



LITTER EVALUATION SURVEY

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TABLE OF CONTENTS

<u>Section:</u>	<u>Page #:</u>
Executive Summary	1
Key Findings and Recommendations	6
I. Introduction	8
A. Background and Methodology.....	8
B. Demographics.....	9
II. Driver Characteristics	12
A. Driving Habits.....	12
B. Litterbag Use.....	13
C. Smokers.....	14
D. Truck Drivers.....	15
III. Litter Awareness and Behavior	20
A. Perception of the Problem along Freeways.....	20
B. Personal Littering.....	21
C. Littering Circumstances.....	23
D. Reasons for Littering.....	25
E. Personal Experience with Specific Littering Situations.....	26
IV. Campaign Awareness	28
A. Awareness of Campaign.....	28
B. Don't Trash Arizona Awareness.....	32
C. Awareness of Litter Resources.....	35
D. Likelihood to Report Littering.....	38
E. Additional Litter Resources.....	41
V. Profiles of Litterers	42
Questionnaire.....	Appendix A
Cross Tabulations – Available under separate cover	

EXECUTIVE SUMMARY

Background

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 Web research and targeted interviews with account 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.

Based on the research results, a strategy was developed that would utilize a “pride” message; focus on the 18 to 24 male demographic (with a secondary target of males 25-35); target both deliberate and “accidental” litter; and include a variety of strategies and tactics within the areas of public relations, paid advertising, media outreach, school outreach, and the development of value-added partnerships.

While the primary goal of the *Don't Trash Arizona* program is to reduce freeway litter by increasing awareness about the problems litter causes and to change littering behavior, it was recognized early on that it would be difficult to rapidly “move the needle” in terms of changing behavior. The communication team outlined a strategy to achieve results through a three-stage process: 1) increase awareness; 2) change attitudes; and 3) change behavior.

A follow-up, evaluative survey was then conducted in July 2008, at the end of the first two years of the campaign, to determine if any changes in awareness, attitudes or behavior were realized. Three subsequent follow-up studies were conducted; however, these studies focused on Maricopa County residents. To accurately compare the data from the 2006 and 2008 surveys to the 2009, 2010 and 2011

data, the 2006 and 2008 data shown in this report include only responses from Maricopa County residents. The 2011 survey is the focus of this report.

Evaluative Survey

RIESTER, on behalf of the Maricopa Association of Governments (MAG), 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 compare responses to the benchmark and subsequent studies, which were conducted in December 2006, July/August 2008, August 2009, August 2010, and August 2011.

Results for the 2011 Litter Evaluation Survey are based on 602 fifteen-minute telephone interviews with Maricopa County residents. The margin of error for the survey is approximately $\pm 4.1\%$ at a 95% confidence level. One change this year included the use of a cell phone database in addition to "land line" telephone calls, due to the number of younger respondents with cell-phone-only telephone access.

Below are some of the key findings of the survey.

Driver Characteristics

- This year, Maricopa County residents were less likely to report having a litterbag or trash receptacle in their vehicle (65%, down from 69% in 2010).
- Of those residents who did not have a litterbag or trash receptacle in their car, two in three (67%) indicated they would consider keeping one in their vehicle in the future, which represents a slight increase from 2010 (64%).
- Similar to previous years, a little more than one in six Valley residents indicated they were smokers (17%). Less than half of smokers reported that they use an ashtray in their vehicle (43%), representing a decrease from smokers who indicated using ash trays in 2010 (53%). Only 2% of respondents indicated they do not smoke in the car at all, also representing a decrease from 2010 (7%).
- One in eight Maricopa County residents indicated they drive a pickup truck (13%, down slightly from 16% in 2010). Truck drivers reported that soda cans/bottles, lawn debris, plastic bags, and water bottles were the most common types of litter that would be found in the back of their truck beds (mentioned by 17%, 14%, 8% and 7%, respectively). Small pieces of paper and construction debris were mentioned by 4% of truck drivers. More than two in five (44%) truck drivers indicated they do not believe they put any type of litter in their truck bed, representing a slight decrease from 2010 (48%).

- This year, fewer truck drivers indicated that on average they “always” secure items in the back of their pickup truck (54%, down from 64% in 2010) while more truck drivers reported that they secure their load “most of the time” (19%, up from 17%) and sometimes (12%, up from 7%).
- Approximately three in ten (27%) Maricopa County residents reported driving in a vehicle that hauls items in an open air trailer or strapped to a luggage rack a few times a year, and 6% stated that they do so one to two times a month or more. More than six in ten residents (64%) reported never driving a vehicle that hauls items in an open air trailer or strapped to a luggage rack in the past year (down from 67% in 2010).
- More than four-fifths (84%) of drivers with open-air trailers or luggage racks indicated that, on average, they “always” secure items in their open air trailers or on their luggage racks, representing an increase from 2010 (77%).

Litter Awareness and Behavior

- The percentage of residents who rated the magnitude of the litter problem along Maricopa County freeways as a “big” or “moderate” problem decreased slightly from 2010 (65% vs. 67%).
- Fewer Valley residents insisted that they had *not* littered at all in the past year than in 2010 (70%, down from 74%).
- The percentage of the target audience, males aged 18 to 34, who indicated they “had not littered in the past year” dropped eleven percentage points from 2010 (40% vs. 51%).
- Females were more likely to claim they had not littered in the past year (76% vs. 64% for males). Residents aged 55+ were also significantly more likely to claim they had not littered in the past year than residents aged 18 to 34 and aged 35 to 54 (85% vs. 52% and 72%, respectively).
- Among those who indicated they had littered in the past year, food or organic material was the most common type of litter (mentioned by 41%), consistent with past years.
- As in prior years, the residents who indicated they had littered in the past year were most likely to report that the littering happened while they were driving and/or riding in a vehicle (47%).
- Similar to previous years, residents reported that the most common littering situation they have experienced is “trash falling out of the vehicle” (24% within the past 3 months).

Campaign Awareness

- Three in ten residents (32%) indicated they had seen advertisements related to litter or littering in the past three months, representing a slight increase from 2010 (30%). Ad awareness is significantly higher for the target audience, males aged 18 to 34, than the total (48% vs. 32%).
- When those aware of litter-related advertising were asked what they specifically remembered about the ads, the most recalled information surrounded the message, “Don’t litter” or “Keep Arizona clean,” and the percentage of recall for these messages was slightly lower than in 2010 (18%, down from 21%).
- Approximately two in five residents (44%) who remembered seeing litter-related advertising in the past three months were able to recall some type of slogan, representing a significant increase from 2010 (30%). Two of the most commonly recalled “slogans” were actually messages. For example, “do not litter” was mentioned by 22% of the residents, a significant increase from 5% in 2010. Likewise, the number of residents who said “don’t know” dropped significantly from 2010 (56% vs. 70%).
- As in the past three years, more than half of Maricopa County residents (52%) recalled the *Don’t Trash Arizona* slogan. Although awareness was not as high as 2008 levels (56%), it still remains significantly higher than the 43% reported in 2006. Males aged 18 to 34 were more likely to recognize the slogan than the total sample (63% vs. 52%).
- Overall awareness of the slogan was highest among males (61% vs. 43% for females), and residents making less than \$100,000 per year in income (58% for those making less than \$100,000 vs. 42% for those earning more than \$100,000).
- Residents who were familiar with the *Don’t Trash Arizona* slogan reported seeing and/or hearing the slogan from a variety of sources, the most common of which were television (36%), radio (24%), billboards (21%), and street/highway signs (19%). Less than 1% indicated seeing the slogan online.
- Valley residents’ awareness decreased slightly for both the Litter Hotline (12% from 13% in 2010) and the *Don’t Trash Arizona* website (11% from 14% in 2010).
- Six percent (6%) of Valley residents aware of the *Don’t Trash Arizona* website reported that they have actually visited the site, which is consistent with 2010 (7%).

- When Valley residents were asked how likely they would be to report littering behavior if they saw someone littering, more than three-fifths (61%) of residents indicated they would be at least “somewhat” likely to report littering (28% “very likely” and 33% “somewhat likely”). This is consistent with data from 2010 (62%).
- The Internet remains the top resource for Valley residents who want more information about litter or littering (mentioned by 46%), only a slight decrease from 2010 (49%).
- Approximately one in five (18%) residents specifically mentioned the *Don't Trash Arizona* Website as a resource to go to if they wanted more information about littering, which is a slight increase from 2010 (14%).
- Facebook is the most commonly used application used to communicate or stay in touch with others (32%), followed by the utilization of search engines such as Google/Yahoo. E-mails from desktops and from cellphones are also popular methods (20% and 17% respectively).

KEY FINDINGS AND RECOMMENDATIONS

While much of the data is consistent between the 2011 and 2010 surveys, there are several key differences worth noting as MAG moves forward in its efforts to make a more meaningful impact among Maricopa County residents who are inclined to litter. Similar to 2010, this survey confirms that the target audience of males aged 18 to 34 continues to be among the most common litter offenders (only 40% of these residents indicated they did not litter last year, vs. 70% for the overall sample). This is an unfortunate decrease for this age group from 2010, when this age group reported 51% had not littered that year.

The percentage of Maricopa County residents classified as “Admitted Litterers” rose to 26%, reversing some of the positive momentum from previous years (notably, between 2008 and 2010, the number of Admitted Litterers consistently decreased).

Interestingly, there were a few significant differences this year regarding residents’ personal experiences with littering. For example, the percentage of residents who littered due to vehicle problems (e.g., leaving a tire behind, etc.) decreased significantly this year to 6% (vs. 13% in 2010). Also, the number of residents who experienced throwing a cigarette butt out the window decreased to just 1% (vs. 8% in 2010). The biggest (and most significant) increase in littering behavior happened when asked about whether they had experienced throwing a beverage container out of a vehicle’s window. Approximately one in six (14%) residents claimed to have experienced this in the past year, which is a significant increase from 2% in 2010.

Six percent (6%) of residents indicated they had thrown out trash in “an area with no litter” in the past three months. This question was added as part of the 2011 survey and the responses were somewhat consistent with results for those who had thrown out trash in “an area with litter” (7%).

Generally, advertisement awareness stayed consistent compared to 2010. More than three in ten (32%) residents indicated they had seen advertising related to litter in the past three months (vs. 30% for 2010). Encouragingly, this was even higher among the target group (48%) of younger males.

Recognition of the slogan *Don’t Trash Arizona* maintained at 52% (vs. 51% in 2010), but is still higher than the benchmark data from 2006 (43%). Encouragingly, awareness of the slogan was significantly higher among the target audience of males, aged 18 to 34, than the overall sample with 63% stating awareness. Overall awareness of the Litter Hotline and the *Don’t Trash Arizona* website decreased only slightly from 2010 (12% from 13% for the hotline, and 11% from 14% for the website).

While high *recall* of key messages, such as “don’t litter,” or the message “you will get fined,” appears to confirm that the current advertising messages are reaching the target audience, it seems that there has been little improvement over last year based on the audience’s proclaimed littering behaviors. This is despite the target audience experiencing more tickets and warnings for littering in the past three months (23% vs. 8% for the total sample).

The Internet in general remains the most preferred method of finding information about littering (46% of the sample would use the Internet), and the second most mentioned method of finding litter information was visiting the *Don’t Trash Arizona* website specifically (18% reported that they would go online for information). This year, data also were analyzed for residents’ preferred method of communicating with one another. The most mentioned method was Facebook (32% overall, 47% among those aged 18 to 34). Given this, and that younger age groups are more likely to utilize the Internet in general, as well as that younger age groups are more likely to litter, it makes sense that online efforts could be instrumental in reaching these residents.

I. INTRODUCTION

A. Background and Methodology

RIESTER, on behalf of the Maricopa Association of Governments (MAG), 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 and explore littering behavior, and compare responses to the benchmark and subsequent studies, which were conducted in December 2006, July/August 2008, August 2009, August 2010, and August 2011. For data comparison purposes, it is important to note that the first two studies were conducted with Arizona residents. To accurately compare the data from these surveys to the 2009, 2010 and 2011 data, the 2006 and 2008 data shown in this report include only responses from Maricopa County residents.

For all previous waves, interviewing was conducted using a Random Digit Dial (RDD) database comprised of “land line” phone numbers from targeted zip codes. This year, however, since cell phones have become more common among younger respondents, interviewing was conducted using both a Random Digit Dial (RDD) database comprising “land line” phone numbers from targeted zip codes, as well as a cell phone database. The database was supplemented with a cell phone sample to reach, and fulfill the quota, for respondents aged 18 to 35.

To ensure an accurate representation of Maricopa County residents, both age and gender quotas were established.

Age	Quota
18 to 34 years old	28%
35 to 54 years old	43%
55+ years old	29%
Male	50%
Female	50%

Results are based on 602 fifteen-minute telephone interviews conducted with 301 male and 301 female residents. The margin of error for the survey is approximately $\pm 4.1\%$ at a 95% confidence level.

B. Demographics

Per established quotas, 50% of Maricopa County residents interviewed were males and 50% were females. The average age of the residents was 43.8 years old (a decrease from 45.9 years in 2010) and 52% were married. The majority had at least some college experience (74%), and more than half were employed either full or part-time (55%). Approximately one in eight (12%) was unemployed. One-fourth (26%) report a household income of more than \$75,000 per year. Approximately three in four residents were Caucasian (72%), and 72% reported that “only English” is spoken in their home.

One in six Maricopa County residents interviewed (17%) reported that at least some Spanish was spoken in their home, which represents a slight increase from 2010 (14%).

The mean income was the lowest it has been in five years (\$58,838 vs. \$63,447 for 2010, \$66,530 for 2009, \$66,420 for 2008, and \$66,620 for 2006). This may be attributable to both the stagnant economy as well as the decrease in the mean age of respondents due to utilizing a cell phone sample to target those aged 18 to 34, a group that generally earns less.

Additional detail on the demographic profile of the respondents is provided in Tables 1a and 1b.

Table 1a: Respondent Demographics

Characteristic	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
	%	%	%	%	%
Male	50	50	50%	50	50
Female	50	50	50	50	50
Age**	%	%	%	%	%
18 to 34	28	28	36	26	32
35 to 54	43	43	43	45	40
55+	29	29	31	28	28
Average	43.8 yrs	45.9 yrs	46.3 yrs	46.1 yrs	44.3 yrs
Marital Status	%	%	%	%	%
Married	53	58	59	56	61
Single	30	25	25	27	26
Widowed	6	7	7	7	6
Divorced	7	7	6	8	5
Separated	1	--	1	--	1
Refused	3	3	2	--	2
Education	%	%	%	%	%
Less than high school	6	5	4	8	7
High school graduate	17	18	19	19	16
Some college	35	33	33	31	35
College graduate	24	23	29	24	27
Graduate degree	15	18	13	17	13
Ethnicity	%	%	%	%	%
White	72	71	76	72	79
Hispanic	12	14	13	15	9
African American	4	5	2	4	3
Native American	1	2	1	2	--
Asian	3	1	2	2	2
Other/Refused	8	7	6	5	4

***Bold** indicates significantly different percentages than 2010 at the 95% confidence level

**Age categories condensed in 2011.

Table 1b: Respondent Demographics

Characteristic	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
Household Income	%	%	%	%	%
<\$10,000	10	7	7	5	3
\$10-\$20,000	7	7	7	5	6
\$20-\$30,000	8	8	6	7	8
\$30-\$40,000	8	7	6	7	7
\$40-\$50,000	6	5	7	8	8
\$50-\$60,000	7	6	6	8	7
\$60-\$75,000	9	6	8	10	9
\$75-\$100,000	10	13	12	12	12
\$100,000+	16	18	20	18	18
Refused	20	23	21	21	22
Average	\$58,838	\$63,477	\$66,530	\$66,420	\$66,620
Employment Status	%	%	%	%	%
Full-time	45	48	50	55	51
Part-time	10	7	9	8	10
Unemployed	12	13	8	7	4
Retired	22	19	21	20	21
Homemaker	4	6	7	6	8
Student	4	4	3	3	4
Profession	%	%	%	%	%
White collar/mgmt	23	23	32	24	16
Other professional	16	23	20	22	10
Blue collar	15	14	15	14	9
Education	8	12	7	8	6
Trade	10	10	6	6	7
Self-employed	6	5	8	12	5
Clerical/admin	9	6	8	10	5
Language spoken at home	%	%	%	%	%
English only	72	72	74	81	85
Spanish only	1	3	4	1	1
Mostly Spanish but some English	1	2	2	**	**
Equally in both languages	4	4	4	11	8
Mostly English but some Spanish	11	6	8	**	**
English and other language	8	9	7	3	4
Refused	3	2	1	-	2

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

II. DRIVER CHARACTERISTICS

A. Driving Habits

In 2011, slightly more than one third of Maricopa County residents (36%) reported driving or riding in a 4-door sedan. This is a slight decrease from 2010 (42%) and approaches the levels measured in 2006 (38%), however, this decrease may be attributed to the change in the question from a read-list question to an open-response question. As in the past, sports utility vehicles (SUV) and pickup trucks were the next most frequently mentioned vehicles driven by residents (18% and 13%).

As expected, more males than females indicated that they drive pickup trucks (19% vs. 7%).

Table 3: Type of Vehicle

Items	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
Sedan (4-door)	36%	42%	39%	44%	38%
Sports utility	18	19	20	18	21
Pickup truck	13	16	16	15	15
Car (unspecified)	10	--	--	--	--
Van/mini-van	7	7	11	8	12
Coupe (2-door)	4	7	7	8	8
Motorcycle	1	1	1	1	--
Other	2	1	1	1	1
Don't drive	7	6	5	4	4
Don't know/ refused	2	1	--	1	1

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

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

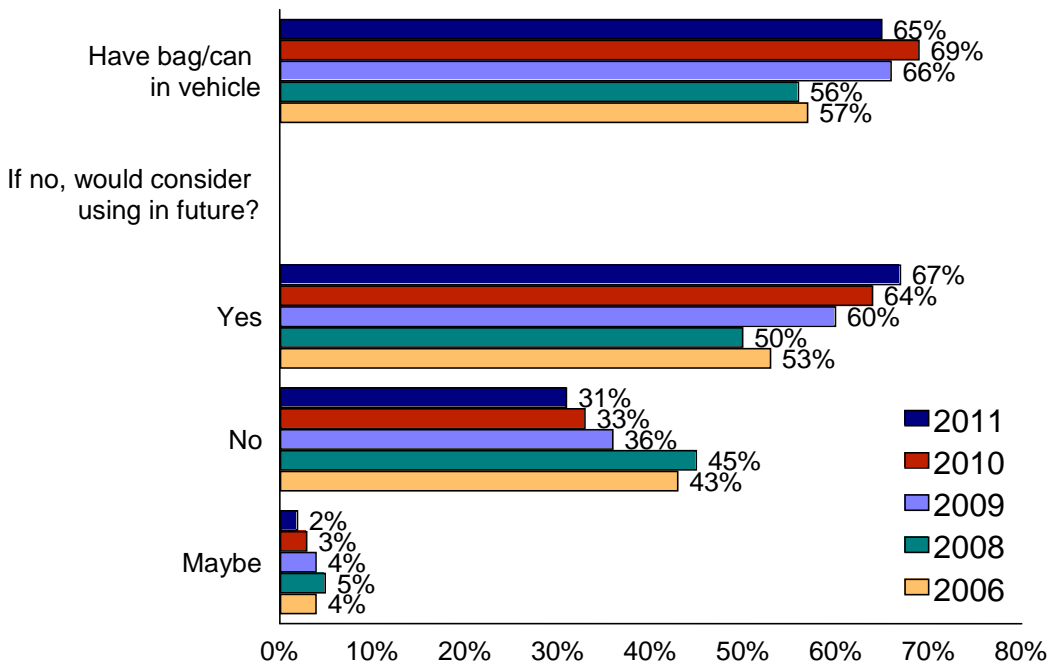
Note: Question wording modified in 2011 to an open-ended question instead of a list that was read to residents.

B. Litterbag Use

This year, Maricopa County residents were less likely to report having a litterbag or trash receptacle in their vehicle (65%, down from 69% in 2010). Those most likely to report having a litterbag were females (69% vs. 60% for males) and residents over the age of 55 (76% vs. 62% for those aged 35 to 54 and 55% for those aged 18 to 34).

Almost two thirds of the residents (67%) who do not currently have a litterbag or trash receptacle in their car indicated they would consider keeping one in their vehicle in the future, which represents a slight increase from 2010 (64%). Residents aged 18 to 34 who do not currently have a litterbag were more likely than older residents to indicate willingness to keep a litterbag in their vehicle in the future (76% vs. 66% for those aged 35 to 54 and 52% for those aged 55+).

Litterbag or Trashcan Use in Vehicle



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744; 2006 Maricopa n=748

C. Smokers

Similar to previous years, a little more than one in six Valley residents indicated they were smokers (17%). Residents with household incomes of less than \$50,000 were more likely than those with incomes over \$50,000 to admit they were smokers (26% vs. 10% for those earning between \$50,000-\$100,000 and 10% for those earning more than \$100,000). Residents without a college degree were also significantly more likely to smoke than residents with a college degree (24% for some high school or less and 23% for some college vs. 8% for college graduates). Males aged 18 to 34 were more likely to smoke than the total sample (28% vs. 17%).

Less than half of smokers reported that they use an ashtray in their vehicle (43%), representing a decrease from those who indicated using ash trays in 2010 (53%). Only 2% of smokers indicated they do not smoke in the car at all, representing a decrease from 2010 (7%). Smokers aged 18 to 34 were more likely than older smokers to throw cigarette butts out the car window (28% vs. 4% for smokers aged 35 to 54 and 5% for smokers aged 55+).

Table 4: Smoking Habits and Disposing of Cigarette Butts
Among those indicating they smoke

Response	2011 Maricopa (n=101)	2010 Maricopa (n=105)	2009 Maricopa (n=97)	2008 Maricopa (n=109)	2006 Maricopa (n=121)
Smoker	17%	18%	15%	15%	16%
	<i>(n=101)</i>	<i>(n=105)</i>	<i>(n=97)</i>	<i>(n=109)</i>	<i>(n=121)</i>
Ashtray in vehicle	43%	53%	49%	55%	46%
Throwing out window	13	5	7	6	5
Something else in vehicle	10	13	19	11	13
It varies	7	9	9	6	12
Don't smoke in the car	2	7	13	12	16
Other (<1% consensus)	--	1	--	2	2
Don't know/refused	25	12	3	8	5

Q10: When you are in a vehicle, do you USUALLY dispose of cigarette butts...?

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

D. Truck Drivers

One in eight Maricopa County residents indicated they drive a pickup truck (13%, down slightly from 16% in 2010). Pickup truck drivers were more likely to be male (19% vs. 7% female), most likely to be white (20% vs. 12% other ethnicities) and were also more likely to have attended at least some college or have graduated from college (17% and 23% vs. 8% high school or less). Furthermore, truck drivers are more likely to earn more than \$50,000 per year (21% for those earning between \$50,000 and \$100,000 and 32% for those earning more than \$100,000 vs. 10% for those earning less than \$50,000).

Table 5: Pickup Truck Drivers

Response	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
Drive pickup truck	13%	16%	16%	15%	15%

Q7: Drive a pickup truck.

Pickup truck drivers reported that soda cans/bottles, lawn debris, plastic bags, and water bottles were the most common types of litter that would be found in the back of their truck beds (mentioned by 17%, 14%, 8% and 7%, respectively). Small pieces of paper and construction debris were mentioned by 4% of truck drivers.

Over two in five (44%) of truck drivers indicated they do not believe they put any type of litter in their truck bed, representing a slight decrease from 2010 (48%).

Table 6: Litter via Truck Bed – Total Responses
Among those who indicate they drive a truck

Items	2011 Maricopa (n=59)	2010 Maricopa (n=94)	2009 Maricopa (n=97)	2008 Maricopa (n=107)	2006 Maricopa (n=97)
	%	%	%	%	%
Nothing	44	48	44	17	14
Soda cans/bottles	17	10	10	11	16
Lawn debris	14	7	11	9	9
Trash/non biodegradable (unspecified)	10	5	7	5	--
Plastic bags/other plastic	8	3	5	11	7
Water cans/bottles	7	8	3	6	1
Construction debris	5	3	4	9	9
Small pieces of paper	5	5	--	4	6
Paper/ newspaper/ napkins	5	2	--	2	4
Beer cans/bottles	2	1	4	2	4
Fast food wrappers	2	1	1	6	8
Furniture	2	--	--	--	--
Cardboard	2	2	3	5	2
Other food wrappers		1	1	2	3
Cups (Styrofoam, plastic, paper)	2	--	5	--	--
Appliances	2	--	--	--	--
Aluminum cans	2	--	--	--	--
Bottles/containers (unspecified)	2	--	--	--	--
Everything/anything/all of it	2	--	--	--	--
Cigarette packs	2	--	--	--	--
Car parts/ batteries	--	1	--	1	2
Food/organic material	--	2	5	4	4
Other	2%	6%	5%	10%	12%
Don't know	2	3	5	23	25

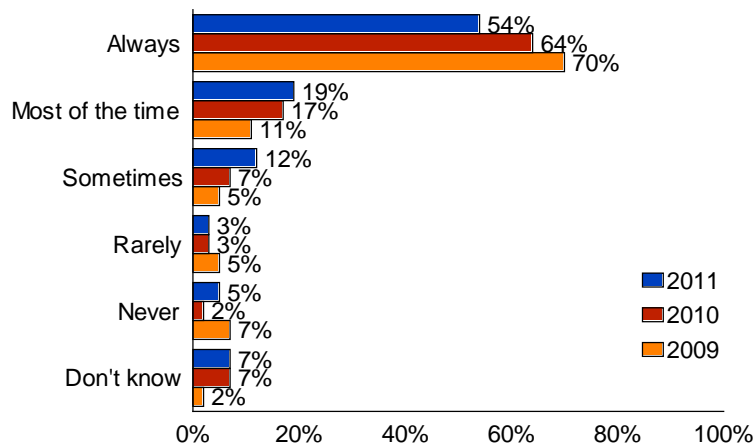
Q15: What types of items do you ever put into your truck bed that you consider to be litter or trash? What else?

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level

This year, fewer truck drivers indicated that, on average, they “always” secure items in the back of their pickup truck (54%, down from 64% in 2010) while more truck drivers report they secure their load “most of the time” (19%, up slightly from 17%) and sometimes (12% up from 7%). Less than one in ten (8%) do not frequently secure items in their truck bed, reporting that they “rarely,” or “never” secure items, which remains consistent with 2010 (9%).

How Often Truck Drivers Secure Loads

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.)?



Truck Drivers: 2011 n=59; 2010 n=94; 2009 n=97 Note: Question added in 2009

Table 7: How often Truck Drivers Secure Loads

Frequency	2011 Maricopa (n=54)	2010 Maricopa (n=94)	2009 Maricopa (n=97)
NET likely (Always + Most)	73	81	81
Always	54	64	70
Most of the time	19	17	11
Sometimes	12	7	5
Rarely	3	3	5
Never	5	2	7
Don't know	7	7	2

Q16: *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.)?*

New question in 2009

**Bold indicates significantly different percentages than 2010 data at the 95% confidence level.*

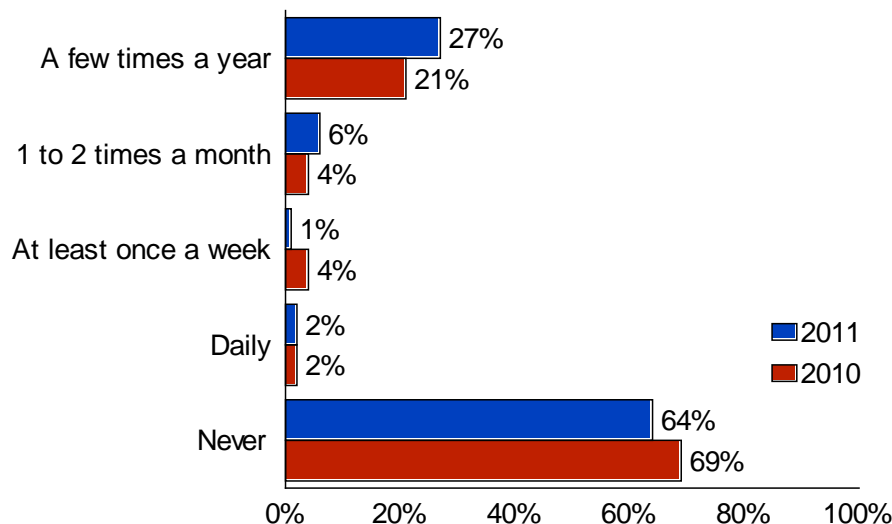
Slightly less than two-thirds (64%) of Maricopa County residents do not report driving in a vehicle that hauls items in an open-air trailer or strapped to a luggage rack. Of the remainder (36%) who do report driving in a vehicle that hauls items in an open air trailer or strapped to a luggage rack, 27% claim to do so a few times a year, and 6% claim to do so one to two times a month. Only 2% of residents who haul items in an open-air trailer or strapped to a luggage rack do so on a daily basis.

Those most likely to haul items include:

- Males vs. females; daily (3% vs. 1%), 1-2 times a month (8% vs. 4%) and a few times a year (36% vs. 18%).
- Residents aged 18 to 34 and 35 to 54 vs. those aged 55+; a few times a year (29% and 35% vs. 15%).

Frequency of Traveling with Trailers or Luggage Racks

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?



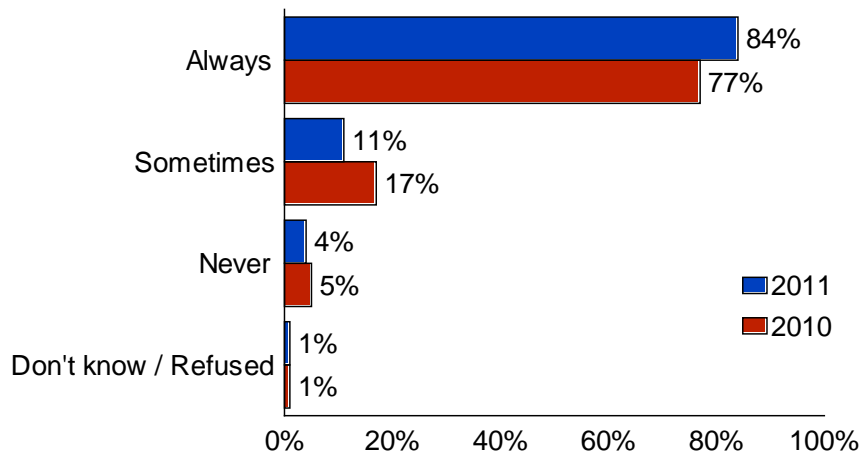
2011 Maricopa n=602; 2010 Maricopa n=587 Note: Question added in 2010

More than four-fifths (84%) of drivers with open-air trailers or luggage racks indicated that, on average, they “always” secure items in their open air trailers or on their luggage racks, representing an increase from 2010 (77%). About one in ten drivers (11%) report securing items “sometimes.” Only 4% report “never” securing items.

Among the drivers who mentioned “rarely” or “never” securing their load, the top reason mentioned was “it’s heavy enough so it doesn’t fly out.”

How Often Those With Trailers or Luggage Racks Secure Loads

On average, how often do you secure the loads that you are hauling (either with ties, bungees, a tarp, etc.)?



Open-air trailer/luggage rack users: 2011 n=219; 2010 n=184

Note: Data is not completely comparable from 2010 to 2011 - 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.

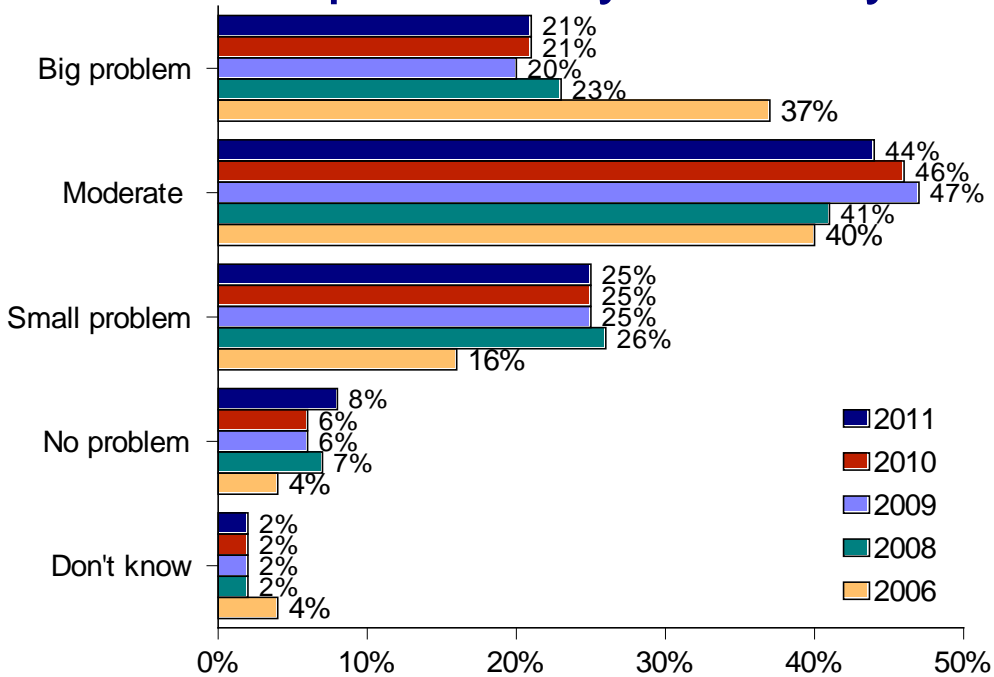
III. LITTER AWARENESS AND BEHAVIOR

A. Perception of Litter as Problem Along Freeways

Perceptions regarding the magnitude of the litter problem along Maricopa County freeways have remained steady since 2010 (65% vs. 67% rate it as a “big” or “moderate” problem). One in three (33%) Maricopa residents continue to feel that litter along county freeways is either a “small problem” or not a problem at all.

Residents of other ethnicities were more likely than white residents to feel that litter along freeways was not a problem at all (14% vs. 6%). Residents earning more than \$100,000 were also more likely to feel this way (14% vs. 5% for those earning between \$50,000 and \$100,000, and 7% for those earning less than \$50,000).

Perception of Litter along Maricopa County Freeways



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744; 2006 Maricopa n=748

Table 8: Freeway Litter as a Problem in Maricopa County

Rating	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
	%	%	%	%	%
Big problem	21	21	20	23	37
Moderate problem	44	46	47	41	40
Small problem	25	25	25	26	16
Not a problem at all	8	6	6	7	4
Don't know	2	2	2	2	4

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

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level

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

B. Personal Littering

Fewer Valley residents insisted that they had *not* littered at all in the past year than in 2010 (70%, down from 74%). A small number (4%) of residents said they “did not know” if they had littered or not.

The percentage of males aged 18 to 34 who indicated they “had not littered in the past year” dropped eleven percentage points from 2010 (40% vs. 51%).

Females were more likely to claim they had not littered (76% vs. 64% for males). Residents aged 55+ were also significantly more likely to claim they had not littered than residents aged 18 to 34 and aged 35 to 54 (85% vs. 52% and 72%, respectively).

Among those who indicated they had littered in the past year, food or organic material was the most common type of litter mentioned (41%). This was also the most common type of litter listed in previous years (mentioned by 44% in 2010, 48% in 2009, 39% in 2008 and 41% in 2006). Small pieces of paper were the second most common items discarded (mentioned by 29%); this was also similar to 2010, 2009, 2008 and 2006 (mentioned by 23%, 22%, 26% and 21%, respectively).

Among the total sample, those most likely to list food and organic materials as items they have personally discarded were:

- Residents aged 18 to 34 and 35 to 54 (14% and 12% vs. 5% for those aged 55+).
- Those with some college experience or who graduated college (10% and 15% vs. 4% of those with high school diploma or less).
- Those with household incomes greater than \$100,000 (17% vs. 12% and 7% for those with household incomes of between \$50,000 and \$100,000 and less than \$50,000, respectively).

Table 9: Items Personally Discarded as Litter – Total Responses

Items	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
Have not littered in past year.	70	74	69	67	69
	(n=157)	(n=141)	(n=180)	(n=209)	(n=206)
	%	%	%	%	%
Food/organic material.	41	44	48	39	41
Small pieces of paper.	29	23	22	26	21
Cigarette butts.	12	11	8	10	15
Soda cans/bottles.	13	4	4	5	7
Other food wrappers.	10	11	8	8	8
Water bottles.	10	1	3	2	2
Paper/newspaper/napkins.	3	2	3	6	4
Plastic bags/other plastic.	1	4	4	5	1
Hair/dog hair.	1	1	3	--	--
Wood.	--	2	2	--	2
Fast food wrappers/paper bags.	--	1	1	4	2
Beer cans and beer bottles.	--	1	1	2	1
Cups (Styrofoam, plastic, paper).	--	1	2	2	--
Lawn debris.	--	1	1	1	--
Thread, string.	--	--	2	-	--
Cardboard, boxes.	--	--	1	1	--
Rocks/dirt.	--	--	1	-	--
Bottles (unspecified).	--	--	1	1	--
Other (<1% consensus).	7	4	4	7	12
Don't know.	4	2	3	--	13

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?

***Bold** indicates significantly different percentages than the previous 2010 data at the 95% confidence level.

C. Littering Circumstances

Consistent with 2010 data, the residents who indicated they had littered in the past year were most likely to report that the littering happened while they were driving and/or riding in a vehicle (47%). Other admitted litterers reported they littered while walking outside or because they just “threw it anywhere they could” (11% and 6%).

Those most likely to discard litter while driving and/or riding in a vehicle include:

- White residents (55% vs. 31% for other ethnicities).
- Residents with incomes above \$100,000 (64% vs. 38% for those with incomes between \$50,000 to \$100,000, and 50% for those with incomes below \$50,000).

Additional detail on the profile of residents’ littering situations is provided below in Table 10.

Table 10: Littering Situation – Total Responses
Among those who indicated they have littered in the past year

Items	2011 Maricopa (n=181)	2010 Maricopa (n=149)	2009 Maricopa (n=195)	2008 Maricopa (n=247)	2006 Maricopa (n=231)
	%	%	%	%	%
Driving/riding/traveling in vehicle	47	48	53	34	47
Walking outside	11	11	8	12	16
Just threw it/anywhere I could	6	3	3	2	--
No trash can around	5	6	5	15	8
Opened door/window – flew out	4	5	4	5	3
I didn't litter	4	1	3	3	1
Don't consider it litter/biodegradable stuff	2	1	2	--	--
Cleaning out car	2	3	2	--	1
In the desert/ middle of nowhere	2	1	2	1	1
Eating food/chewing gum	2	--	--	1	2
Flew out of truck bed	2	--	--	2	2
Shopping	2	--	--	--	--
My kid/grandkid did it	2	--	--	--	--
At work/working	1	--	--	--	--
In a hurry	1	--	--	--	--
Smoking/discarded cigarettes	1	--	--	--	--
Let the animals eat it	2	1	2	--	--
Wouldn't fit in the trash	1	--	--	--	--
Camping/hiking	--	1	--	2	--
Other (<1% consensus)	5%	9%	9%	8%	7%
Don't know/can't remember	12%	13%	11%	19%	15%

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?

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

D. Reasons for Littering When Driving

The most common reason people gave for littering when driving had to do with food scraps, because they are biodegradable. The percentage of residents who reported littering food scraps because they are biodegradable decreased from 2010 (to 13%, down from 17%); but still this remained the most common reason cited for littering when driving. “No trash receptacles were convenient” the second most common reason cited for littering when driving, as it was mentioned by 10% of residents who have littered in the past year (down from 14% in 2010).

Residents who claimed they littered while driving because they simply did not want it in their car is up significantly from 2010 (8% vs. 3%).

One third of those who litter claimed they do not litter when driving (32%). Those aged 35 to 54 and 55+ were more likely to not litter when driving (40% and 44% vs. 22% for those aged 18 to 34).

Table 11: Reasons for Littering when Driving – Total Responses
Among those who indicated they have littered in the past year

Items	2011 Total (n=181)	2010 Total (n=147)	2009 Total (n=195)
	%	%	%
I don't litter when driving	33	32	36
I only litter food scraps – they are biodegradable	13	17	3
No trash receptacles are convenient	10	14	16
It was an accident/unintentional	9	5	5
I don't want to keep it in my car	8	3	11
It's easy	5	3	8
I don't consider throwing out gum, small wrappers, cigarette butts litter	4	3	5
I won't get in trouble for littering so I do it	3	--	--
I'm lazy	3	3	3
Cigarettes stink up car, easier to throw out window	2	3	1
Don't have an ashtray	2	--	--
I don't care	1	--	--
I litter when I'm in a hurry/a rush	--	--	1
Other	4%	5%	3%
Don't know	9	13	10

Q14: Why do you litter WHEN DRIVING?

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

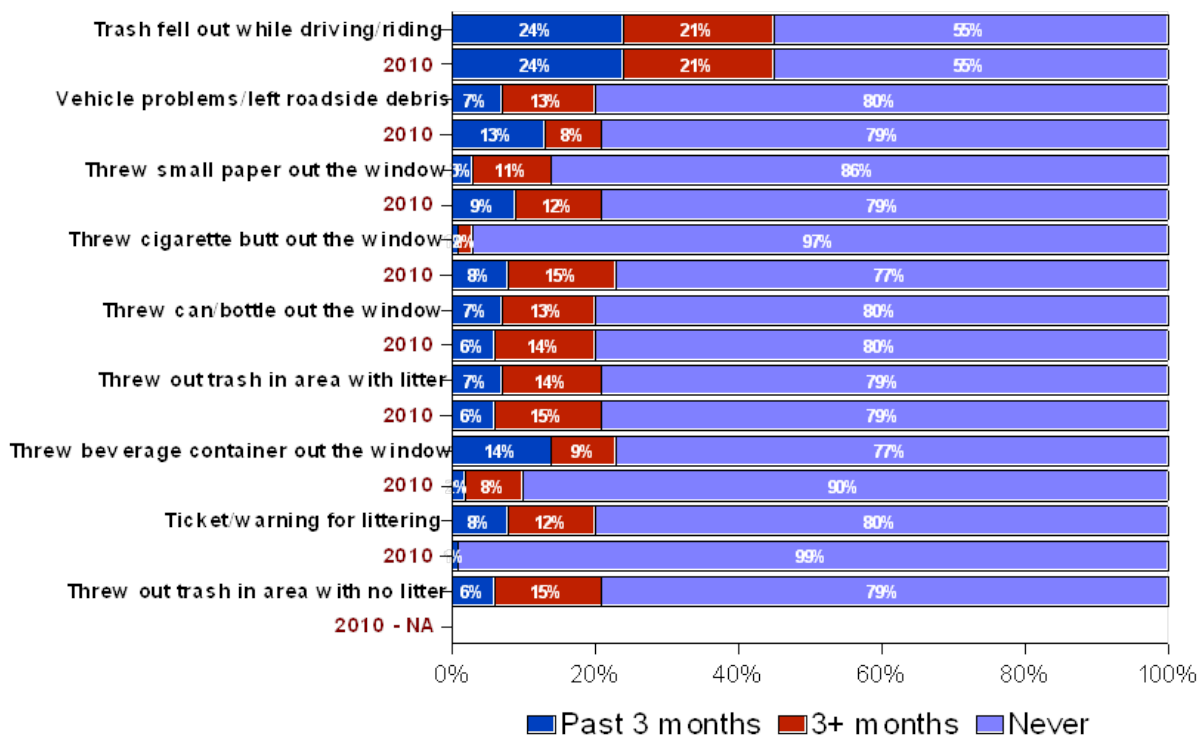
E. Personal Experience with Specific Littering Situations

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. In 2011, a new situation was added: someone in a vehicle you were in threw out trash in an area that did not have any litter.

Similar to 2010, residents reported that the most common littering situation they have experienced is “trash falling out of the vehicle” (24% within the past 3 months, consistent with 2010). Mentions for the second most common litter experience, throwing a beverage out the car window, have increased significantly since 2010 (14% within the past 3 months vs. 2% in 2010). The percentage of residents who experienced tickets/warnings for littering in 2011 increased significantly from 2010 (8% vs. 1%).

Six percent (6%) of residents indicated they had thrown out trash in “an area with no litter” in the past three months. This question was added as part of the 2011 survey and the responses were somewhat consistent with results for those who had thrown out trash in “an area with litter” (7%).

2011 Experience with Littering Situations



2011 n=602; n=505 for 'Threw out trash in area with no litter'

Residents most likely to experience trash falling out of the vehicle within the last three months were:

- Residents aged 18 to 34 (32% vs. 23% for those aged 35-54 and 18% for those aged 55+).
- Males aged 18 to 34 (36% vs. 24% for total).

In general, residents aged 18 to 34 were more likely than those in other age groups to report having experiences with the specific littering situations that were queried.

**Table 12: Personal Experience with Littering Circumstances
Past 3 Months**

Circumstance	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (748)
You noticed that some trash fell out of a pickup or other vehicle you were driving in.	24%	24%	26%	23%	19%
Rather than keep a beverage container in the car, you, or someone in a vehicle you were in, threw out a can or bottle.	14%	2%	3%	5%	4%
Someone in a vehicle you were in threw trash out in an area that already had lots of litter.	7%	6%	7%	6%	6%
Someone in a vehicle you were in threw trash out in an area that had no litter	7%	--	--	--	--
You had problems with a vehicle and left debris like tire, part of a tire, or other stuff on the roadside.	6%	13%	9%	9%	7%
Someone in a vehicle you were in threw out a can, bottle or litter out onto the side of the road.	6%	6%	7%	9%	6%
You threw out a small item from your vehicle like a candy wrapper, scrap paper, etc.	3%	9%	8%	8%	7%
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	1%	8%	8%	10%	11%

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 in the past 3 months,” “Have experienced over 3 months ago,” or “have never experienced.”

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

IV. CAMPAIGN AWARENESS

A. Awareness of Campaign

1. General Awareness

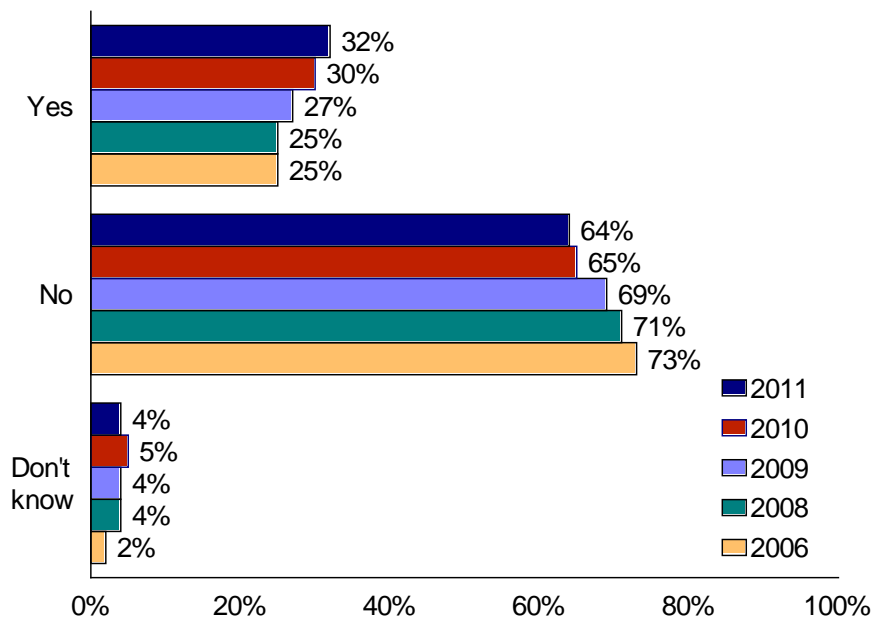
Three in ten residents (32%) indicated they had seen advertising related to litter or littering in the past three months, representing a slight increase from 2010 (30%) and a significant increase from 2008 (25%).

Awareness is significantly higher for males aged 18 to 34 than the total sample (48% vs. 32%), and is also higher for males than for females (39% vs. 26%). Residents aged 55+ were less likely to be aware of litter advertising than younger residents (24% vs. 35% for those aged 35 -54 and 37% for those aged 18 to 34). Residents of other ethnicities were more likely than white residents to be aware of litter advertising (41% vs. 28%).

“Don’t know” levels are significantly higher for residents aged 55+ than for those aged 18 to 34 (7% vs. 1%), and also higher for females than males (6% vs. 2%).

Have Seen Ads for Litter

Within last 3 months



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744; 2006 Maricopa n=748

2. Recalled Messages and Slogans

When those aware of litter-related advertising were specifically asked what they remembered about the ads, the most recalled information surrounded the message, “Don’t litter” or “Keep Arizona clean,” and this percentage was slightly lower than in 2010 (18%, down from 21%).

The second most cited message was “the fines,” with 16% of residents referencing this.

Those aged 35 to 54 were more likely to recall “the fines” than those aged 18 to 34 (20% vs. 8%).

Table 13: Recalled Messages of Litter-Related Advertising

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

Responses	2011 Maricopa (n=194)	2010 Maricopa (n=183)	2009 Maricopa (n=170)	2008 Maricopa (n=186)	2006 Maricopa (n=188)
	%	%	%	%	%
Don't litter/keep Arizona clean	18	21	16	28	17
The fines	16	24	7	4	29
It was a sign along the road/billboard	12	6	15	15	11
About how a mother can't pick up after you/her kids	11	--	--	--	--
Saw on TV/commercial/public service announcement	8	1	8	4	5
Just because it's a freeway doesn't mean you are free to litter on it	7	--	--	--	--
Heard on radio	7	3	4	--	4
Don't Trash Arizona	5	--	--	--	--
Use ashtray/cigarettes cause fires	5	6	4	2	--
Littering is unlawful/can get a ticket	5	4	4	7	9
Recycling	4	4	2	4	
Prisoners picking up trash	3	1	2	--	8
Make the earth greener/go green	3	2	--	--	--
Litter is bad for the environment/bad for wildlife	2	3	3	4	2
A hamburger wrapper being a 500 dollar fine/ a five hundred dollar burger	2	9	4	--	--
Clean up efforts/Adopt a highway	2	3	3	4	4

Tires coming apart on the road/tires along the road way	1	3	--	--	--
Don't be a litter bug	1	2	--	--	--
Littering is unsightly/litter is ugly		1	2	--	--
Littering/dumping things in desert by illegal immigrants	1	1	1	--	3
Read article in newspaper		1	1	1	2
A funny commercial where the guy is addicted to littering	1	1	3	--	--
At the river they give out trash bags to put your trash in	1	-	-	-	-
Strap your load down	1	--	--	--	--
Smokey the Bear	1	--	--	--	--
Keep highways clean	--	7	4	1	--
Litter causes car accidents	--	--	2	--	--
Man following man/shows litter, makes pyramid/tree/robot	--	--	1	2	--
Call a number to report littering	--	2	1	-	2
It's a big problem/becoming an issue	--	1	1	-	2
Cost of cleaning up/tax dollars	--	2	-	2	4
People littering out of their vehicle	--	2	2	-	-
Other (1% or less of consensus)	7%	6%	15%	15%	15%
Don't know	13	15	10	19	10

Q22? What specifically do you remember about the ads related to litter or littering?

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

Approximately two in five residents (44%) who remembered seeing litter-related advertising in the past three months were able to recall some type of slogan/message, representing a significant increase from 2010 (30%). Recognition of “Do not litter” increased significantly from 2010 (22% vs. 5%).

Likewise, the number of residents who said “don’t know” dropped significantly from 2010 (56% vs.70%).

Table 14: Main Slogan of Recalled Advertising
Among those who indicated they remember seeing ads related to litter or littering in the past 3 months

Responses	2011 Maricopa (n=194)	2010 Maricopa (n=183)	2009 Maricopa (n=170)	2008 Maricopa (n=186)	2006 Maricopa (n=188)
	%	%	%	%	%
Do not litter	22	5	9	12	13
You will be fined	3	4	6	3	6
Littering is unlawful	3	3	4	3	3
Keep our freeways clean	3	3	1	1	1
Don't Trash Arizona	2	4	2	6	5
There was no slogan/ it was a sign/ gave information	2	2	1	3	2
Arizona Clean and Beautiful	2	-	1	3	2
Go Green	1	2	2	-	-
Recycle, reduce, reuse	1	-	-	2	-
Don't mess with Texas	1	-	-	1	1
\$500 fine for throwing out hamburger wrapper	1	2	1	-	-
It is your environment	1	-	-	-	-
Don't be a litterbug	-	1	3	-	-
Litter hurts everyone	-	1	1	-	2
Litter costs everyone	-	1	-	-	3
Adopt a highway	-	2	2	-	1
Keep Arizona Beautiful	-	2	1	2	3
Give a hoot, don't pollute	-	-	-	-	1
Grow Up, Don't Litter	-	na	na	na	na
Other	7%	2%	5%	6%	3%
Don't know	56%	70	65	62	70

Q24: What was the main slogan used in the ads?

Note: Although not read to respondents, Grow Up, Don't Litter was added to the pre-coded list in 2011.

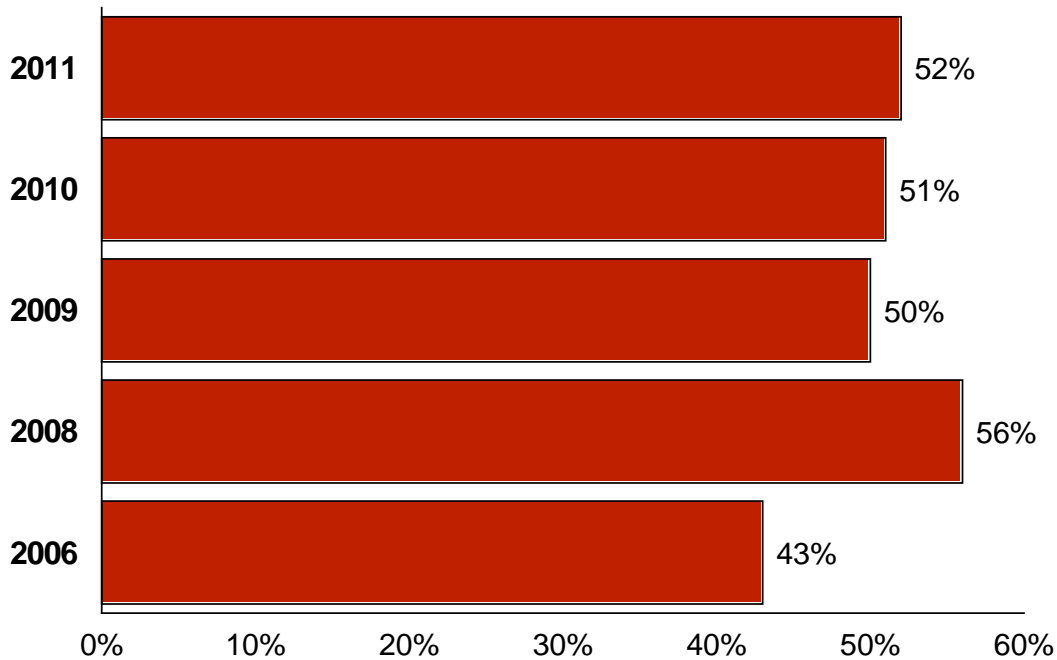
***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level

B. Don't Trash Arizona Awareness

As in the past three years, more than half of Maricopa County residents (52%) recalled the *Don't Trash Arizona* slogan. Although awareness is not as high as 2008 levels (56%), it still remains significantly higher than the 43% reported in 2006. Overall awareness of the slogan was higher among males than among females (61% vs. 43%), and among residents making less than \$100,000 per year in income (56% for those earning below \$50,000 and 60% for those earning between \$50,000 and \$100,000, compared to 42% for those earning more than \$100,000).

Males aged 18 to 34 were more likely to recognize the slogan than the total sample (63% vs. 52%).

Total Awareness Have Heard Slogan "Don't Trash Arizona" (Aided + Unaided)



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744;
2006 Maricopa n=748

Residents who were familiar with the *Don't Trash Arizona* slogan reported seeing and/or hearing the slogan from a variety of sources, the most common of which were television (36%), radio (24%), billboards (21%), and street/highway signs (19%). Less than 1% of respondents mentioned seeing the slogan online.

Females were more likely to recall seeing the slogan on television than males (43% vs. 32%).

Younger residents were more likely than those over age 55 to remember hearing the slogan on the radio (26% for those aged 18 to 34 and 30% for those aged 35 to 54 vs. 10% for those aged 55+). Residents with incomes of more than \$100,000 were more likely to remember hearing the slogan on the radio than residents with incomes below \$50,000 (38% vs. 24%).

Residents of other ethnicities were more likely to have seen the slogan on street or highway signs than white residents (32% vs. 14%). Additionally, residents with incomes below \$50,000 and between \$50,000 and \$100,000 were more likely to have seen the slogan on street signs than residents with incomes over \$100,000 (21% and 19% vs. 8%, respectively).

Table 15: Where Saw *Don't Trash Arizona* Slogan
Total responses among those indicating they had heard the slogan

Media	2010 Maricopa (n=313)	2010 Maricopa (n=308)	2009 Maricopa (n=319)	2008 Maricopa (n=417)	2006 Maricopa (n=322)
	%	%	%	%	%
Television	36	31	34	30	26
Radio	24	21	22	21	14
Billboards	21	20	18	24	20
Street/highway signs	19	16	14	16	12
Newspaper	5	4	6	6	5
Magazines	1	-	2	2	-
Bus signs	1	-	-	-	-
Bumper sticker	1	-	-	-	-
Parks	1	-	-	-	-
Light Rail Train	1	-	-	-	-
Internet	-	2	2	-	-
Other (1% or less of consensus)	6	7	5	5	6
Don't know	18	24	20	25	25

Q25: Where have you seen, heard or read the slogan "*Don't Trash Arizona*?"

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

Seven in ten residents (70%) were unable to name a sponsor for the *Don't Trash Arizona* slogan, representing consistency from 2010 (69%). This year, slightly more residents correctly identified the Arizona Department of Transportation (8% vs. 7% from 2010) and slightly fewer residents generically cited the "state" or "local" government (13% vs. 17% from 2010).

Residents aged 18 to 34 and 35 to 54 were more likely to mention ADOT than residents aged 55+ (10% and 11% vs. 1%, respectively). Likewise, college graduates were more likely to mention ADOT than those who did not attend any college (14% vs. 3%). Residents with incomes between \$50,000 and \$100,000 were more likely than residents earning below \$50,000 to mention ADOT (14% vs. 5%).

Residents aged 35 to 54 were most likely to mention the state and local government as the sponsor than those aged 55+ (18% vs. 7%)

Table 16: Who Sponsors *Don't Trash Arizona* Slogan
Among those indicating they had heard the slogan

Sponsor	2011 Maricopa (n=313)	2010 Maricopa (n=308)	2009 Maricopa (n=319)	2008 Maricopa (n=417)	2006 Maricopa (n=322)
	%	%	%	%	%
State/local government	13	17	14	17	14
ADOT	8	7	9	9	12
Sanitation department/ department of waste	3	3	--	--	--
City of Phoenix	2	2	--	--	--
Department of Public Safety	1	--	--	--	--
Maricopa Association of Governments	--	na	na	na	na
Other (<1% consensus)	3	3	6	6	5
Don't know	70	69	70	65	70

Q26: Who sponsors the *Don't Trash Arizona* advertisements?

Note: Although not read to respondents, the Maricopa Association of Governments was added to the precoded list in 2011

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

C. Awareness of Litter Resources

Valley residents' awareness decreased only slightly for both the Litter Hotline (to 12% from 13% in 2010) and the *Don't Trash Arizona* website (11% from 14% in 2010).

Among the target group of males, aged 18 to 34, awareness of the litter hotline remained steady from 2010 at 13%. Awareness of the hotline was significantly higher among:

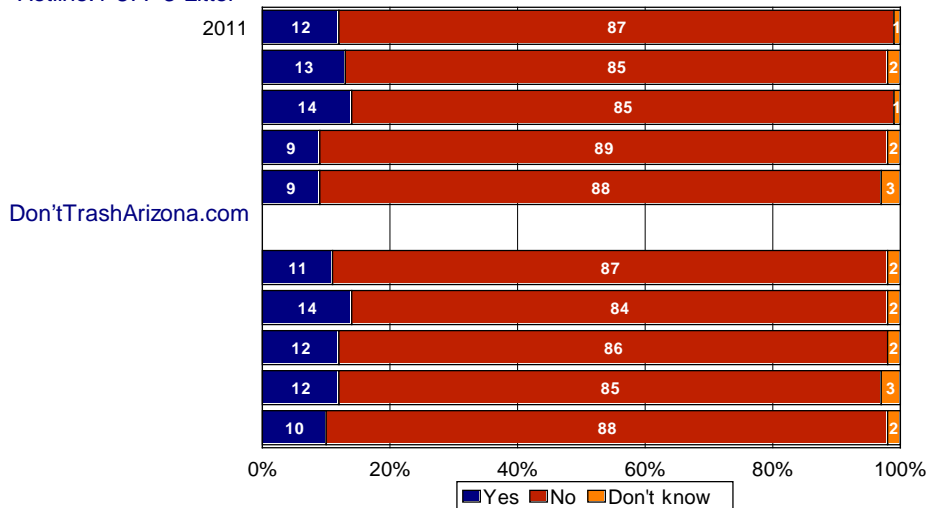
- Males than females (16% vs. 7%).
- Those who have seen litter advertising in the past three months than those who have not (16% vs. 7%).

Awareness of the "Don't Trash Arizona Website" was higher among:

- Males than females (16% vs. 6%).
- Males aged 18 to 34 than the total sample (23% vs. 11%).
- Those aged 18 to 34 than those aged 35 to 54 and 55+ (17% vs. 9% and 9%, respectively).
- Residents who had not graduated from college (15% for high school-only graduates and 13% for some-college residents vs. 7% for college graduates).
- Those earning below \$50,000 than those earning more than \$100,000 (16% vs. 5%).
- Residents who had seen litter-related advertising in the past three months than those that had not (18% vs. 4%).

Aided Awareness - Litter Resources

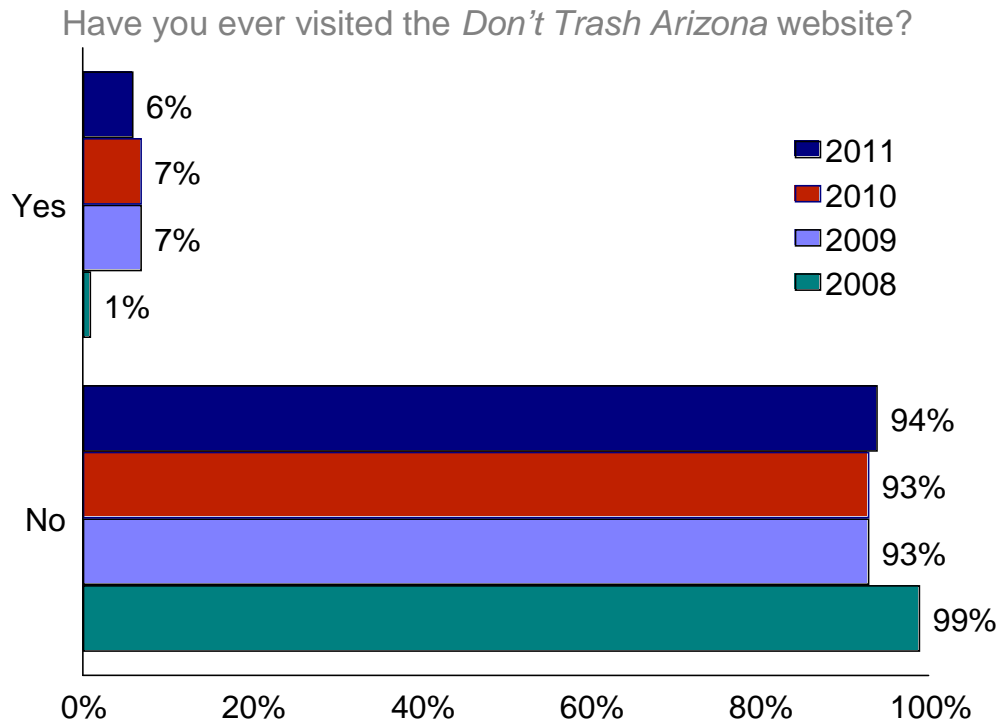
Hotline:1-877-3-Litter



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744; 2006 Maricopa n=748

This year, six-percent (6%) of Valley residents aware of the *Don't Trash Arizona* website reported that they have visited the site.

Don't Trash Arizona Website Visitation



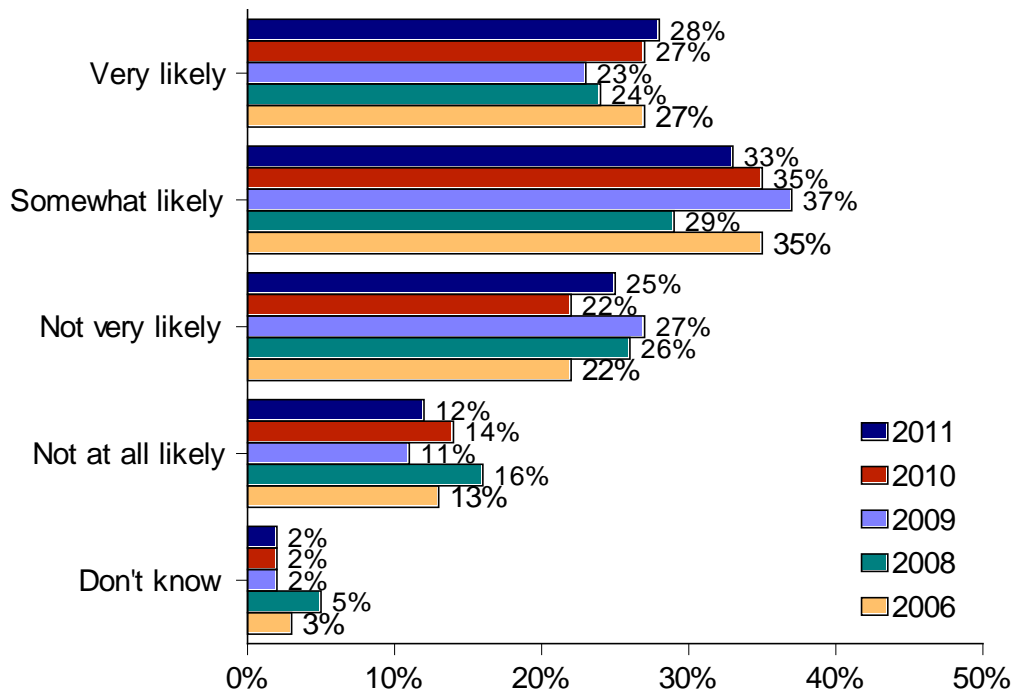
Among those aware of website: 2011 n=67; 2010 n=83; 2009 n=73; 2008 n=72

D. Likelihood to Report Littering

When Valley residents were asked how likely they would be to report littering behavior if they saw someone littering, more than three-fifths (61%) of residents indicated they would be at least “somewhat” likely to report littering (28% “very likely” and 33% “somewhat likely”). This is consistent with data from 2010 (62%).

Those “very likely” or “somewhat likely” to report littering include those over the age of 34 (62% for those aged 55+ and 68% for those aged 35 to 54 vs. 48% for those aged 18 to 34). **Males aged 18 to 34 were most likely to have indicated they were “not very likely” or “not at all likely” to report littering vs. the total sample (55% vs. 37%).**

Likelihood to Report Littering



2011 Maricopa n=602; 2010 Maricopa n=601; 2009 Maricopa n=637; 2008 Maricopa n=744; 2006 Maricopa n=748

Table 17: Likelihood to Report Littering

Likelihood	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006* Maricopa (n=748)
NET likely (Very + somewhat)	61%	62%	60%	53%	62%
Very likely	28%	27%	23%	24%	27%
Somewhat likely	33%	35%	37%	29%	35%
Not very likely	25%	22%	27%	26%	22%
Not at all likely	12%	14%	11%	16%	13%
Don't know	2%	2%	2%	5%	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?

In 2006 and 2008, the question asked how likely they would be to report littering by calling the litter hotline.

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

E. Additional Litter Resources

The Internet remains the top resource for Valley residents who want more information about litter or littering (mentioned by 46%), only a slight decrease from 2010 (49%). Approximately one in five (18%) residents specifically mentioned the *Don't Trash Arizona* website as a resource to go to if they wanted more information about littering, which is a slight increase from 2010 (14%).

Likelihood to indicate visiting www.DontTrashArizona.com was higher among:

- Those below the age of 55 (24% for those aged 18 to 34 and 20% for those aged 35 to 54 vs. 8% for those aged 55+).
- Those who had attended at least some college (20% for those with some-college and 20% for college graduates vs. 10% for high school-only residents).
- Those with incomes between \$50,000 and \$100,000 (27% vs. 15% for those earning below \$50,000 and 16% for those earning more than \$100,000).
- Those who had seen litter-related advertising in the past three months (24% vs. 11% for those who had not).

One in six (15%) claim they do not know where they would go for additional information on litter. Only a small percentage of residents (5%) indicated they would call the litter hotline.

Table 18 below contains additional information about residents' preferred sources for litter information.

Table 18: Source for Litter/Littering Information

Source	2011 Maricopa (n=602)	2010 Maricopa (n=601)	2009 Maricopa (n=637)	2008 Maricopa (n=744)	2006 Maricopa (n=748)
	%	%	%	%	%
Internet	46	49	49	26	59
Don't Trash AZ website	18	14	18	35	--
The "city"	7	5	5	5	5
Litter hotline	5	5	5	6	4
I wouldn't need that information/ wouldn't contact anyone	3	3	2	3	3
Police/ highway patrol/DPS	2	3	3	1	4
ADOT/highway dept.	2	2	2	4	2
Phonebook/ yellow pages	2	2	2	2	4
The state/governor	2	2	2	3	3
Waste Management/ garbage company	2	2	1	1	2
Friend/ neighbor/ family member/ teacher	1	1	2	2	1
Newspaper	1	--	--	--	1
City council/councilmembe rs	--	--	--	--	1
Other (<1% consensus)	6	3	5	7	8
Don't know	15	19	16	12	13

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? *All mentions less than 1%*

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

Facebook is the most commonly used application used to communicate or stay in touch with others (32%), followed by the utilization of search engines such as Google/Yahoo. E-mails from desktops and from cell phones are also popular methods (20% and 17%, respectively).

Facebook is more likely to be used by those aged 18-34 than older residents (47% vs. 36% for those aged 35-54 and 10% for those aged 55+).

Table 19: Electronic Communications Preferences

Electronic Communication Preferences	2011 Maricopa (n=602)
Facebook web page.	32%
Google/AOL/Yahoo/etc.	27%
Website.	26
E-mail using computer.	20
Phone (unspecified).	19
E-mail using a cell phone or handheld device.	17
Nothing.	12
Text Messages using a cell phone or handheld device.	6
Internet.	6
Twitter.	3
Word of mouth.	2
Television.	1
Other.	5
Don't know/NA.	3

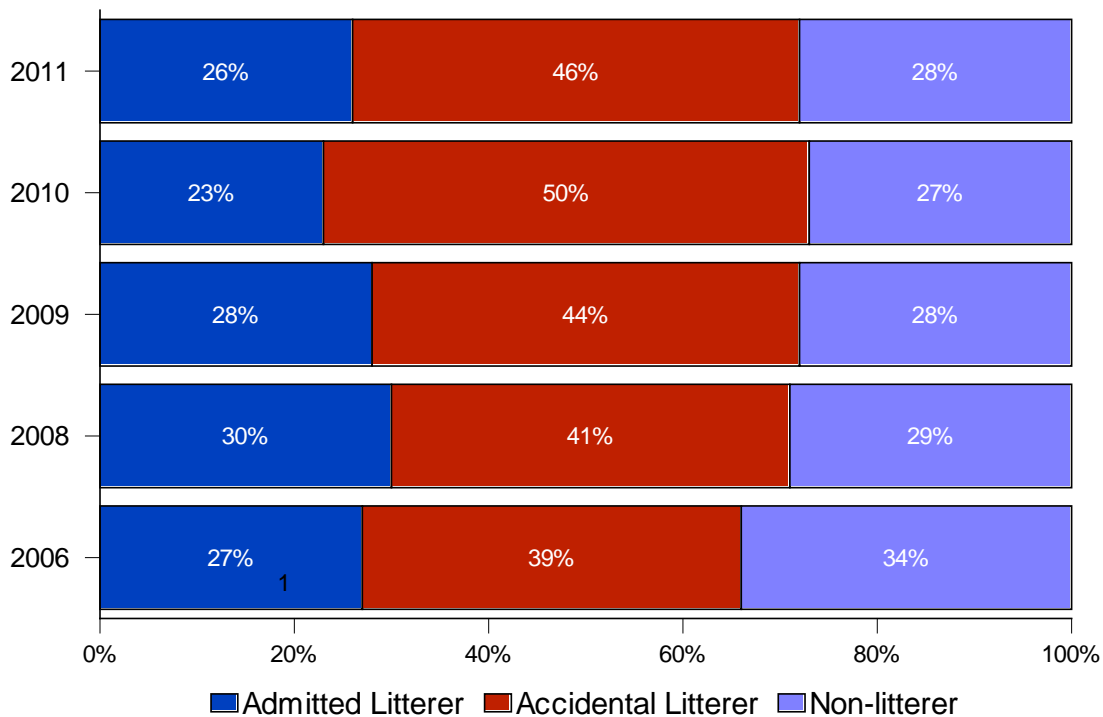
Q 32: People use many different resources to communicate and stay in touch with others. What applications or websites do you use to gather information or communicate with others? Note: Question added in 2011.

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). **“Accidental Litterers”** are defined as residents who indicated that they had never littered themselves, but reported being in a vehicle when littering occurred (46% of the total population). **“Non-Litterers”** are those who indicated they had never littered themselves and also indicated they had never experienced other littering situations (28% of the total population).

This year, a slight increase occurred among Maricopa County residents who were categorized as “Admitted Litterers” (26%, up from 23% in 2010).

Littering Behavior



More than half of the males aged 18 to 34 are admitted litterers (56%), representing a slight increase from 2010 (51%) matching 2006 levels.

In addition, in 2011, Admitted Litterers were most likely to be:

- Aged 18 to 34 (49% vs. 23% for Accidental Litterers and 16% for Non-Litterers).
- Single residents (40% vs. 29% for accidental litterers and 24% for non-litterers).
- Students than non-litterers (6% vs. 1%)

Retired residents fall into the Accidental and Non Litterer categories significantly more than into the Admitted Litterer group (22% and 33% vs. 9%).

Tables 19a and 19b show the demographic characteristics of each of these groups.

Table 19a: Demographic Comparison Based on Littering Behavior

Characteristic	2011			2010		
	Admitted Litterers (n=157)	Accidental Litterers (n=276)	Non-Litterers (n=169)	Admitted Litterers (n=141)	Accidental Litterers (n=298)	Non-Litterers (n=162)
Gender	%	%	%	%	%	%
Male	60	49	43	57	47	49
Female	40	51	57	43	53	51
Age						
18 to 34	49%	23%	16%	49%	25%	16%
35 to 54	38	47	41	40	48	36
55-65+	13	30	43	11	27	48
Average	37.4	44.8	48.2	37.7 yrs	46.2 yrs	52.4 yrs
Marital Status	%	%	%	%	%	%
Married	46	54	56	55	59	59
Single	40	29	24	36	24	18
Widowed	1	6	10	4	5	12
Divorced	8	8	6	4	9	6
Separated	1	-	1	-	-	-
Don't know or Refused	4	3	4	1	3	5
Education	%	%	%	%	%	%
Less than high school	7	6	4	4	6	6
High school graduate	14	18	18	16	19	19
Some college	36	38	28	40	31	31
College graduate	27	21	27	22	25	20
Graduate degree	13	14	20	17	16	22

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

Table 19b: Demographic Comparison Based on Littering Behavior

Characteristic	2011			2010		
	Admitted Litterers (n=157)	Accidental Litterers (n=276)	Non-Litterers (n=169)	Admitted Litterers (n=141)	Accidental Litterers (n=298)	Non-Litterers (n=162)
Ethnicity	%	%	%	%	%	%
White	70	73	73	71	72	71
Hispanic	13	12	11	19	13	13
African-American	5	4	3	5	6	4
Asian	4	3	1	-	1	1
Native American	-	1	1	2	2	3
Other	5	2	5	2	2	4
Refused	3	5	6	1	4	4
Household Income	%	%	%	%	%	%
<\$10,000	8	11	10	12	6	5
\$10-\$20,000	7	19	3	3	9	8
\$20-\$30,000	10	8	5	10	7	7
\$30-\$40,000	7	8	7	6	8	9
\$40-\$50,000	6	6	5	4	5	6
\$50-\$60,000	11	5	7	5	7	5
\$60-\$75,000	6	9	11	8	6	3
\$75-\$100,000	11	10	8	11	14	12
\$100,000+	18	14	17	25	16	14
Refused**	16	17	28	16	22	31
Employment	%	%	%	%	%	%
Full-time	51	43	44	56	46	45
Part-time	13	9	8	6	8	6
Retired	9	22	33	6	19	32
Homemaker	6	5	3	6	7	6
Student	6	4	1	9	3	1
Unemployed	13	13	8	16	14	7
Household Language*	%	%	%	%	%	%
English only	73	74	69	68	72	75
Spanish only	-	1	1	2	3	4
Mostly Spanish + some English	-	2	2	1	3	1
Equally in Spanish and English	5	4	2	4	3	4
Mostly English + some Spanish	12	10	11	14	6	8
English + Other	8	6	12	9	11	6
Refused	2	3	3	2	2	2

***Bold** indicates significantly different percentages than 2010 data at the 95% confidence level.

APPENDIX A

QUESTIONNAIRE

Benchmark Study

Client: Maricopa Association of Governments
Subject: Litter Survey 2011
Date: August 2011

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 (*Note: age categories condensed and under 18 category added*)
 - a. Under 18
 - b. 18 to 34
 - c. 35 to 54
 - d. 55+
 - e. Refused

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. *Note: New question.*

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
Note: Question wording modified

- a. Sedan
- b. Pickup truck
- c. Sports utility vehicle
- d. Coupe
- e. Van / Minivan
- f. Motorcycle
- g. Other
- h. Don't drive
- i. 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....
- a. Big problem
 - b. Moderate problem
 - c. Small problem
 - d. Not a problem at all
 - e. Don't know / Refused (DO NOT READ)
9. Do you smoke?
- a. Yes
 - b. No
 - c. 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
- a. By using an ashtray inside the vehicle
 - b. By using something else you have inside the vehicle
 - c. By throwing it out the window
 - d. Or does it vary
 - e. DO NOT READ: Other means of disposal
 - f. Do not smoke in car (added)
 - g. 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.” *Note: Situation C added*
- a. You noticed that some trash fell out of a pickup 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 – SKIP TO: Q17
 - 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 discarded 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, cigarette 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. Don't know/Refused

15. TRUCK DRIVERS ONLY: What types of items do you ever put into your truck bed that you consider to be litter or trash? PROBE: What else? MULTIPLE RESPONSES ALLOW UP TO THREE. DO NOT READ LIST.

- a. Soda cans and soda bottles
- b. Water cans and water bottles
- c. Small pieces of paper (receipts, lottery tickets, gum wrappers)
- d. Plastic bags / other plastic
- e. Cigarette butts
- f. Construction debris
- g. Cardboard
- h. Food / organic material, raw food
- i. Lawn debris
- j. Trash / no biodegradable stuff (unspecified)
- k. Paper / newspaper / Kleenex / mail
- l. Other
- m. Don't know
- n. Nothing

16. 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. Don't know/Refused
- g. If never – WHY NOT? *

ASK ALL:

17. 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 Q19

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

- a. Always
- b. Most of the time
- c. Only sometimes
- d. Rarely
- e. Never
- f. If rarely or never – WHY NOT?

19. Do you have a litterbag or trash can in your vehicle?

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

20. IF NO IN Q19: 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

21. In the past three months, have you seen, heard or read any advertisements related to litter or littering?
- Yes
 - No
 - Don't know / Refused
22. IF YES in Q21: What specifically do you remember about the ads related to litter or littering?
23. IF YES IN Q21: What was the main slogan used in the ads? DO NOT READ LIST. MULTIPLE RESPONSES ALLOWED. *Note: Grow Up, Don't Litter added*
- Don't Trash Arizona
 - Keep Arizona Beautiful
 - Do not litter
 - You will be fined
 - Littering is unlawful
 - Go green
 - Grow up. Don't Litter
 - Adopt a Highway
 - It is your environment
 - Keep our freeways clean
 - None
 - Other _____
 - Don't know / Refused
24. IF NOT MENTIONED IN Q23 "a": Have you seen or heard the slogan, "Don't Trash Arizona?"
- Yes
 - No
 - Don't know / Refused
25. IF mentioned in Q23a or YES IN Q24: Where have you seen, heard or read the slogan, "Don't Trash Arizona?" PROBE: Where else? DO NOT READ LIST. MULTIPLE RESPONSES ALLOWED.
- Television
 - Radio
 - Billboards
 - Light Rail Train
 - Street or highway signs
 - Newspaper
 - Online
 - Other
 - Don't know / Refused

26. IF mentioned in Q23a or YES IN Q24: Who sponsors the “Don’t Trash Arizona” advertisements? DO NOT READ LIST. ONE RESPONSE ONLY. *Note: MAG added*
- State / Local Government
 - Arizona Department of Transportation
 - Sanitation department
 - City of Phoenix
 - Maricopa Association of Governments
 - Other
 - Don’t know / Refused
27. Have you heard of www.DontTrashArizona.com?
- Yes
 - No
 - Not sure/Don’t Know
28. If YES IN Q27 “a”: Have you ever visited the “Don’t Trash Arizona Website”?
- Yes
 - No
 - Don’t know
29. Have you heard about the Litter Hotline, 1-877-3-Litter, where you can report someone who litters? *NOTE: Question moved within the survey.*
- Yes
 - No
 - Don’t know / Refused
30. 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?
- Very likely
 - Somewhat likely
 - Not very likely
 - Not at all likely
 - Don’t know / Refused (DO NOT READ)
31. 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

- i. Waste Management/ garbage company
 - j. That state/governor
 - k. Other
 - l. Don't know/refused
32. People use many different resources to communicate and stay in touch with others. What applications or web sites do you use to gather information or communicate with others? DO NOT READ LIST MULTIPLE RESPONSES ALLOWED *Note: New question*
- a. Nothing
 - b. Text messages using a cell phone or handheld device
 - c. e-mail using a cell phone or hand held device
 - d. MySpace web page
 - e. FaceBook web page
 - f. Using Twitter (also known as "tweeting")
 - g. Website: Specify _____
 - h. Other: Specify _____

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/Not applicable

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 housewife, a student or unemployed?

- a. Full-time
- b. Part-time
- c. Retired
- d. Housewife
- e. Student
- f. Unemployed
- g. Refused/Not Applicable

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.