



# MAG Litter Survey

December 2006

Prepared For:

RIESTER

&

Maricopa Association of Governments

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## Executive Summary

RIESTER, on behalf of its client the Maricopa Association of Governments (MAG), commissioned WestGroup Research of Phoenix to conduct a telephone study with residents in the state of Arizona. The purpose of the study was to evaluate overall awareness of and attitudes towards litter. WestGroup Research conducted interviews during December 2006.

Results are based on 1,233 fifteen-minute telephone interviews with Arizona residents. All respondents were randomly selected from a Random Digit Dial (RDD) database comprised of phone numbers from the targeted zip codes. The margin of error for the survey is approximately  $\pm 3.0\%$  at a 95% confidence level.

### Driver Characteristics

- On average, Arizona residents drive slightly more than 20 miles per day with residents living in the outlying areas of the state reporting more daily miles than other residents (22 miles vs. 20.7).
- Residents most commonly reported driving a 4-door sedan (mentioned by 38%). Sports Utility Vehicles (SUV) and pick-up trucks were the next most frequently mentioned vehicles driven by Arizona residents (20% and 18%, respectively).

### Trash in Vehicles

- Three in five residents (62%) indicated they keep a litterbag or trashcan in their vehicle. Those who do not currently have a litterbag or trashcan in their vehicle were asked if they would consider keeping one in their vehicle; approximately half (54%) answered in the affirmative.
- Arizona residents were most likely to report that the most common type of trash that accumulates in their vehicles is small pieces of paper such as gum wrappers, receipts and lottery tickets (mentioned by 34%).

### Smokers

- Approximately one in six Arizona residents indicated they are smokers (17%). This percentage was slightly higher, but not significantly so, among residents in outlying areas of the state than those in Maricopa or Pima Counties (20% vs. 17% and 16%, respectively).
- Of those who currently smoke, only 5% do not feel that throwing cigarette butts out the window is littering, and only 3% report that they actually throw their cigarette butts out the window.

### Truck Drivers

- Slightly fewer than one in five Arizona residents indicated they drive a pickup truck (18%). This percentage is highest in the outlying areas of the state (28%).
- Truck drivers were most likely to report that soda cans/bottles is the most common type of litter that would be found in the back of their truck (mentioned by 20%). Plastic bags/other plastics (11%), small pieces of paper (9%), as well as construction (10%) or lawn debris (7%) were among the other types of litter that can be found in truck beds.

### **Litter Awareness**

- Four in five Arizona residents believe that litter along the freeways throughout the state of Arizona is a “big” (38%) or “moderate” (42%) problem.
- Overall, residents were slightly less likely to see litter as a “big” or “moderate” problem along their county freeways than along Arizona freeways in general (74% “big” + “moderate” vs. 80% for Arizona freeways). Residents living in Maricopa County were more likely to indicate that litter along the freeways in that county is a “big” problem than residents in other areas of the state (37% vs. 25% for Pima County and 30% for outlying areas).
- Residents were asked to respond with the first thought that came to mind when they heard the word “litter.” The most common definition offered was “trash” or “garbage” or “junk” (mentioned by 38%).
- Soda and beer cans top of list of items that residents are most likely to label as a “severe” litter problem (soda cans/bottles – mentioned by 34%; beer cans/bottles – 31%), however, an additional 12% mention water bottles as a severe litter problem.
- Three items dominated the list of “minor litter” – biodegradable items, such as food and gum (19%), small pieces of paper such as receipts, lottery tickets and gum wrappers (19%), and cigarette butts (13%).

### **Littering Circumstances**

- When asked to itemize what items they thought they had littered in the past year, the vast majority of Arizona residents insisted that they had not littered at all during the past year (69%) – this was particularly true among Pima County residents (77%).
- Among those who indicated they had littered in the past year, food or organic material (including gum) was the most common type of litter (listed by 39%).
- 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 (mentioned by 46%) or when they were walking outside (15%).
- Approximately half of those who reportedly littered in the past year indicated that they were alone when the littering occurred (47%).
- The vast majority of those who admitted that they have littered in the past do *not* believe they will get caught for littering at some point in the future (71%).
- Residents were most likely to report that at some point in time they “noticed trash falling out of the vehicle” they were driving or riding in (19% within the past 3 months; 18% 3+ months). The next most commonly experienced litter situation was throwing or having a cigarette butt thrown out of the window (10% within the past 3 months, 13% more than 3 months).

### **Campaign Awareness**

- Approximately one in four residents indicated they had seen advertising related to litter or littering in the past three months (26%).

- “Don’t litter” or “Keep Arizona clean” were the main message residents recalled from litter-related advertising (mentioned by 32%). Other messages recalled included information about the fines for littering (15%), littering is unlawful (9%), and highway clean-up efforts such as “Adopt a highway” (5%).
- Approximately one-third of residents who remember seeing litter-related advertising in the past three months were able to recall some type of slogan (30%). Two of the most commonly recalled “slogans” were actually messages – “do not litter” (mentioned by 14%) and “you will be fined” (mentioned by 5%).
- Actual slogans that were most frequently recalled were “Don’t Trash Arizona” (6%), Arizona Clean and Beautiful (4%) and “Keep Arizona Beautiful” (4%).

#### **“Don’t Trash Arizona” Awareness**

- Slightly more than two in five Arizona residents indicated they have heard the slogan “Don’t Trash Arizona” (42%).
- Residents who were familiar with the “Don’t Trash Arizona” slogan reported seeing and/or hearing the slogan from a variety of sources – television (26%), billboards (22%), radio (14%), and street/highway signs (12%).
- Most residents were unable to name a sponsor for the “Don’t Trash Arizona” slogan (72%). One in ten correctly identified the Arizona Department of Transportation (10%) and 12% generically cited the “state” or “local” government.
- The primary meaning associated with the slogan was to not litter and put trash where it belongs (mentioned by 59%).

#### **Litter Hotline**

- When specifically asked about three sources for information about litter, only one in ten residents indicated awareness of the “Don’t Trash Arizona” website (11%) or the toll-free hotline (10%). One in twelve indicated awareness of the Phoenix-based hotline (8%).
- Overall, the combined awareness of the specific hotlines as well as the aided awareness of a general hotline was 28% for all Arizona residents surveyed.
- When asked how likely they would be to call the litter hotline to report someone who was littering, approximately three in five residents indicated they would be at least “somewhat” likely to call (31% “very likely” and 32% “somewhat likely”).

#### **Persuasive Campaign Messages**

- The three messages receiving the highest proportion of “very persuasive” ratings from Arizona residents are those that address the impact of littering on individuals or the state:
  - *“Littering can cost drivers and passengers a misdemeanor fine of \$500”* (48% very persuasive; 71% combined 4+5 ratings)
  - *“More than 85,954 bags of trash were picked up along the Maricopa County freeway system last year alone. This costs us an average of \$2.3 million per year in cleanup”* (46% very persuasive; 68% combined 4+5 ratings)

- *“Debris on roadways nationwide caused 25,000 accidents each year and more than 80 fatalities.”* (44% very persuasive; 68% 4+5 ratings).
- In addition to receiving high ratings for persuasiveness, an advertising message that informs residents of the \$500 litter fine also received the highest percentage of effectiveness ratings from Arizona residents (70% “4” or “5” ratings).
- When asked to describe what they would say to someone to convince them not to litter, the largest proportion of Arizona residents indicated they would simply tell the person not to do it (34%) or pick it up and put it in the trash (12% and 10%, respectively).
- Arizona residents indicated they would primarily turn to the Internet if they wanted more information about litter or littering (mentioned by 53%).

### **Spanish Media Use**

- Approximately one in ten Arizona residents interviewed (11%) reported that Spanish was spoken in their home. This percentage was highest in Pima County (14%).
- Approximately half of the Spanish-speaking Arizona residents (47%) indicate they speak “mostly English and some Spanish” and another 27% report to speak the two languages equally.
- Slightly more than two in five Spanish-speaking residents indicated they watch and/or listen to Spanish TV and radio regularly (33% daily and 11% two to five times a week).

## **Conclusions**

1. The majority of Arizona residents believe that litter is a problem along freeways throughout the state, but interestingly, they are more likely to believe litter is a problem in “other” areas of the state than along the freeways where they live. Cans and bottles are perceived to be the biggest litter problems.
2. A definite challenge for an anti-litter campaign will be the perception by a majority of residents that they do not litter, and the subsequent perception among litters that they will not be caught if they do litter.
3. Unaided awareness of current and past litter campaigns and specific messages other than “don’t litter” is relatively low. Specific messages/slogans recalled were primarily related to general statewide campaigns to “Keep Arizona Clean,” “Keep Arizona Beautiful” and “Don’t Trash Arizona.” This may suggest that these types of messages also resound with residents and reflect sentiments they support.
4. Although the tested message that was most often selected as “persuasive” and “effective” touted the \$500 fine for littering, it is unlikely that residents in general would personally find this to be compelling reason not to litter based on the earlier findings that most either do not think they litter or will not get caught. Since there was a positive response to the messages about the importance of keeping Arizona beautiful, a message that supports this concept is more likely to resonate with and be “embraced” by residents.

## **I. Introduction**

### **A. Background and Methodology**

RIESTER, on behalf of its client the Maricopa Association of Governments (MAG), commissioned WestGroup Research of Phoenix to conduct a telephone study with residents age 16 and older living in the state of Arizona. The purpose of the study was to evaluate overall awareness of and attitudes toward litter. WestGroup conducted these surveys in December 2006.

Results are based on 1,233 fifteen-minute telephone interviews conducted with 616 male and 617 female residents. Respondents were randomly selected from a Random Digit Dial (RDD) database comprised of phone numbers from targeted zip codes. The margin of error for the survey is approximately  $\pm 3.0\%$  at a 95% confidence level.

Data is reported by total sample as well as by the three areas identified by MAG – Maricopa County, Pima County, and outlying areas. Thirty-four interviews (3%) were conducted in Spanish.

### **B. Demographics**

Per established quotas, 50% of Arizona residents interviewed were males and 50% were females. The average age of the residents was 45, 60% were married, and 44% had children under the age of 18 living in their household. The majority had at least some college experience (72%), 58% are employed either full or part-time, and approximately one-fourth (26%) reports a household income of more than \$75,000. Three fourths of the residents are Caucasian (76%), while 82% report that “only English” is spoken in their home.

Additional detail on the demographic profile of the respondents is provided in Tables 1a and 1b while Table 2 provides a breakdown of the city of residence represented in the sample.

Table 1a: Respondent Demographics

Characteristic	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Male	50%	50%	51%	50%
Female	50%	50%	49%	50%
<b>Age</b>				
>21	6%	6%	4%	8%
21-24	4%	3%	4%	7%
25-34	19%	23%	10%	16%
35-44	20%	24%	12%	17%
45-54	20%	16%	24%	26%
55-65	14%	12%	18%	14%
66+	17%	16%	28%	12%
Average	45.6 yrs	44.3 yrs	51.5 yrs	44.0 yrs
<b>Marital Status</b>				
Married	60%	61%	61%	58%
Single	25%	26%	21%	28%
Widowed	6%	6%	9%	5%
Divorced	5%	5%	7%	5%
Separated	1%	1%	1%	1%
D/K or Refused	2%	2%	1%	3%
<b>Education</b>				
Less than H.S.	8%	7%	7%	12%
H.S. graduate	18%	16%	14%	26%
Some college	34%	35%	33%	33%
College graduate	25%	27%	27%	17%
Graduate degree	13%	13%	16%	11%
<b>Ethnicity</b>				
White	76%	79%	75%	66%
Hispanic	11%	9%	12%	13%
African American	2%	3%	3%	-
Asian	1%	2%	1%	-
Other	7%	4%	8%	16%
<b>HH with Children &lt;18</b>	44%	45%	37%	46%

Table 1b: Respondent Demographics

Characteristic	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
<b>HH Income</b>				
<\$10,000	4%	3%	4%	6%
\$10-\$20,000	7%	6%	8%	9%
\$20-\$30,000	9%	8%	10%	10%
\$30-\$40,000	8%	7%	7%	13%
\$40-\$50,000	9%	8%	8%	10%
\$50-\$60,000	6%	7%	7%	4%
\$60-\$75,000	9%	9%	7%	10%
\$75-\$100,000	11%	12%	8%	12%
\$100,000+	15%	18%	14%	6%
Refused	23%	22%	27%	21%
<b>Employment Status</b>				
Full-time	49%	51%	42%	48%
Part-time	9%	10%	7%	10%
Retired	24%	21%	35%	22%
Homemaker	8%	8%	7%	9%
Student	4%	4%	3%	4%
Unemployed	4%	4%	5%	5%
<b>Profession</b>				
White collar/mgmt	14%	16%	11%	11%
Blue collar	9%	9%	10%	8%
Trade	8%	7%	9%	8%
Professional (medical/legal)	9%	10%	9%	6%
Education	6%	6%	3%	9%
Clerical/admin	5%	5%	3%	7%
Self-employed	5%	5%	4%	5%
<b>HH Language</b>				
English only	82%	85%	80%	77%
English & Spanish	10%	8%	13%	11%
Spanish only	1%	1%	-	1%
English + other language	4%	4%	4%	5%
Other language only	2%	2%	2%	3%

**Table 2: Sample Breakdown by City**  
 Frequencies reported, NOT percentages

Characteristic	Total (n=1,233)
Apache Junction	9
Avondale	12
Buckeye	8
Carefree	1
Cave Creek	5
Chandler	49
El Mirage	6
Flagstaff	16
Fountain Hills	7
Gilbert	41
Glendale	58
Goodyear	13
Green Valley	13
Kingman	16
Laveen	2
Litchfield Park	5
Mesa	107
New River	1
Payson	5
Page	3
Peoria	42
Phoenix	210
Prescott	10
Queen Creek	8
Scottsdale	49
Show Low	6
Sierra Vista	17
Sun City	23
Sun Lakes	2
Surprise	26
Tempe	23
Tolleson	1
Tucson	205
Yuma	20
Other*	181
Refused	33

\*includes all mentions less than 1%

## II. Driver Characteristics

### A. Driving Habits

**On average, Arizona residents drive slightly more than 20 miles per day** with residents living in the outlying areas of the state reporting more daily miles than other residents (22 miles vs. 20.7). Males reported more average daily miles driven than females (24.9 vs. 17.1)

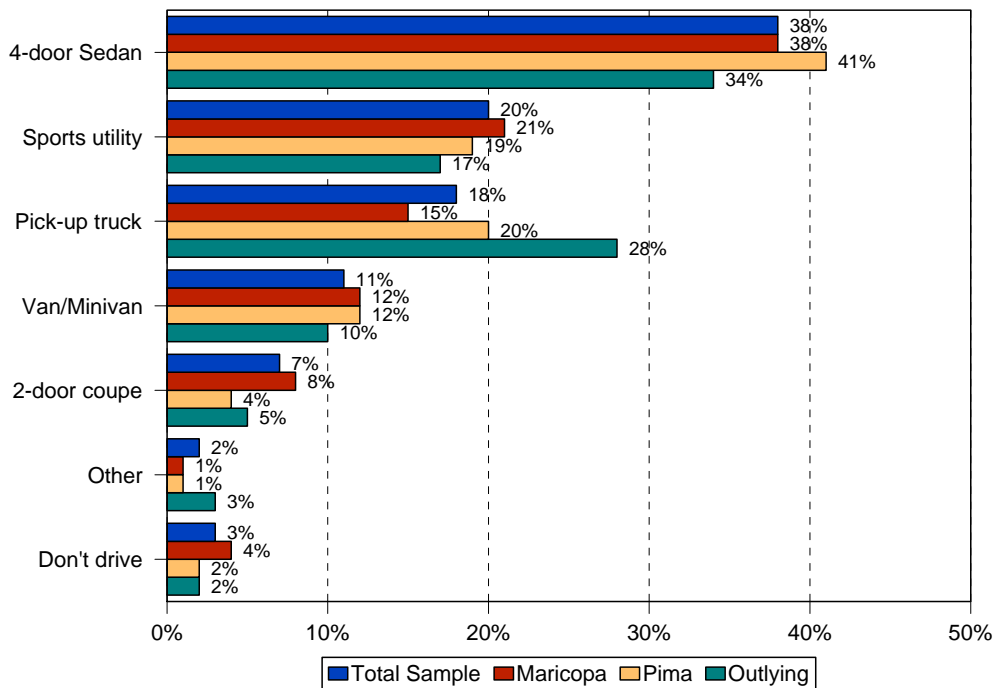
**Table 3: Average Miles Driven**  
(On Average Day)

Average Miles	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
0-10 miles	41%	42%	39%	38%
11-20 miles	20%	18%	23%	22%
21-30 miles	13%	14%	11%	11%
31-50 miles	12%	12%	12%	14%
50+ miles	12%	12%	12%	14%
Average miles	21.0	20.7	20.6	22.2
Don't know	2%	2%	4%	1%

*Q8: In a typical day, how many miles do you drive or ride in a motor vehicle?*

**Residents most commonly reported driving a 4-door sedan (mentioned by 38%).** Sports Utility Vehicles (SUV) and pick-up trucks were the next most frequently mentioned vehicles driven by Arizona residents (20% and 18%, respectively). Maricopa County residents were most likely to report driving a 4-door sedan (38%) or an SUV (21%), whereas Pima County residents and those living in the outlying areas of the state were more likely to report driving 4-door sedans (41% and 33%, respectively) or pick-up trucks (20% and 28%, respectively).

## Type of Vehicle Driven/Ridden



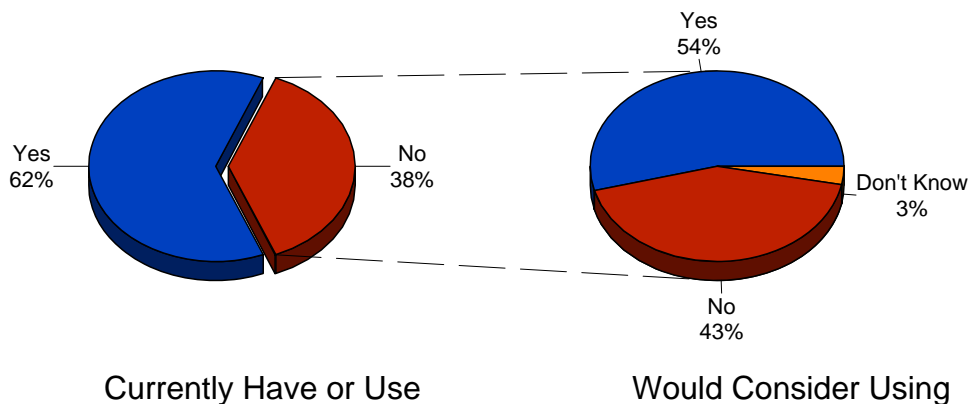
Total sample n=1,233; Maricopa n=748; Pima n=243; Outlying n=242

## B. Litterbag Use

**Three in five residents (62%) indicated they keep a litterbag or trashcan in their vehicle.** Interestingly, Maricopa County residents are significantly less likely to have a litterbag/trashcan in their vehicles (57%) than Pima County residents (65%) and particularly residents living in the outlying areas of the state (74%). Residents most likely to report having a litterbag or trashcan in their vehicle are females (66%), older residents (71% of those age 55 or older), and those with household incomes less than \$40,000 (68%).

**Those who do not currently have a litterbag or trashcan in their vehicle were asked if they would consider keeping one in their vehicle; approximately half (54%) answered in the affirmative.** Again, residents in the outlying areas of the state were more amenable to putting a litterbag in their vehicle than those in Maricopa or Pima Counties (64% vs. 53% and 49%, respectively).

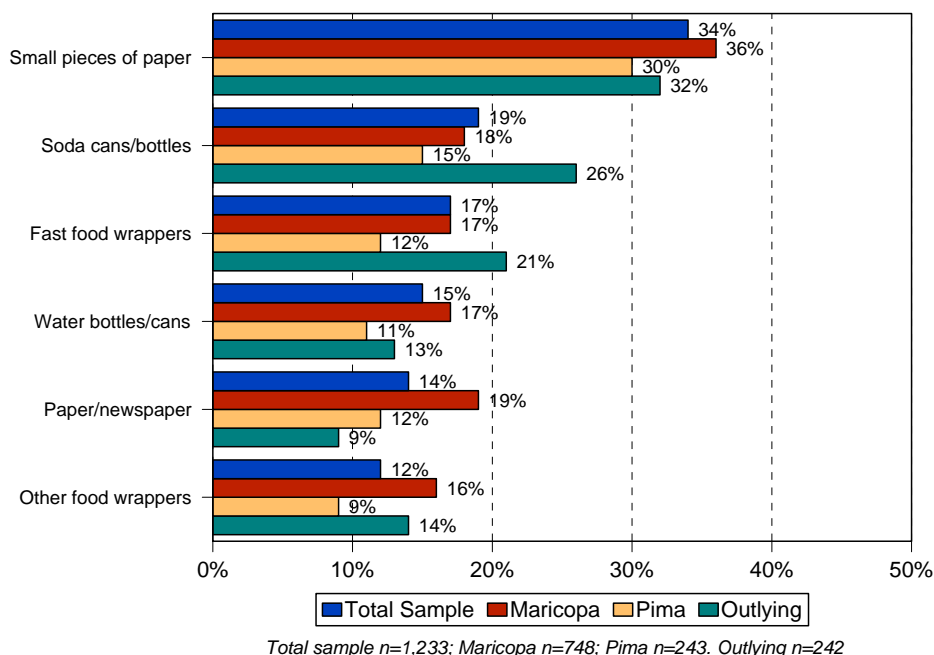
### Litterbag or Trashcan Use in Vehicle



## A. Trash Accumulating Inside Vehicle

Arizona residents were most likely to report that the most common type of trash that accumulates in their vehicles is small pieces of paper such as gum wrappers, receipts and lottery tickets (mentioned by 34%). Four of the five next most common items are food and drink items – soda cans/bottles (19%), fast food wrappers (17%), water bottles (15%), and miscellaneous other food wrappers such as chip bags and candy wrappers (12%). One in four residents, however, indicated that they always remove trash from their vehicle so nothing accumulates (25%).

### Six Most Common Types of Trash Inside Vehicle



Residents in the outlying areas of the state are more likely than those in the metro areas to report an accumulation of soda cans (26% vs. 18% Maricopa and 15% Pima) or fast food wrappers (21% vs. 17% Maricopa and 12% Pima) as well as plastic bags or other plastic items (12% vs. 5% others). Pima County residents were most likely to report that they keep their vehicles clean (37% vs. 23% Maricopa and 18% outlying).

In general, residents under the age of 35 are significantly more likely than residents ages 55 and older, to report all types of trash in their vehicle (14% report “nothing” vs. 41%). Females were more likely than males to report an accumulation of paper and snack items. Males were more likely to indicate that soda cans/bottles are commonly found in their vehicle.

**Table 4: Trash Accumulated in Vehicle - Total Responses**

Items	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Small pieces of paper (receipts, lottery tickets, gum wrappers)	34%	36%	20%	32%
Soda cans/bottles	19	18	15	26
Fast food wrappers	17	17	12	21
Water cans/bottles	15	17	11	13
Paper/newspaper/napkins	14	16	12	9
Other food wrappers	12	13	9	14
Plastic bags/other plastic	7	6	5	12
Cups (Styrofoam, plastic, paper)	4	4	3	6
Food/organic material	3	3	3	3
Cigarette butts	3	2	2	4
Beer cans/bottles	1	1	1	2
Nothing/always clean out vehicle	25	23	37	18
Other	7	6	7	7
Don't know	2	2	1	1

*Q26: What kinds of trash tend to accumulate INSIDE your vehicle?*

## D. Smokers

**Approximately one in six Arizona residents indicated they are smokers (17%).** This percentage was slightly higher, but not significantly so, among residents in outlying areas of the state than those in Maricopa or Pima Counties (20% vs. 17% and 16%, respectively). Males (20%), those with household incomes of less than \$40K (23%), those without any college experience (24%), and single residents (24%) were more likely than those in comparative groups to admit they were smokers.

**Of those who currently smoke, only 5% do not feel that throwing cigarette butts out the window is littering, and only 3% report that they actually throw their cigarette butts out the window.** Interestingly, only Maricopa County smokers indicated they occasionally throw their cigarette butts out the window (5%; the primary reason being they do not have an ashtray in their vehicle – mentioned by 4 of the 6 respondents). The majority of smokers report that they either use the ashtray in their vehicle (56%) or do not smoke in their vehicle (14%).

**Table 5: Smoking Habits**

Response	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
<b>Smoker</b>	17% (n=205)	16% (n=121)	15% (n=36)	20% (n=48)
Agree throwing cigarette butts out window is littering	95%	94%	94%	96%

*Q13: Do you smoke? Q14: If yes, in your opinion, is throwing cigarette butts out the window or on the ground littering?*

**Table 6: Disposing of Cigarette Butts**  
(Among those indicating they smoke)

Response	Total (n=205)	Maricopa (n=121)	Pima (n=36)	Outlying (n=48)
Ashtray in vehicle	56%	46%	61%	75%
Don't smoke in the car	14%	16%	8%	10%
Something else in vehicle	12%	13%	14%	8%
It varies	8%	12%	3%	4%
Throwing out window	3%	5%	-	-
Other	2%	2%	-	2%
Don't know/refused	5%	5%	14%	-

*Q15: When you are in a vehicle, do you USUALLY dispose of cigarette butts...?*

**E. Truck Drivers**

**Slightly fewer than one in five Arizona residents indicated they drive a pickup truck (18%). This percentage is highest in the outlying areas of the state (28%).** Overall, 62% of truck drivers report that they put things in the bed of the truck, with Maricopa County drivers being more likely to use the truck beds than truck drivers in the rest of the state (67% vs. 60% Pima and 53% outlying).

**Table 7: Truck Drivers**

Response	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
<b>Drive a truck</b>	18%	15%	20%	28%
	(n=186)	(n=36)	(n=40)	(n=49)
Put things in truck bed	62%	67%	60%	53%

*Q24: TRUCK DRIVERS ONLY – Do you ever put anything in your truck bed?*

**Truck drivers were most likely to report that soda cans/bottles is the most common type of litter that would be found in the back of their truck (mentioned by 20%; see Table 8).** Plastic bags/other plastics (11%), small pieces of paper (9%), as well as construction (10%) or lawn debris (7%) were among the other types of litter that can be found in truck beds. Slightly more than one in ten (12%) indicated that they do not believe they put any type of litter in the bed of their truck.

**Table 8: Litter Via Truck Bed - Total Responses**  
(Among those who indicate they drive a truck)

Items	Total (n=173)	Maricopa (n=97)	Pima (n=40)	Outlying (n=36)
Soda cans/bottles	20%	16%	18%	31%
Nothing	12	14	10	6
Plastic bags/other plastic	11	7	10	22
Construction debris	10	9	10	14
Sm. pieces of paper	9	6	10	17
Lawn debris	7	9	5	3
Fast food wrappers	6	8	-	6
Food/organic material	5	4	8	3
Paper/ newspaper/ napkins	4	4	5	3
Beer cans/bottles	4	4	2	11
Other food wrappers	3	3	-	6
Cardboard	3	2	-	8
Water bottles	2	1	-	8
Litter that falls out accidentally	2	2	-	6
Tires	2	1	2	3
Car parts/ batteries	2	2	-	3
Wood	2	1	2	3
Other	10%	8%	15%	9%
Don't know	25	25	32	19

*Q25b: What types of items do you ever put into your truck bed that you consider to be litter or trash? What else?*

### III. Litter Awareness

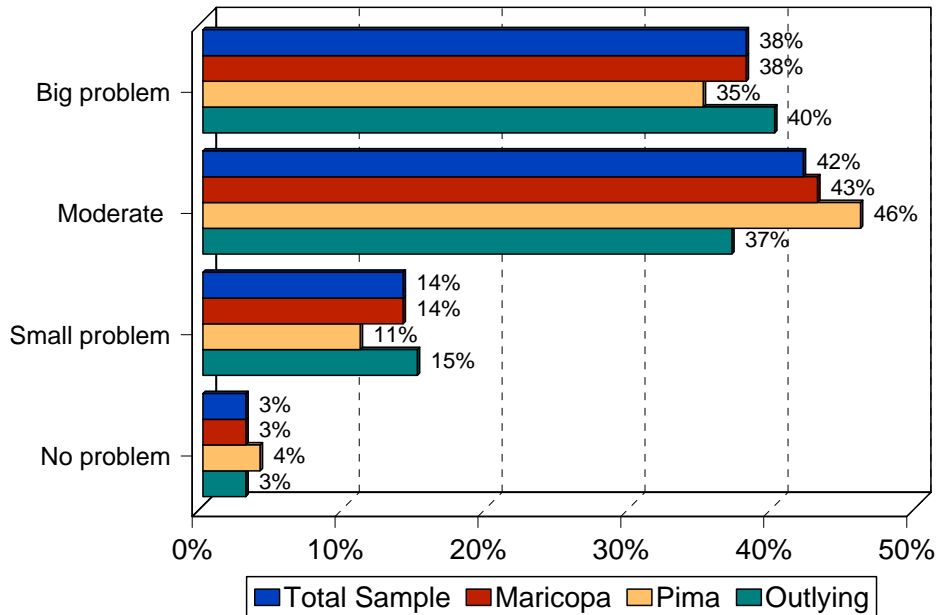
#### A. Perception of Litter as Problem along Freeways

**Four in five Arizona residents believe that litter along the freeways throughout the state of Arizona is a “big” (38%) or “moderate” (42%) problem.** Residents in Pima County are slightly more likely than residents living in other areas of the states to describe the litter problem as “moderate;” particularly in comparison to residents living in the outlying areas of the state (46% vs. 37%).

Those most likely to consider litter along freeways a “big” problem are:

- Residents ages 55 and older (45% vs. 30% of those under the age of 35)
- Those with lower household incomes (42% of those with incomes under \$40K vs. 29% of those with household incomes of \$75K or higher)
- Residents who are not employed (40% vs. 36%)
- Residents who are aware of anti-litter advertising (43% vs. 36%)

### Perception of Litter along Freeways across Arizona



*Total sample n=1,233; Maricopa n=748; Pima n=243. Outlying n=242*

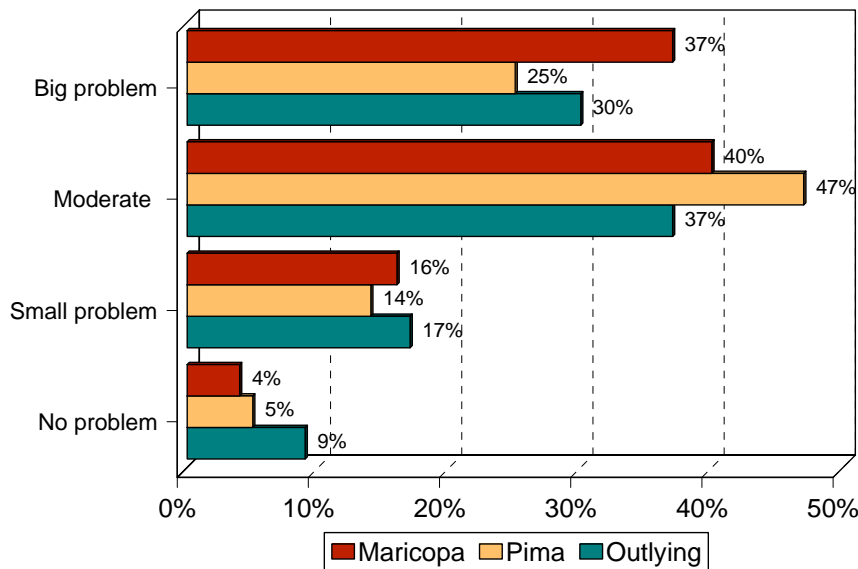
**Table 9: Freeway Litter As A Problem in Arizona**

Rating	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Other (n=242)
Big problem	38%	38%	35%	40%
Moderate problem	42%	43%	46%	37%
Small problem	14%	14%	11%	15%
Not a problem at all	3%	3%	4%	3%
Don't know	3%	2%	5%	5%

*Q10: In your opinion, how big of a problem is litter along freeways in Arizona? Would you say it is a...*

In addition to their perceptions of litter along Arizona freeways in general, residents were also asked to indicate their perception of the litter specifically along the freeways in the county where they live. **Overall, residents were slightly less likely to see litter as a “big” or “moderate” problem along their county freeways than along Arizona freeways in general (74% “big” + “moderate” vs. 80% for Arizona freeways). Residents living in Maricopa County were more likely to indicate that litter along the freeways in that county is a “big” problem than residents in other areas of the state (37% vs. 25% for Pima County and 30% for outlying areas).**

### Perception of Litter along Freeways in Specific County



Total sample n=1,233; Maricopa n=748; Pima n=243. Outlying n=242

**Table 10: Freeway Litter As A Problem in County of Residence**

Rating	Total Sample (n=1,233)	Maricopa (n=748)	Pima (n=243)	Other (n=242)
Big problem	33%	37%	25%	30%
Moderate problem	41%	40%	47%	37%
Small problem	16%	16%	14%	17%
Not a problem at all	5%	4%	5%	9%
Don't know	6%	4%	10%	7%

*Q11: In your opinion, how big of a problem is litter along freeways in your County? Would you say it is a...*

## B. Littering Material

### 1. Definitions of Litter

Residents were asked to respond with the first thought that came to mind when they heard the word “litter.” The most common definition offered was “trash” or “garbage” or “junk” (mentioned by 38%). The remaining definitions had a consensus of less than one in fifteen residents. Several definitions, however, reflected back on the individual who litters rather than the litter itself (people who litter – 6%; irresponsible – 5%; lazy/slobs – 3%). Others referred to the way litter looks (dirty/disgusting – 5%; ugly/unsightly – 3%) or the way it makes them feel (angry/upset – 2%).

**Table 11: Definition of “Litter”**

Items	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Trash/garbage/junk/mess	38%	40%	33%	36%
Paper	6	7	6	5
People throwing things out car windows/not using receptacles	6	6	9	4
Irresponsible/disrespectful/ careless/inconsiderate	5	6	5	4
Dirty/disgusting/filthy	5	5	6	4
Empty cans/bottles/cups	4	3	4	5
Lazy/slobs/pigs/messy people	3	3	4	4
Ugly/looks bad/unsightly	3	3	3	2
Anger/makes me upset	2	2	2	4
Roads/freeways	2	2	3	2
Cigarette butts	2	3	2	1
Should be cleaned up/ problem needs to be fixed	2	2	3	2
Plastic bags	2	2	2	3
Pollution/bad for environment	1	1	1	2
Cat litter	1	1	1	1
Don't do it	1	1	-	2
Other*	14%	13%	14%	16%
Don't know	2	2	2	2

*Q12: What is the first thought that comes to your mind when you hear the word “litter”? \*Includes all mentioned less than 1%*

2. *Perceptions on Types of Litter*

**Soda and beer cans top of list of items that residents are most likely to label as a “severe” litter problem (soda cans/bottles – mentioned by 34%; beer cans/bottles – 31%), however, an additional 12% mention water bottles as a severe litter problem.** More than one in five residents also mentioned plastic items and cigarette butts as litter they consider to be a “severe” problem (27% and 22% mentions, respectively). Paper, food wrappers, and tires were also mentioned by more than one in six residents (16% to 18%).

Pima County residents were slightly more likely than Maricopa residents to list soda cans/bottles as a severe litter problem (39% vs. 33%). Pima County and residents in the outlying areas of the state were significantly more likely than Maricopa residents to include plastic bags and other plastics on the list of items that are a severe problem (35% and 34% vs. 21%). Maricopa and Pima County residents, on the other hand, were more likely than residents in outlying areas of the state to cite cigarette butts (25% and 22% vs. 14%) and fast food wrappers (18% and 16% vs. 11%) as severe litter problems.

## Most Common Types of Trash Labeled as a 'Severe' Litter Problem

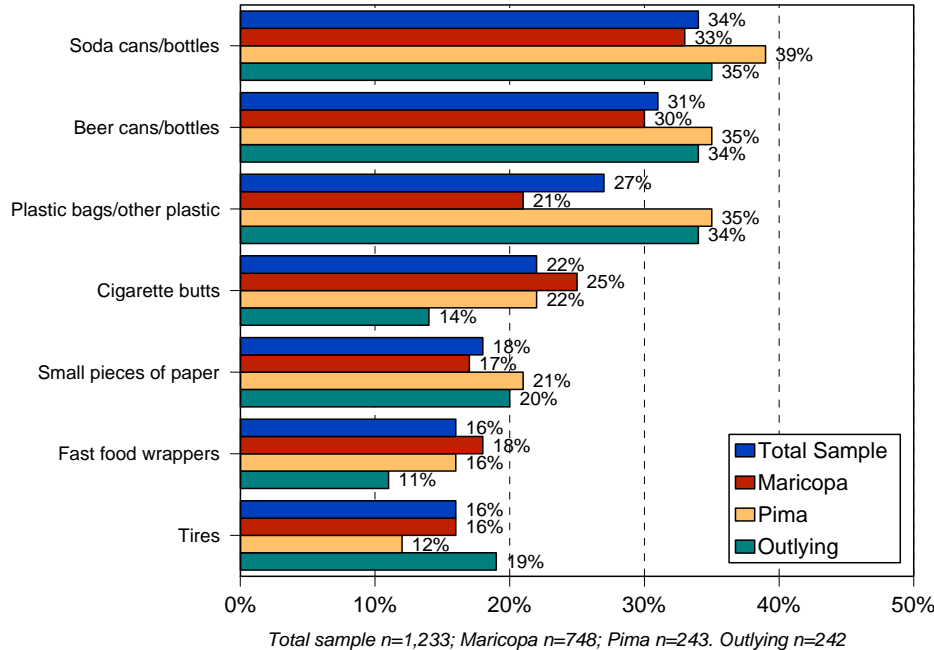


Table 12: Litter Perceived as a SERIOUS Problem - Total Answers

Items	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Soda cans/bottles	34%	33%	39%	35%
Beer cans/bottles	31	30	35	34
Plastic bags/other plastic	27	21	35	34
Cigarette butts	22	25	22	14
Small pieces of paper	18	17	21	20
Fast food wrappers	16	18	16	11
Tires	16	16	12	19
Water cans/bottles	12	10	19	13
Construction debris	8	10	4	4
Litter that falls out of pick up trucks accidentally	7	8	4	6
Trash (unspecified)	6	6	5	9
Paper/newspaper/napkins	6	7	6	4
Other food wrappers	4	5	4	4
Glass	4	4	5	5
Cardboard	2	2	1	1
Everything	4	4	2	4
Diapers/baby wipes	3	3	2	6
Furniture (couches, beds)	3	4	2	2
Cups (Styrofoam, plastic, paper)	3	3	2	3
Car parts/batteries/motor oil	3	2	2	5
Aluminum cans	2	2	4	2
Bottles/containers (unspecified)	2	2	4	2
Cardboard	2	2	2	2
Food/organic material	2	2	1	1
Other	10%	12%	5%	10%
Don't know	4%	3%	4%	4%

*Q18: What types of materials do you think are a serious litter problem?*

After discussing the items they considered to be “severe” litter problems, residents were asked to list additional items they considered to be “minor” problems. **Three items dominated the list of “minor litter” – biodegradable items, such as food and gum (19%), small pieces of paper such as receipts, lottery tickets and gum wrappers (19%), and cigarette butts (13%; see Table 12).** Interestingly, Maricopa County residents were more likely than other residents to include cigarette butts on the “minor” list (16% vs. 9%).

Table 13: Litter Perceived as a MINOR Problem - Total Answers

Items	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Food/organic material	19%	19%	14%	25%
Small. pieces of paper (receipts, lottery tickets, gum wrappers)	19	18	18	20
There isn't minor litter/ all litter is major	18	17	17	21
Cigarette butts	13	16	9	9
Other food wrappers (chip bags, candy wrappers)	4	5	3	3
Soda cans/bottles	4	4	3	5
Paper/ newspaper/ napkins	4	3	5	4
Fast food wrappers	3	3	3	3
Beer cans/bottles	3	3	3	4
Plastic bags/other plastic	2	2	4	2
Lawn debris	2	2	2	-
Tires	2	2	2	2
Litter that falls out of truck accidentally	1	1	2	1
Cardboard	1	-	2	2
Other	11%	12%	12%	10%
Don't know	22%	21%	25%	22%

*Q19: What types of materials do you think are a minor litter problem?*

**When asked to itemize what items they thought they had littered in the past year, the vast majority of Arizona residents insisted that they had not littered at all during the past year (69%)** – this was particularly true among Pima County residents (77%). An additional one in six residents (16%) said they “did not know” if they had littered or not. In general, residents under the age of 35 are more likely to indicate that they have littered in the past year than those over age 35 (50% vs. 28% of those ages 35 to 54 and 16% of those age 55 or older).

Among those who indicated they had littered in the past year, food or organic material (including gum) was the most common type of litter (listed by 39%). Once again, Maricopa County residents are more likely than residents in other areas of the state to report that they have discarded cigarette butts (15% vs. 9% and 6%). In general, females and older residents are more likely than those in comparative groups to list organic materials as items they personally have discarded (53% of females and 50% of those age 55 or older). Males and younger residents are more likely to report other types of littering.

**Table 14: Items Personally Discarded as Litter - Total Responses**

Items	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Have not littered in past year	69%	69%	77%	62%
Don't know	16% (n=328)	13% (n=206)	27% (n=44)	18% (n=78)
Food/organic material	39%	41%	32%	40%
Small pieces of paper	23	21	23	27
Cigarette butts	12	15	9	6
Other food wrappers	10	8	20	6
Soda cans/bottles	6	7	-	6
Paper/newspaper/napkins	4	4	4	3
Plastic bags/other plastic	2	1	7	4
Fast food wrappers	2	2	2	3
Litter that accidentally falls out of pickup truck	2	2	2	1
Water cans/bottles	2	2	-	1
Wood/toothpicks	2	2	-	1
Beer cans/bottles	1	1	-	3
Other*	11%	12%	4%	10%

*Q20: 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?*

*\*Less than 1% mentions by total sample*

## C. Littering Circumstances

### 1. Littering Circumstances among those who Litter

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 (mentioned by 46%) or when they were walking outside (15%).

**Table 15: Littering Situation - Total Responses**  
(Among those who indicated they have littered in the past year)

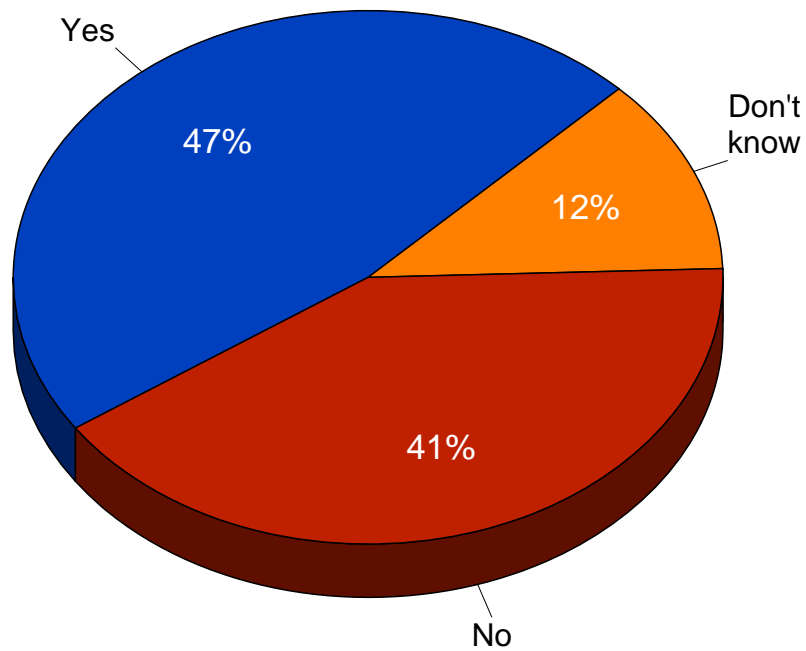
Items	Total (n=378)	Maricopa (n=231)	Pima (n=56)	Outlying (n=91)
Driving/riding/traveling in vehicle	46%	47%	45%	45%
Walking outside	15	16	11	14
Opened door/window – flew out	4	3	4	6
No trash can around	7	8	5	6
I didn't litter	2	1	4	6
Eating food/chewing gum	2	2	-	2
Flew out of truck bed	2	2	2	1
Cleaning out car	1	1	-	2
At home	1	1	2	1
In the desert/ middle of nowhere	1	2	-	-
Other	7%	7%	6%	8%
Don't know/can't remember	16	15	27	14

*Q21: To the best of your knowledge, what were the general circumstances in terms of where and what you were doing when you discard litter?*

Approximately half of those who reportedly littered in the past year indicated that they were alone when the littering occurred (47%). Males are most likely to indicate they are alone when littering occurs (54% vs. 38%).

## Tend to Be Alone When Littering

*(Among those who said they littered in the past year n=378)*



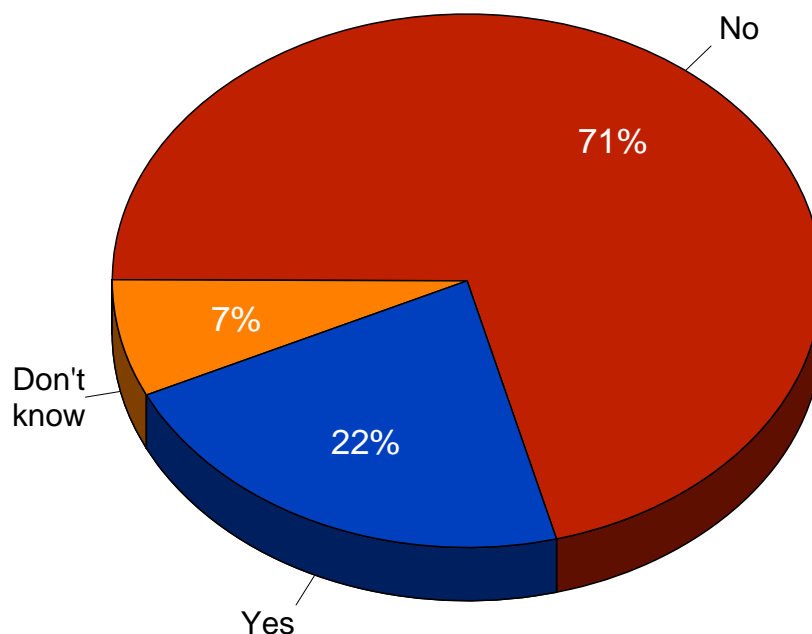
## 2. Perception of Accountability

The vast majority of those who admitted that they have littered in the past do *not* believe they will get caught for littering at some point in the future (71%). Residents most likely to believe that they may get caught for littering include:

- Those living in the outlying areas of the state (30% vs. 20% of those in Maricopa and 18% of those in Pima)
- Younger residents (33% of those under age 35 vs. 5% of those age 55 or older)
- Those with lower household incomes (31% of those with incomes under \$40K vs. 14% of those with incomes greater than \$75K)
- Residents with a high school or less education (31% vs. 15% of those with a college degree)
- Minority residents (39% vs. 16% of Caucasian residents)

## Believe Will Get Caught for Littering

(Among those who said they littered in the past year n=378)



When asked why they do not believe they will get caught littering, more than half of those who previously indicated they had littered replied, “I don’t litter” (49%) and an additional 19% indicated they do not litter “very often.” A small percentage believes they will not be caught littering because they are careful (8%) or they only throw away things that will disintegrate like food (6%) or gum (2%). Others do not believe littering laws are enforced (7%) and/or it simply is not “a big deal” (3%).

**Table 16: Reasons Why People Believe they will not get Caught Littering**  
 (Among those who indicated they have littered in the past year  
 and believe they will not get caught)

Responses	Total (n=269)	Maricopa (n=171)	Pima (n=40)	Outlying (n=58)
I don't litter	49%	47%	55%	50%
I don't litter very often	19	21	18	16
I'm cautious/ careful/ make sure no one is looking	8	7	5	12
Nobody gets caught/ not enforced/ other things for cops to do	7	8	8	5
Only litter food/ things that will disintegrate	6	6	8	5
It's not a big deal/ nobody cares	3	3	2	2
I carry a trash container in the car/ hold on to it and throw it away later	2	2	2	2
I don't throw out anything big	2	2	2	3
I don't think a piece of gum is littering	2	2	-	2
Cigarette butts aren't a big thing	2	2	-	-
Other	2	2	-	2
Don't know/refused	4	4	10	3

*Q23B: Why don't you believe you will ever get caught for littering?*

### 3. *Personal Experience with Specific Littering Situations*

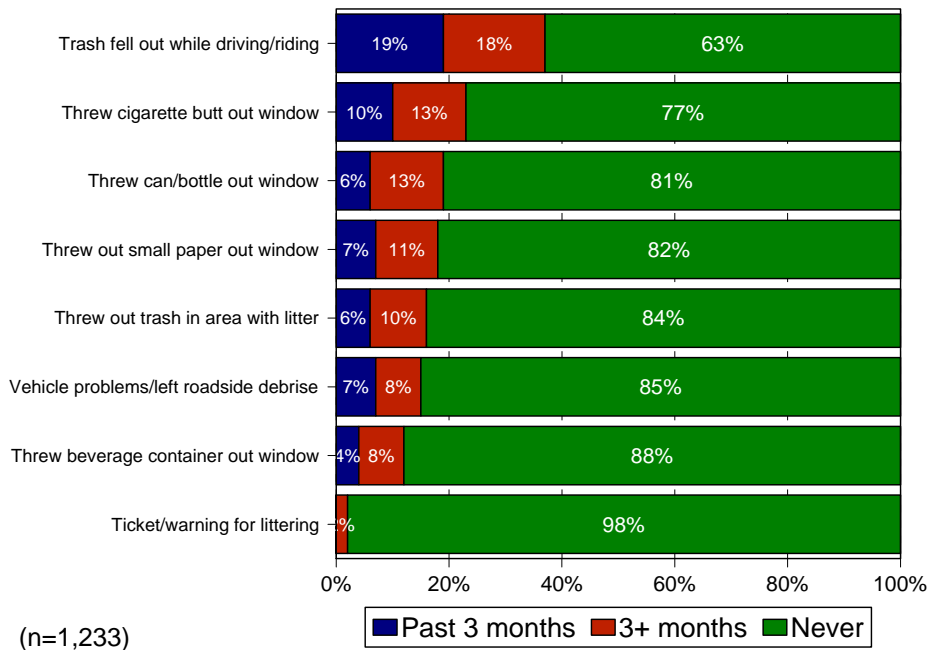
*Residents were read a list of eight specific littering situations and asked to indicate if they personally had experienced that littering situation in the past three months, more than three months ago, or had never experienced that specific situation.*

**Residents were most likely to report that at some point in time they “noticed trash falling out of the vehicle” they were driving or riding in** (19% within the past 3 months; 18% 3+ months). In particular, Maricopa County residents and those living in outlying areas of the county were more likely than Pima County residents to indicate they had experienced this in the past three months (19% and 23% vs. 14%).

**The next most commonly experienced litter situation was throwing or having a cigarette butt thrown out of the window** (10% within the past 3 months, 13% more than 3 months). Approximately one in fourteen residents indicated they had been in a vehicle where something else was thrown out of the window (7% paper, 6% can/bottle, 6% beverage container) or they had left debris on the roadside after having problems with their vehicle (7%). Only 2% of all residents reported ever receiving a warning or ticket for littering.

In general, males, residents under age 35, those with household incomes under \$45K, and those with a high school education or less were more likely than those in comparative groups to report having experiences with the specific littering situations that were queried.

## Experience with Specific Littering Situations



**Table 17: Personal Experience with Littering Circumstances  
Past 3 Months**

Circumstance	Total Sample (1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Noticed trash falling out of vehicle you were driving or riding in.	19%	19%	14%	23%
Rather than keep a cigarette butt in the vehicle, you or someone in the car threw it out the window.	10%	11%	7%	10%
You had vehicle problems and left debris like a tire or other things on the side of the road.	7%	7%	7%	7%
You threw out a small item from your vehicle like a candy wrapper, scrap paper, etc.	7%	7%	7%	7%
Someone in a vehicle you were in threw trash out in area with lots of litter.	6%	6%	4%	8%
Someone in a vehicle you were in threw out a can, bottle or litter on to the side of the road.	6%	6%	6%	6%
You or someone in car threw out a beverage container.	4%	4%	4%	4%
You or someone you were with got a ticket or warning for littering.	-	-	-	-

*Q17: 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.”*

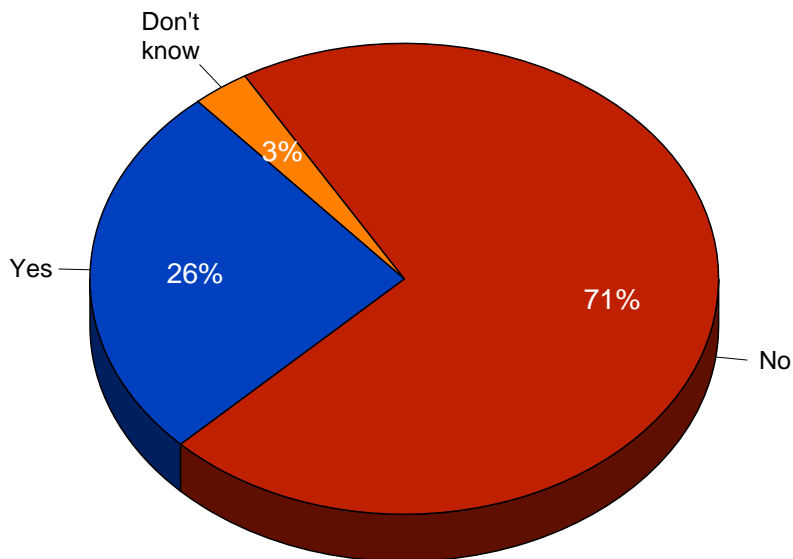
## IV. Campaign Awareness

### A. Awareness of Campaign

Approximately one in four residents indicated they had seen advertising related to litter or littering in the past three months (26%). There were no differences in awareness by region or between demographic subgroups.

## Have Seen Ads for Litter

Within last 3 months



**“Don’t litter” or “Keep Arizona clean” were the main message residents recalled from litter-related advertising (mentioned by 32%; see Table 18).** Other messages recalled included information about the fines for littering (15%), littering is unlawful (9%), and highway clean-up efforts such as “Adopt a highway” (5%). Other residents could only report the type of advertising they recalled such as billboards or signs along the road (13%), television (5%), or radio (4%). Maricopa County residents were more likely to recall information about fines than Pima County residents (17% vs. 8%) and residents in the outlying areas were more likely than other residents to recall the highway signs (12% vs. 4% Maricopa and 2% Pima). Males and residents under age 35 were more likely to remember seeing information about fines for littering than residents in the comparative groups (18% and 23%).

**Table 18: 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	Total (n=315)	Maricopa (n=188)	Pima (n=62)	Outlying (n=65)
Don't litter/ keep Arizona clean	32%	29%	37%	37%
The fines	15	17	8	14
It was a sign along the road/billboard	13	11	19	14
Littering is unlawful/ can get a ticket	9	9	8	8
Clean up efforts/ Adopt a highway	5	4	2	12
Saw on TV/ commercial/ public service announcement	5	5	5	3
Prisoners picking up trash	5	8	-	-
Heard on radio	4	4	6	2
Cost of cleaning up / tax dollars	4	4	2	5
It's a big problem/ becoming an issue	4	2	6	3
Litter is bad for the environment/ bad for wildlife	3	2	6	3
Call a number to report littering	3	2	6	3
Littering/ dumping things in the desert by illegal immigrants	2	3	3	-
Read article in newspaper	2	3	2	2
Indian crying	2	2	3	-
Other*	17%	13%	19%	20%
Don't know	10%	10%	5%	15%

*Q30? What specifically do you remember about the ads related to litter or littering? \*Less than 2% mentions*

**Approximately one-third of residents who remember seeing litter-related advertising in the past three months were able to recall some type of slogan (30%).**

Two of the most commonly recalled “slogans” were actually messages – “do not litter” (mentioned by 14%) and “you will be fined” (mentioned by 5%). Actual slogans that were most frequently recalled were “Don’t Trash Arizona” (6%), Arizona Clean and Beautiful (4%) and “Keep Arizona Beautiful” (4%).

**Table 19: Main Slogan of Recalled Advertising**  
(Among those who indicated they remember seeing ads related to litter or littering in the past 3 months)

Responses	Total (n=315)	Maricopa (n=188)	Pima (n=62)	Outlying (n=65)
Do not litter	14%	13%	13%	20%
Don’t Trash Arizona	6	5	6	6
You will be fined	5	6	2	6
Arizona Clean and Beautiful	4	2	8	9
Keep Arizona Beautiful	4	3	2	5
Littering is unlawful	2	3	3	2
There was no slogan/ it was a sign/ gave information	2	2	3	2
Litter costs everyone/ save taxpayers’ money	2	3	2	-
Give a hoot, don’t pollute	2	1	-	5
Litter hurts everyone	2	2	-	3
Don’t mess with Texas	1	1	-	3
Keep our freeways clean	1	1	-	2
Adopt a highway	1	1	-	3
It is a freeway, its not free to litter	1	-	3	-
Other	3%	3%	3%	3%
Don’t know	68%	70%	71%	62%

*Q31? What was the main slogan used in the ads?*

## B. Don't Trash Arizona Awareness

Slightly more than two in five Arizona residents indicated they have heard the slogan “Don't Trash Arizona” (42%). Overall awareness of the slogan was highest among males (47% vs. 38%) and employed residents (45% vs. 39%).

### Total Awareness - Have Heard Slogan “Don't Trash Arizona” (Unaided + aided)

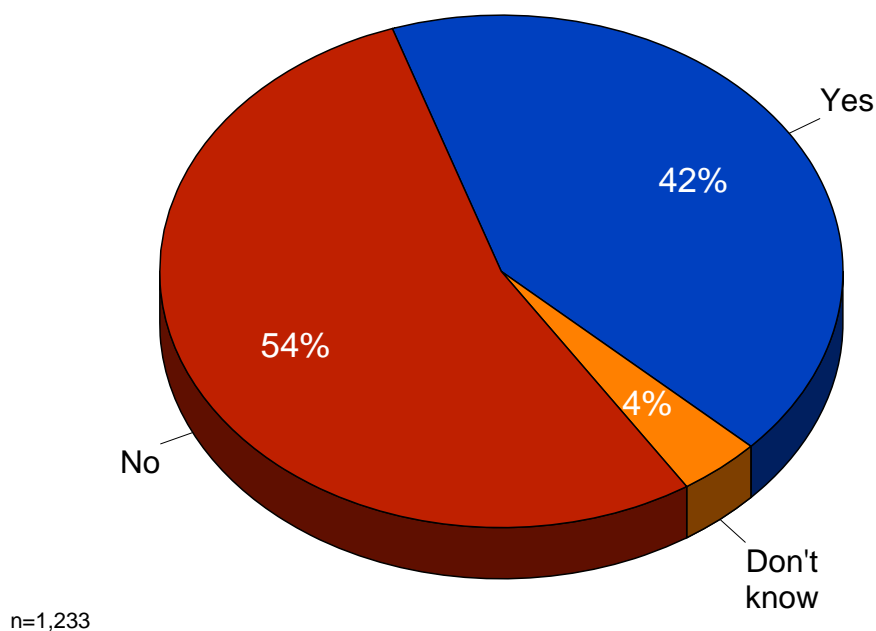


Table 20 on the following page shows that residents who were familiar with the “Don't Trash Arizona” slogan reported seeing and/or hearing the slogan from a variety of sources – television (26%), billboards (22%), radio (14%), and street/highway signs (12%). Residents living in the outlying areas of the state were more likely than others to report seeing the slogan on street/highway signs (17% vs. 12% Maricopa and 7% Pima). Residents under age 35 were more likely than those ages 55 or older to report seeing the slogan on billboards (32% vs. 15%) or on the radio (19% vs. 6%).

Table 21 shows that most residents were unable to name a sponsor for the “Don't Trash Arizona” slogan (72%). One in ten correctly identified the Arizona Department of Transportation (10%) and 12% generically cited the “state” or “local” government.

**Table 20: Where Saw “Don’t Trash Arizona” slogan - Total Responses**  
(Among those indicating they had heard the slogan)

Media	Total (n=522)	Maricopa (n=322)	Pima (n=95)	Outlying (n=105)
Television	26%	26%	30%	19%
Billboards	22%	20%	21%	29%
Radio	14%	14%	11%	18%
Street/highway signs	12%	12%	7%	17%
Newspaper	5%	5%	2%	9%
Bumper stickers	2%	1%	3%	3%
Bus signs	1%	-	3%	-
Trash cans	1%	1%	-	1%
Other	5%	4%	1%	12%
Don’t know	25%	25%	27%	22%

*Q33: Where have you seen, heard or read the slogan “Don’t Trash Arizona?”*

**Table 21: Who Sponsors “Don’t Trash Arizona” slogan**  
(Among those indicating they had heard the slogan)

Sponsor	Total (n=522)	Maricopa (n=322)	Pima (n=95)	Outlying (n=105)
State/local government	12%	14%	7%	9%
Arizona Dept. of Transportation	10%	12%	10%	9%
Maricopa Assoc. of Governments	2%	2%	1%	2%
Other	5%	3%	6%	5%
Don’t know	72%	70%	76%	76%

*Q34: Who sponsors the “Don’t Trash Arizona” advertisements?*

All residents, whether they were aware of the slogan or not, were asked to indicate what the slogan “Don’t Trash Arizona” meant to them. **The primary meaning associated with the slogan was to not litter and put trash where it belongs (mentioned by 59%).** Similar meanings included do not throw trash out the window and keep roads clean (18%) or take care of your own trash (6%). More than one in five residents assigned an environmental meaning to the slogan – do not ruin our state/keep it beautiful (18%) or have respect for and protect the environment (6%).

**Table 22: Meaning of “Don’t Trash Arizona”**

	Total (n=1233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Don’t litter/ put trash where it belongs/ don’t make a mess	59%	61%	55%	57%
Don’t throw trash out the window/ keep roads clean	18%	19%	24%	12%
Don’t ruin our state/ keep it beautiful/ take care of it	18%	18%	16%	21%
Pick up after yourself/ take care of your own trash/ be responsible	6%	6%	11%	4%
Have respect for the environment/ protect environment/ take pride in the state	6%	6%	7%	7%
It means what it says/self-explanatory	4%	3%	5%	4%
Litter makes AZ look bad/ look like a trashcan	2%	3%	2%	2%
Don’t graffiti/ vandalize	2%	2%	2%	1%
Don’t speak badly about Arizona	2%	2%	1%	1%
Do your part/ pick up trash when you see it	2%	1%	1%	3%
Other	6%	5%	6%	6%
Don’t know	4%	2%	4%	7%

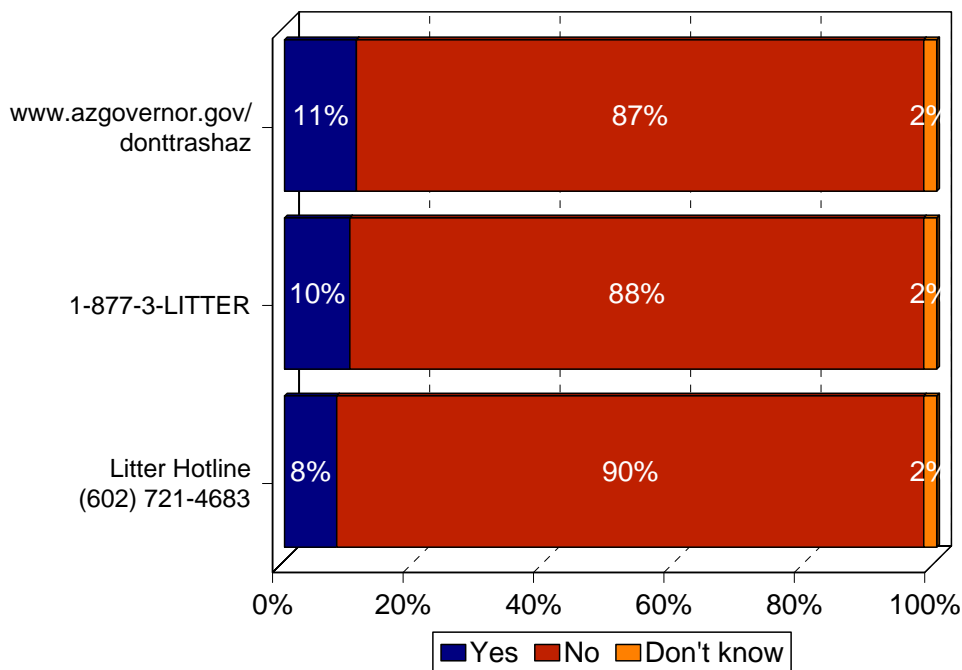
*Q35: In your own words, please tell me what the slogan “Don’t Trash Arizona” means to you?*

**C. Awareness of Litter Hotline**

When specifically asked about three sources for information about litter, only one in ten residents indicated awareness of the “Don’t Trash Arizona” website (11%) or the toll-free hotline (10%). One in twelve indicated awareness of the Phoenix-based hotline (8%).

- Awareness of the website was highest among lower income residents (13% of those with incomes under \$40K vs. 9% of those with incomes over \$75K), those with less than a college degree (12% vs. 8%), and residents with a minority ethnic background (16% vs. 10%).
- Awareness of the toll-free litter hotline was highest among Pima County residents (14% vs. 9% for Maricopa and 7% for outlying), males (12% vs. 8%), and residents between the ages of 35 and 54 (12% vs. 8% of those ages 55 or older).
- Surprisingly, awareness for the Phoenix-based hotline phone number was the same across residents from all three areas surveyed (8% Maricopa and 7% for Pima and outlying). Once again, awareness was highest among males (9% vs. 6%) and residents between the ages of 35 and 54 (10% vs. 5% of those under the age of 35 and 6% of those age 55 or older).

## Aided Awareness - Litter Resources



**Table 23: Aided Awareness - Litter Hotline**

Source	Those indicating awareness			
	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
NET aware all three				
<a href="http://www.azgovernor.gov/don'ttrashaz">www.azgovernor.gov/don'ttrashaz</a>	11%	10%	13%	12%
Litter Hotline 1-877-3-LITTER	10%	9%	14%	7%
Litter Hotline 602-721-4683	8%	8%	7%	7%

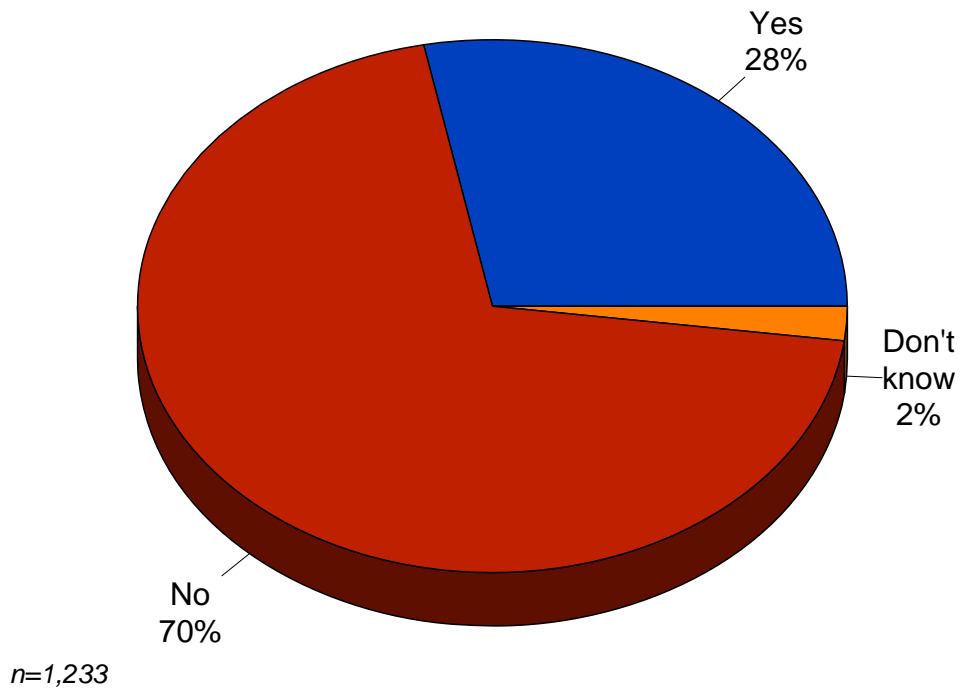
*Q36: Have you heard of the following information source?*

*Residents who were not aware of the two telephone hotlines were asked about their awareness in general of a litter hotline they could call to report someone who litters.*

**Overall, the combined awareness of the specific hotlines as well as the aided awareness of a general hotline was 28% for all Arizona residents surveyed.** Those most likely to be aware of the hotline were Pima County residents (37% vs. 26% of all other residents), males (31% vs. 25%), and residents ages 35 to 54 (32% vs. 23% of those under age 35).

## Total Awareness of Litter Hotline

(Aided + Unaided)



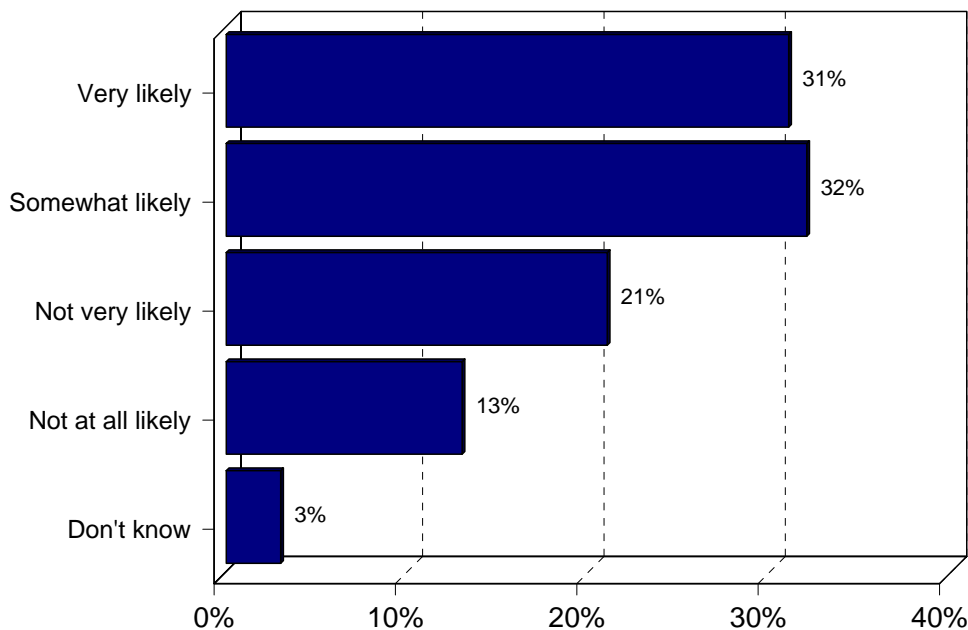
#### D. Likelihood to Use Litter Hotline

When asked how likely they would be to call the litter hotline to report someone who was littering, approximately three in five residents indicated they would be at least “somewhat” likely to call (31% “very likely” and 32% “somewhat likely”).

Residents who were most likely to indicate that they are “very likely” to call the litter hotline and report a violation include:

- Residents living in the outlying areas of the state (40% vs. 34% of Pima and 27% of Maricopa)
- Residents ages 35 to 54 (37% vs. 24% of those under age 35)
- Non-white residents (38% vs. 29% of Caucasians)

### Likelihood to Report Littering via Hotline



Total n=1,233

**Table 24: Likelihood to Report Littering**

Likelihood	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Very likely	31%	27%	34%	40%
Somewhat likely	32%	35%	31%	24%
Not very likely	21%	22%	20%	21%
Not at all likely	13%	13%	12%	12%
Don't know	3%	3%	4%	4%

*Q 38: If you were to see someone litter, how likely are you to report this behavior*

**E. Persuasive Campaign Messages**

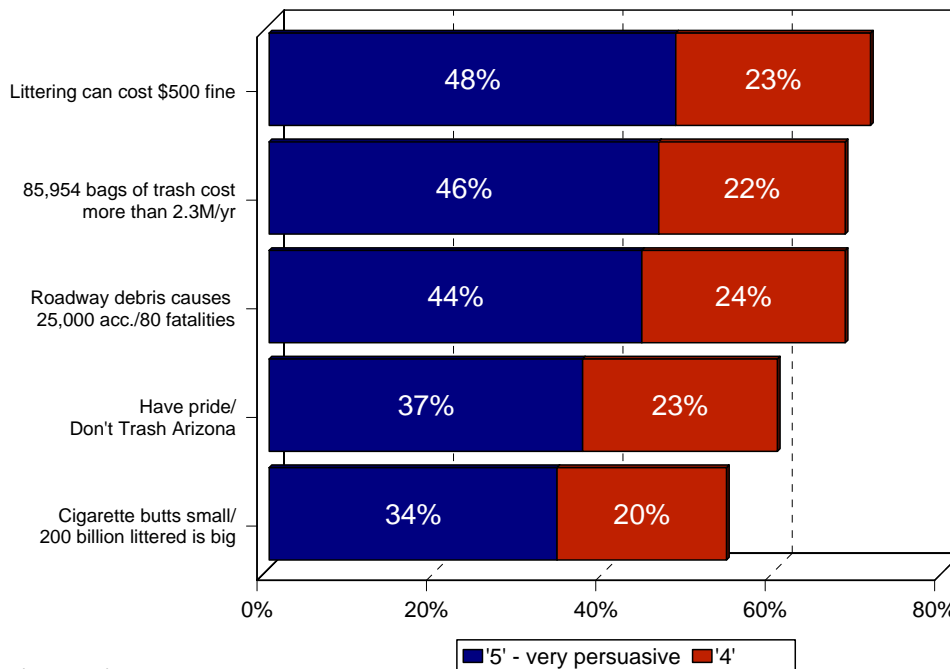
Residents were read a list of 10 messages and asked to indicate how persuasive they felt each message would be in motivating residents not to litter along state freeways.

The three messages receiving the highest proportion of “very persuasive” ratings from Arizona residents are those that address the impact of littering on individuals or the state – *“Littering can cost drivers and passengers a misdemeanor fine of \$500”* (48% very persuasive; 71% combined 4+5 ratings); *“More than 85,954 bags of trash were picked up along the Maricopa County freeway system last year alone. This costs us an average of \$2.3 million per year in cleanup”* (46% very persuasive; 68% combined 4+5 ratings); and *“Debris on roadways nationwide caused 25,000 accidents each year and more than 80 fatalities.”* (44% very persuasive; 68% 4+5 ratings).

Rounding out the top five messages receiving the highest persuasive ratings are “Have pride in your state. Don’t Trash Arizona.” (60% combined 4+5 ratings) and “Cigarette butts are small, but with over 200 billion littered each year it becomes a big problem and toxic chemicals add up” (54% 4+5 ratings).

## Five Most Persuasive Messages

(Percentage giving ‘4’ or ‘5’ rating; 5 = very persuasive)



Overall females, those with household incomes under \$40K, those with lower education levels, and minority residents tended to be more likely than residents in the comparative groups to give all of the messages a “4” or “5” rating. Interestingly, younger residents were more likely than residents ages 35 and older to find the messages that quoted statistics to be most persuasive, whereas residents ages 55 and older were more likely than younger residents to give “4” or “5” ratings for the messages that focused on the beauty of Arizona and personal responsibility.

**Table 25: Persuasive Messages**

Messages	Not at all		Very			Average Rating
	Persuasive		Persuasive			
	1	2	3	4	5	
Littering can cost drivers and passengers a misdemeanor fine of \$500	5%	5%	18%	23%	48%	4.0
More than 85,954 bags of trash/costing us \$2.3 million per year	7%	8%	16%	22%	46%	3.9
Debris on roadways nationwide caused 25,000 accidents ea. year/80 fatalities	7%	7%	17%	24%	44%	3.9
Have pride in your state. Don't trash AZ	7%	11%	21%	23%	37%	3.7
Cigarette butts are small/200 billion littered each year becomes a big problem and toxic chemicals add up	12%	13%	20%	20%	34%	3.5
Be responsible & please dispose of litter properly.	12%	15%	27%	17%	29%	3.4
Keep a litterbag in your car	15%	17%	23%	14%	30%	3.3
Walk a few extra steps to use a trash can	10%	18%	26%	16%	28%	3.3
If you don't litter in front of people, why would you litter alone?	16%	15%	23%	18%	24%	3.2
It is your responsibility to report someone littering by calling the Litter Hotline	19%	22%	27%	13%	17%	2.9

*Q41: How persuasive do you believe the following messages are:*

There were slight differences between residents living in the three regions studied in the perceived persuasiveness of some of the messages.

- As expected, Maricopa County residents were more likely to highly rate the message regarding the number of bags of trash picked up along Maricopa County freeways than were residents living in other parts of the state (70% giving a 4 or 5 rating compared to 66% for Pima and 64% for outlying areas).
- Pima County residents were more likely to give higher ratings than Maricopa County residents for two messages – “Keep a litter bag in your car “ (48% giving a 4 or 5 rating compared to 40% of Maricopa residents) and “It is your responsibility to report someone littering by calling the Litter Hotline” (36% giving a 4 or 5 rating compared to 27% of Maricopa County residents)
- Residents living in the outlying areas of the state were more likely than others to give high ratings to six of the 10 messages tested. Most notably, the one message that received the highest percentage of “4” or “5” ratings among these residents was “Debris on roadways nationwide caused 25,000 accidents each year and more than 80 fatalities” (72%). This message ranked third among Maricopa and Pima County residents.

**Table 26: Persuasive Messages - Regional Information  
Percentage giving a “4” or “5” Rating**

Message	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Littering can cost drivers and passengers a misdemeanor fine of \$500	70%	71%	72%	69%
More than 85,954 bags of trash/costing us \$2.3 million per year	68%	70%	66%	64%
Debris on roadways nationwide caused 25,000 accidents ea. Year/80 fatalities	68%	68%	63%	72%
Have pride in your state. Don't trash AZ	60%	57%	62%	67%
Cigarette butts are small/200 billion littered each year becomes a big problem and toxic chemicals add up	54%	54%	50%	60%
Be responsible & please dispose of litter properly.	45%	41%	46%	57%
Keep a litterbag in your car	44%	42%	46%	50%
Walk a few extra steps to use a trash can	44%	40%	58%	53%
If you don't litter in front of people, why would you litter alone?	42%	41%	45%	44%
It is your responsibility to report someone littering by calling the Litter Hotline	30%	27%	36%	31%

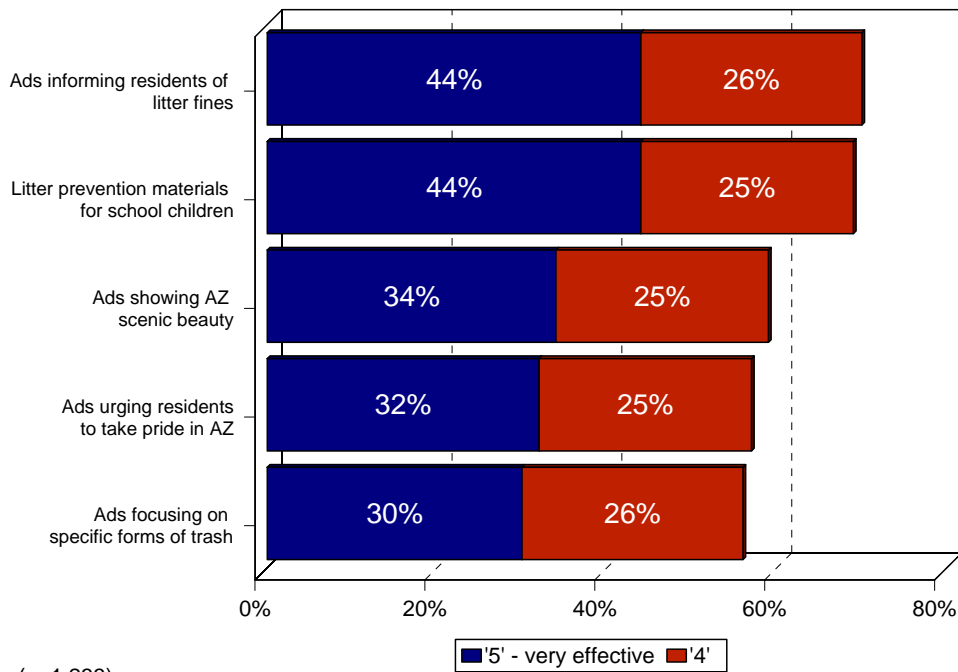
**F. Effective Advertising Messages**

*Next, residents were read a list of seven types of advertisements and asked to indicate how effective they felt the message from each ad would be in persuading people not to litter.*

**In addition to receiving high ratings for persuasiveness, an advertising message that informs residents of the \$500 litter fine also received the highest percentage of effectiveness ratings from Arizona residents (70% “4” or “5” ratings). Residents also felt it would be effective to give litter prevention materials to elementary age children (69% “4” or “5” ratings). The next tier of advertising messages that received “4” or “5” ratings from close to three in five residents included ads showing or describing Arizona’s scenic beauty (59%), ads urging residents to take pride in Arizona (58%), and ads concentrating on specific, prevalent forms of trash such as cigarette butts, bottles, tires or fast food trash (57%).**

## Five Most Effective Ad Messages

(Percentage giving ‘4’ or ‘5’ rating; 5 = very effective)



Once again, females, those with lower incomes, a high school or less education, and residents with minority ethnic backgrounds were more likely than those in comparative groups to give a “4” or “5” effectiveness rating to all the ad messages. Residents age 55 and older were significantly more likely than residents age 35 and younger to give high effectiveness ratings on six of the seven messages.

Table 27: Effectiveness of Advertising Messages

Messages	Not at all Effective			Very Effective		Average Rating
	1	2	3	4	5	
Ads informing residents if they litter they will be fined	6%	7%	17%	26%	44%	4.0
Litter prevention awareness materials for elementary school children	4%	6%	20%	25%	44%	4.0
Ads showing or describing AZ scenic beauty	7%	10%	22%	25%	34%	3.7
Ads urging residents to take pride in the state of AZ	6%	11%	25%	25%	32%	3.7
Ad focusing on specific, prevalent forms of trash	6%	10%	26%	26%	30%	3.7
Ads informing residents if they litter they will be caught	10%	13%	24%	21%	30%	3.5
Ads urging residents to report those who litter by calling litter hotline	12%	18%	29%	19%	22%	3.2

*Q42: Please rate how effective you think each would be in persuading people not to litter:*

There were slight differences between residents living in the three regions studied in the perceived effectiveness of some of the potential advertising messages.

- In general, Maricopa County residents were less likely than residents in other areas of the state to give a “4” or “5” rating to all of the messages.
- Although most of the ratings given by Pima County residents were higher than those given by Maricopa County residents, Pima County residents were significantly more likely than Maricopa County residents to give a “4” or “5” effectiveness ratings for ads urging residents to take pride in Arizona (61% vs. 55%) and ads urging residents to report those who litter by calling a litter hotline (46% vs. 38%).
- Residents living in the outlying areas of the state also gave significantly higher ratings than Maricopa County residents for the two ad messages pointed out for Pima County (62% and 46%, respectively), they also gave higher ratings than residents of both Pima and Maricopa Counties for ads showing or describing Arizona’s scenic beauty (66% “4” or “5” ratings compared to 57% Maricopa and 59% Pima).

**Table 28: Effectiveness of Advertising Messages - Regional Information**  
**Percentage giving a "4" or "5" Rating**

Message	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Ads informing residents if they litter they will be fined	70%	68%	71%	73%
Litter prevention awareness materials for elementary school children	69%	68%	71%	72%
As showing or describing AZ scenic beauty	59%	57%	59%	66%
Ads urging residents to take pride in the state of AZ	58%	55%	61%	62%
Ad focusing on specific, prevalent forms of trash	57%	56%	58%	57%
Ads informing residents if they litter they will be caught	51%	49%	53%	56%
Ads urging residents to report those who litter by calling litter hotline	41%	38%	46%	46%

### G. Personal Litter Messages

When asked to describe what they would say to someone to convince them not to litter, the largest proportion of Arizona residents indicated they would simply tell the person not to do it (34%) or pick it up and put it in the trash (12% and 10%, respectively). Others indicated their message would be something that would make the person feel guilty, such as “don’t be lazy,” “do you do that at your house?” or “that’s disrespectful, why did you do that?” (mentioned by 18%).

A proportion of residents would point out the ramifications of littering either on the person who litters (“you will get fined – 5%), the environment (7%), other people (“think of future generations” – 2%; someone has to pick it up – 2%), or cost to city/state to clean it up (2%). A small percentage indicated they would not say anything (5%) and/or would just pick the trash up themselves (1%).

**Table 29: Personal Message to People Who Litter**

Message	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Don't do it/ Don't litter/ Don't trash Arizona	34%	34%	35%	32%
Something to make them feel guilty/ make them feel ashamed/ don't be lazy/ do you do that at your house?/ It's disrespectful, why did you do that?	18	18	15	21
Put it in the trash	12	12	10	11
Pick it up/ Clean up after yourself	10	10	10	12
It looks trashy/ messy	9	8	7	12
Explain harmful effects to the environment	7	6	8	7
You will get fined for that/ its illegal	5	5	4	5
I wouldn't tell them anything	5	4	6	4
Think of the next generation/ the future	2	2	2	4
Money spent to pick up trash/ could be put to use somewhere else	2	2	2	1
Someone has to pick it up/ who's going to pick that ups?	2	1	2	2
Something graphic/ would cuss them out	2	1	2	2
I would just pick it up/ I would take care of it	1	1	2	1
Other	6%	6%	5%	6%
Don't know	8%	8%	10%	8%

*Q40: In your own words, please tell me what would you say to someone to convince them not to litter?*

Males and younger residents (under age 55) are more prone to indicate they would say something to make the person littering feel guilty (20% for each), whereas older residents would be more likely to tell them to pick it up and clean up after themselves (12%). Residents with a minority ethnic background are more likely to say they would simply tell people not to do it (42% vs. 32% of Caucasian residents) or pick it up (15% vs. 11%). Caucasian residents were more likely to indicate they would say something to make the person feel guilty (19% vs. 14%) or talk about how messy/trashy it looks (10% vs. 6%).

## H. Additional Litter Resources

**Arizona residents indicated they would primarily turn to the Internet if they wanted more information about litter or littering (mentioned by 53%).** This was particularly true among residents living in Maricopa County (59% vs. 46% Pima and 40% outlying) and those under age 55 (69% of those under age 35; 58% of those 35 to 54; 30% of those 55 or older). Older residents were more likely to go to the litter hotline (6% vs. 3%) or other government entities, such as the city, state, ADOT, city council, etc.

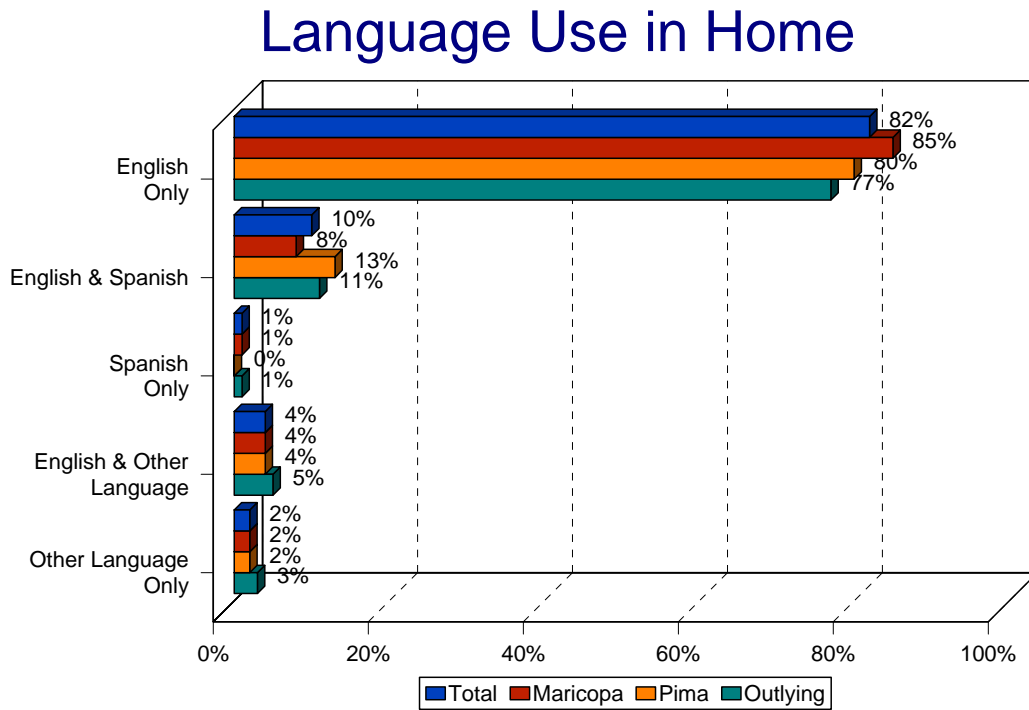
**Table 30: Source for Litter/Littering Information**

Source	Total (n=1,233)	Maricopa (n=748)	Pima (n=243)	Outlying (n=242)
Internet	53%	59%	46%	40%
Police/ highway patrol/DPS	5	4	6	7
The "city"	4	5	4	3
Litter hotline	4	4	3	6
Phonebook/ yellow pages	4	4	4	3
I wouldn't need that information/ wouldn't contact anyone	3	3	2	2
The state/governor	3	3	2	2
ADOT	3	2	3	3
Waste Management/garbage company	2	2	4	2
City council/ councilmen/ mayor	2	1	2	3
Friend/ neighbor/ family member/ teacher	2	1	1	2
Newspaper	1	1	1	2
Other*	9%	8%	11%	14%
Don't know	16	13	18	21

*Q39: 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%*

## V. Spanish Media Use

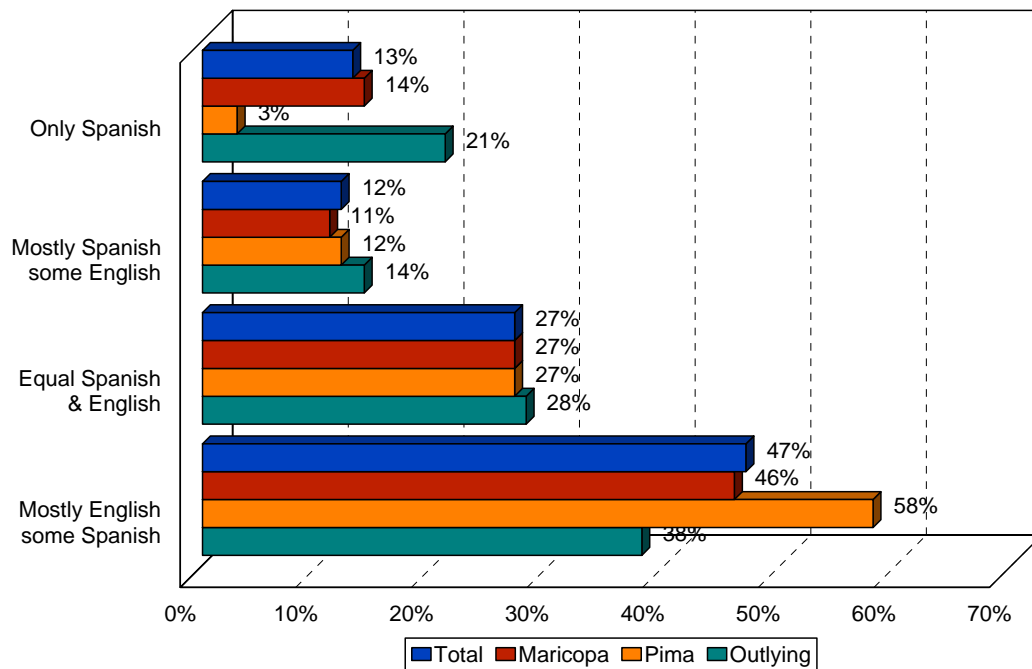
Approximately one in ten Arizona residents interviewed (11%) reported that Spanish was spoken in their home. This percentage was highest in Pima County (14%).



Total n=1,233; Maricopa n=748; Pima n=243; Outlying n=242

Approximately half of the Spanish-speaking Arizona residents (47%) indicate they speak “mostly English and some Spanish” and another 27% report to speak the two languages equally.

### Amount of Spanish Spoken



(Among Spanish-speaking residents; n=125)

Slightly more than two in five Spanish-speaking residents indicated they watch and/or listen to Spanish TV and radio regularly (33% daily and 11% two to five times a week).

**Table 31: Spanish TV & Radio – Viewing Habits**  
Among those indicating they speak Spanish at home

Frequency	Total (n=125)	Maricopa (n=63)	Pima (n=33)	Outlying (n=29)
Daily	33%	32%	33%	35%
Regularly (2-5x per week)	11%	11%	12%	10%
Occasionally (1x every 1-2 weeks)	23%	19%	27%	28%
Rarely (less than 1x every 2-5 weeks)	33%	38%	27%	28%

*QD7B: Thinking about your habits in regard to Spanish television and radio, would you say you watch Spanish television...?*

## VI. 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 (27% of the total population). “Accidental Litterers” are defined as residents who indicated they had never littered themselves, but reported being in a vehicle when littering occurred (39% 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 (34% of the total population).

**Table 31: Demographic Comparison based on Littering Behavior**

Characteristic	Admitted Litterers (n=335)	Accidental Litterers (n=478)	Non-Litterers (n=420)
<b>Gender</b>			
Male	59%	51%	41%
Female	41%	49%	59%
<b>Age</b>			
>21	16%	3%	1%
21-24	11%	3%	-
25-34	23%	22%	13%
35-44	21%	21%	18%
45-54	16%	22%	21%
55-65	8%	14%	17%
66+	5%	15%	30%
Average	36 years	46 years	53 years
<b>Marital Status</b>			
Married	52%	63%	63%
Single	39%	22%	18%
Widowed	2%	6%	10%
Divorced	4%	6%	5%
Separated	2%	-	1%
D/K or Refused	1%	3%	2%
<b>Education</b>			
Less than H.S.	13%	6%	6%
H.S. graduate	18%	18%	17%
Some college	34%	35%	33%
College graduate	21%	26%	27%
Graduate degree	12%	13%	13%

**Table 31b: Demographic Comparison based on Littering Behavior**

Characteristic	Admitted Litterers (n=335)	Accidental Litterers (n=478)	Non-Litterers (n=420)
<b>Ethnicity</b>			
White	73%	76%	84%
Hispanic	15%	12%	6%
African American	2%	3%	2%
Asian	2%	1%	1%
Native American	4%	3%	2%
Other	4%	4%	5%
<b>HH with Children &lt;18</b>	56%	43%	35%
<b>HH Income</b>			
<\$10,000	6%	3%	3%
\$10-\$20,000	8%	6%	7%
\$20-\$30,000	9%	8%	10%
\$30-\$40,000	8%	9%	8%
\$40-\$50,000	9%	10%	6%
\$50-\$60,000	5%	6%	8%
\$60-\$75,000	9%	9%	7%
\$75-\$100,000	10%	14%	9%
\$100,000+	17%	14%	14%
Refused	19%	21%	28%
<b>Employment Status</b>			
Full-time	52%	54%	40%
Part-time	11%	9%	8%
Retired	11%	22%	35%
Homemaker	9%	7%	10%
Student	8%	2%	2%
Unemployed	6%	5%	3%
<b>HH Language</b>			
English only	82%	80%	85%
English & Spanish	10%	10%	8%
Spanish only	1%	1%	1%
English + other language	4%	5%	2%
Other language only	2%	2%	2%