
6. For classification purposes, may I have the Zip Code in which you live?



7. What type of vehicle do you most often drive or ride in..? DO NOT READ LIST
- Sedan
  - Pick-up truck
  - Sports utility vehicle
  - Coupe
  - Van / Minivan
  - Motorcycle
  - Other
  - Don't drive
  - Don't know/Refused

### Litter Awareness

Today, I would like to talk to you specifically about the topic of litter. When answering the following questions, please be open and accurate about your opinions and actions. We are trying to understand what people really think about litter. All of your responses will remain confidential.

8. In your opinion, how big of a problem is litter along freeways in Maricopa County? Would you say it is a....
- Big problem
  - Moderate problem
  - Small problem
  - Not a problem at all
  - Don't know / Refused (DO NOT READ)
9. Do you smoke?
- Yes
  - No
  - Don't know / Refused
10. IF YES in Q10: When you are in a vehicle, do you USUALLY dispose of cigarette butts...? READ LIST – ONE RESPONSE ONLY
- By using an ashtray inside the vehicle
  - By using something else you have inside the vehicle
  - By throwing it out the window
  - Or does it vary
  - DO NOT READ: Other means of disposal
  - Do not smoke in car (added)
  - Don't know / Refused (DO NOT READ)



11. I am going to read you a few statements pertaining to your litter awareness. For each of the following statements, please respond by telling me if this is something you “Have experienced within the past 3 months,” Have experienced over 3 months ago,” or “Have never experienced.”
- a. You noticed that some trash fell out of a pick-up truck or other vehicle you were driving or riding in.
  - b. Someone in a vehicle you were in threw out trash in an area that already had lots of litter
  - c. Someone in a vehicle you were in threw out trash in an area that did not have any litter
  - d. Someone in a vehicle you were in threw out a can, bottle, or other litter out onto the side of the road.
  - e. You had problems with a vehicle and left debris like a tire, part of a tire, or other stuff on the roadside
  - f. Rather than keep a beverage container in the car, you, or someone in a vehicle you were in, threw out a can or bottle.
  - g. You threw out a small item from your vehicle, like a candy wrapper, scrap paper or something like that.
  - h. You or someone you were with got a ticket or warning for littering.
  - i. Rather than keep a cigarette butt in the car, you or someone in the vehicle you were in threw the cigarette butt out the window.

### Littering Behavior

12. Can you think of items that you yourself might have discarded as litter (by litter we mean items that you did not put in a trash receptacle) in the past year? MULTIPLE RESPONSES ALLOW UP TO THREE. DO NOT READ LIST.
- a. Small pieces of paper (receipts, lottery tickets, gum wrappers)
  - b. Cigarette butts
  - c. Other food wrappers (chip bags/candy)
  - d. Food / organic material, raw food
  - e. Other
  - f. Have not littered in past year – TRUCK DRIVERS SKIP TO Q15, ALL OTHERS SKIP TO: Q16
  - g. Don't know



13. To the best of your knowledge, what were the general circumstances in terms of where and what you were doing when you discard litter? PROBE: Any other circumstances? DO NOT READ. MULTIPLE RESPONSES ALLOWED UP TO THREE.

- a. Driving / riding in / traveling in vehicle
- b. Walking outside
- c. Opened door and it flew out / flew out of window / flew out of cab
- d. No trash can around (not while in car)
- e. Cleaning out car
- f. In parking lot
- g. Just threw it out / got rid of it anywhere I could
- h. Other
- i. Don't know/Can't remember / don't recall

14. Why do you litter WHEN DRIVING? (*Do not read list, mark all that apply*)

- a. I'm lazy
- b. It's easy
- c. No trash receptacles are convenient
- d. Cigarettes stink up car, easier to throw out window
- e. Only litter food scraps – they are biodegradable
- f. I don't care
- g. I don't consider throwing out gum, small wrappers, cig butts litter
- h. It was an accident/unintentional
- i. I don't want to keep it in my car
- j. I don't litter when driving
- k. Other \_\_\_\_\_
- l. Dk/Refused

15. TRUCK DRIVERS ONLY: When putting items into the bed of your truck, how often, on average, do you secure your load (either with ties, bungees, a tarp, etc)?

- a. Always
- b. Most of the time
- c. Only sometimes
- d. Rarely
- e. Never
- f. DK/Refused
- g. If never – WHY NOT?

ASK ALL:

16. How often do you drive or ride in a vehicle that transports items that are not carried within the vehicle or trunk, such as hauling items in an open-air trailer or strapped to a luggage rack or trunk?

- a. Daily
- b. At least once a week
- c. 1-2 times a Month
- d. A few times a year
- e. Never

SKIP TO Q18



17. (If selected a, b, c, d on question 16 On average, how often do you secure the load that you are hauling (either with ties, bungees, a tarp, etc)?)

- a. Always
- b. Sometimes
- c. Never

18a: If sometimes or never – Why don't you secure your loads all of the time?

18. Do you have a litter bag or trash can in your vehicle?

- a. Yes
- b. No
- c. Don't know / Refused

19. IF NO IN Q18: Would you consider keeping a litter bag or trash can in your vehicle?

- a. Yes
- b. No
- c. Don't know / Refused

### Litter Campaign Awareness

20. In the past three months, have you seen, heard or read any advertisements related to litter or littering?

- a. Yes
- b. No - SKIP TO Q23
- c. Don't know / Refused

21. IF YES in Q20: What specifically do you remember about the ads related to litter or littering?

22. IF YES IN Q20: What was the main slogan used in the ads? DO NOT READ LIST. MULTIPLE RESPONSES ALLOWED.

- a. Don't Trash Arizona
- b. No cups cans or butts
- c. Trash Talk
- d. Keep Arizona Beautiful
- e. Do not litter
- f. You will be fined
- g. Littering is unlawful
- h. Go green
- i. Grow up. Don't Litter
- j. Adopt a highway
- k. It is your environment
- l. Keep our freeways clean
- m. None
- n. Other \_\_\_\_\_
- o. Don't know / Refused



23. IF NOT MENTIONED IN Q22 "a": Have you seen or heard the slogan, "Don't Trash Arizona?"

- a. Yes
- b. No
- c. Don't know / Refused

24a IF NOT MENTIONED IN Q22 "b": Have you seen or heard the slogan, "No cups, cans or butts! Don't Trash Arizona?"

- d. Yes
- e. No
- f. Don't know / Refused

24b. IF NOT MENTIONED IN Q22 "c": Have you seen or heard the slogan for Don't Trash Arizona that included the words "Trash Talk?"

- g. Yes
- h. No
- i. Don't know / Refused

24. IF mentioned in Q22a or Q22b or YES IN Q23 or Q24: Where have you seen, heard or read the slogans, "Don't Trash Arizona" or "No cups, cans or butts: Don't Trash Arizona" or "trash talk" PROBE: Where else? DO NOT READ LIST. MULTIPLE RESPONSES ALLOWED.

- a. Television
- b. Radio
- c. Billboards
- d. Convenience stores
- e. Mobile advertising truck
- f. Movie theaters
- g. Events around the valley/materials given away at events
- h. Light Rail Train
- i. Street or highway signs
- j. Newspaper
- k. Online
- l. Other
- m. Don't know / Refused

25. IF mentioned in Q22a or Q22b or YES IN Q23 or Q24: Who sponsors the "Don't Trash Arizona" advertisements? DO NOT READ LIST. ONE RESPONSE ONLY.

- a. State / Local Government
- b. Arizona Department of Transportation
- c. Sanitation department
- d. City of Phoenix
- e. Maricopa Association of Governments
- f. Other
- g. Don't know / Refused



26. Have you heard of [www.DontTrashArizona.com](http://www.DontTrashArizona.com)?
- Yes
  - No
  - Not sure/DK
27. If YES IN Q27 "a": Have you ever visited the "Don't Trash Arizona Website"?
- Yes
  - No
  - Don't know
- 28a. IF YES: What were you looking for when you went to the Don't Trash Arizona website?
28. Have you heard about the Litter Hotline, 1-877-3-Litter, where you can report someone who litters? NOTE: QUESTION MOVED WITHIN SURVEY
- Yes
  - No
  - Don't know / Refused
29. If you were to see someone litter, how likely are you to report this behavior to the Litter Hotline or the Web site in the future?
- Very likely
  - Somewhat likely
  - Not very likely
  - Not at all likely
  - Don't know / Refused (DO NOT READ)
30. If you wanted to find out more information about litter or littering, where would you go or who would you contact to find that information? DO NOT READ LIST, SELECT ALL THAT APPLY.
- Don't Trash AZ website
  - Internet
  - Litter hotline
  - The "city"
  - I wouldn't need that information/wouldn't contact anyone
  - ADOT/highway dept.
  - Police/ highway patrol/DPS
  - Phonebook/ yellow pages
  - Waste Management/ garbage company
  - That state/governor
  - Other
  - Don't know/refused



## Demographics

Now I have a few final questions that are for classification purposes only.

*D1. What is your present marital status? (ASK AS OPEN END; ACCEPT ONE MENTION)*

- a. Single
- b. Married
- c. Divorced
- d. Separated
- e. Widowed
- f. Don't know
- g. Refused/NA

D2. What was the last year of education you have completed?

- a. Grammar school (8 years or less)
- b. Some high school (9-11 years)
- c. Graduated high school (12 years)
- d. Some post-high school training/some college
- e. Graduated from four-year college (B.A./B.S.)
- f. Graduate Degree
- g. Don't Know
- h. Refused

D3. Are you employed full-time, employed part-time, retired, a stay at home parent, a student or unemployed?

- a. Full-time
- b. Part-time
- c. Retired
- d. House-spouse/stay at home parent
- e. Student
- f. Unemployed
- g. Refused/NA

D4. Which of the following best classifies your profession? Read List

- a. White collar/management
- b. Blue collar
- c. Trade profession
- d. Professional (medical/legal)
- e. Educational
- f. Clerical/administrative
- g. Sales
- h. Self-employed
- i. Other (SPECIFY)
- j. Don't know



D5. How would you describe your ethnic heritage? Would you say you are... (READ CODES 1-5; ACCEPT ONE MENTION)

- a. White
- b. African-American
- c. Hispanic
- d. Asian, or
- e. Something Else [SPECIFY]:
- f. Native American
- g. Refused

D6. Thinking about your personal language use including in home and away from home, would you say you speak...? READ LIST; ALLOW ONLY ONE RESPONSE)

- a. English Only
- b. Only Spanish
- c. Mostly Spanish, but also some English
- d. Equally in Spanish and English
- e. Mostly English, but also some Spanish
- f. English plus some other language
- g. Don't know/refused

D7. Was your annual household income before taxes last year: Read List

- a. Less than \$10,000
- b. \$10,000 to less than \$20,000
- c. \$20,000 to less than \$30,000
- d. \$30,000 to less than \$40,000
- e. \$40,000 to less than \$50,000
- f. \$50,000 to less than \$60,000
- g. \$60,000 to less than \$75,000
- h. \$75,000 to less than \$100,000
- i. More than \$100,000
- j. No answer

Thank you very much – those are all my questions.

