

**Findings from
Opinion Research**

**2011
SAN DIEGO CITY
STORM WATER SURVEY**

**Conducted for
Think Blue San Diego**

Goodwin Simon Strategic Research

April, 2011

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Methodology

Think Blue San Diego, a program of the San Diego Storm Water Pollution Prevention Division, asked Goodwin Simon Strategic Research (GSSR) to conduct a telephone survey of adult residents living in San Diego.

Purposes

- To assess awareness of the Think Blue program and its outreach activities.
- To assess the impact of Think Blue outreach efforts on interest in and attitudes about pollution of water in storm drains.
- To assess the impact of Think Blue outreach efforts on awareness of the causes of storm water pollution and knowledge that the storm drain and sewage systems are separate.
- To assess the impact of Think Blue outreach efforts on reducing potential pollution-causing behaviors.
- To identify barriers that might prevent residents from 1) asking violators to clean up dog waste and 2) fixing fluid leaks from vehicles.
- To assess the impact of various potential motivations for behavioral change.

Population and Sample Frame

The population under study was adults living in residential non-group housing in the city of San Diego. The sampling frame consisted of households that had either landline telephone service, or cellular telephone service, or both.

The sample, supplied by Scientific Telephone Samples, consisted of two separate random selections of landline and wireless telephone numbers, created in representative replicates.

- The landline sample was selected from among working banks of 100 contiguous numbers in exclusively landline exchanges which contained three or more residential listings in the city of San Diego. The sample was pre-screened to eliminate disconnects, businesses, and ported cell phone numbers.
- The wireless sample was selected randomly from among all wireless exchanges associated with the county of San Diego (wireless sample can only be ordered on a county-wide basis).

Sampling

Eight hundred adult residents of San Diego were interviewed by telephone March 2 to 13, 2011. Eligibility for participation was determined through the use of screening questions:

- Landline interviews were randomized among household adults through the use of the “last birthday” method.
- Wireless numbers were hand-dialed and participants screened for safety.

- All participants were screened for adult status, city of residence, and non-business use of the phone number.

Both samples were released in representative replicates to ensure an appropriate regional distribution, and multiple attempts were made to contact each number. Refusal conversions were attempted. Data collection was carried out by McGuire Research. The questionnaire was translated and interviews were conducted, upon participant request, in either English (N=787) or Spanish (N=13). The full questionnaire and marginal results are included as an appendix to this report.

Landline and Wireless Phone Service

Two hundred thirty interviews were conducted on a wireless phone, and 570 on a landline phone. Among landline participants, 360 could also have been reached on a cell phone, while 212 have only a landline number.

As no precise figures are available at this time for how many households in the City of San Diego have only a landline phone, only a cell phone, or both, the samples were combined by using the best available estimate of landline and cell phone households, i.e. roughly 19% of the population has only a landline, and cannot be reached using a cell phone sample. The combination factor calculations utilized a 50/50 estimate for dual (cell phone and landline) household overlap. Once combined, the sample was adjusted to match the latest American Community Survey census estimates for gender, race and ethnicity, age, and educational attainment.

Survey Error and Response Rates

The best estimate of sampling error for citywide results for the combined sample of 800 is plus or minus 3.4 percentage points at a 95% confidence level. No precise estimate is available of the contribution to sampling error which may arise from combining landline and wireless samples. The margin of sampling error (MOSE) for some analyzed subgroups may be higher.

While every precaution was taken to avoid error and increase accuracy, surveys such as this one may be subject to errors other than those attributable to sampling techniques, for which precise estimates cannot be calculated. These could include undetected differences between those who agreed to participate and those who did not, bias resulting from the wording or order of the questions, or influence from outside events that take place during the study period. Such errors are the result of the various practical difficulties associated with taking any survey of public opinion.

AAPOR Response rates are available in Appendix II at the end of this report.

Analysis and Comparisons with Previous Research

This is the fifth year that Goodwin Simon Strategic Research has conducted an annual survey of San Diego residents for Think Blue San Diego. It is important to note that since 2009, the sampling frame has included both landline and wireless telephone samples. In previous years, sampling was of landline exchanges only.

Note also that this 2011 survey asks residents to report actions they took in 2010. Thus the 2011 survey generally refers to 2010 actions, while the 2010 survey refers to 2009 actions, and so forth.

This report presents results broken out by subgroups of adult residents (e.g., by men versus women or by watershed) only if the differences are both statistically significant using standard significance testing, and are of relevance.

Executive Summary

Think Blue San Diego, a program of the San Diego Storm Water Pollution Prevention Division, asked Goodwin Simon Strategic Research (GSSR) to conduct a telephone survey of adult residents living in the city of San Diego.

This study was conducted between March 2 and March 13, 2011. Eight hundred telephone interviews were conducted with adult residents randomly identified from across the city of San Diego using a random-digit-dial methodology, in which random lists of landline and cell phone telephone numbers served as the sample. Results were weighted to avoid double counting those who could have been reached on both a cell and a land line, and to match the latest American Community Survey census estimates for gender, race and ethnicity, age, and educational attainment

The margin of error for citywide results is plus or minus 3.4% at a 95% confidence level. That is, if this survey were to be repeated exactly as it was originally conducted, then 95 out of 100 times the responses from the sample (expressed as proportions) would be within 3.4 percentage points of the actual population proportions.

KEY CHANGES FROM 2010 SURVEY RESULTS

This first section of the summary presents statistically significant changes in response to identical or comparable questions asked in the 2010 and 2011 Think Blue surveys.

- Awareness of the Think Blue San Diego slogan reached 53% in the 2011 survey, up from 47% a year ago and the highest level we have recorded in any recent Think Blue survey. There were significant increases in awareness of the slogan among white residents, women, and residents under age 65.
- The proportion of residents who said they saw a Think Blue TV commercial rose from 46% to 52%, and the proportion who said they heard a radio commercial increased from 26% to 35%.
- The proportion of residents who claim to have called the Think Blue Hotline rose from 1% to 4%, although a substantial change in how this question was asked might account for most or all of difference.
- While there was no change overall in the proportion who said that they changed their behavior as a result of seeing any information about what polluted water in storm drains does to local waters (although there was a sizable increase in reported action among Hispanics), there was a substantial decline in the proportion who said that the action they took involved water conservation: from about 50% in previous years to 28% in the 2011 survey. There were small increases in the proportion who said they picked up dog waste and disposed of motor oil properly, which were two main areas of concentration in 2010 for Think Blue outreach.
- The proportion of residents who knew that storm water is not treated rose significantly from 52% to 57%, continuing an upward trend that we have seen since 2008 (when it was 39%). Nearly all of the increase compared to the 2010 survey is found among men compared to women. We also found sizable increases in awareness among Asian and Black respondents, although the small sample sizes with these groups might account for the volatility in responses.
- The 2011 survey found a significant increase in the proportion of residents who reported seeing leaking motor oil (from 12% to 20% who say they see it often or very often on their blocks), litter (from 19% to 30%), and dog waste (from 21% to 26%) – again possibly a result of Think Blue outreach on these sources of pollution. We also found a significant increase in the proportion who admit to having vehicle fluid leaks (from 9% of vehicle owners to 17%) and who said they took action to stop the leaks, from 70% to 86% of leakers.

- The 2011 survey found a sizable decrease in the proportion who considered litter and motor oil to be serious sources of pollution of storm water, from 64% in 2010 to 53% in 2011 for litter and from 81% in 2010 to 69% in 2011 for motor oil.

KEY FINDINGS

The second section of the Executive Summary presents highlights from the 2011 survey results.

Familiarity with Think Blue Communications Efforts

Awareness of the Think Blue San Diego slogan reached its highest point reported in any survey conducted for the program in recent years, at 53% who said they had heard it *“in the past year.”* The comparable number in the 2010 survey was 47%. Awareness was much lower among seniors, and that pattern is seen throughout the survey. Awareness also increased with length of residency, and was higher among whites and Hispanics compared to other residents of San Diego. Awareness of the slogan was positively correlated with awareness of specific Think Blue outreach efforts (e.g. TV and radio commercials), and also with accurate knowledge of how the storm drain system works and with having taken personal action to reduce pollution. Most people (59%) said they encountered the slogan on TV.

More than half (52%) said they saw a Think Blue TV commercial, with 35% who heard a radio ad. There was a significant increase in reported exposure to both TV and radio commercials from the 2010 survey to the 2011 survey. Much smaller proportions report seeing a booth or sign at an event (18%) or a brochure from Think Blue (14%), but these figures still represent hundreds of thousands of people claiming to have seen Think Blue materials. Very small proportions claim to have seen the website (5%), gotten a Facebook posting from Think Blue (4%), or gotten an email from Think Blue (3%). Hispanics are most likely to say they have encountered Think Blue communications, and this is consistent with what we found in the 2010 survey. Seniors are among the least familiar with Think Blue communications. As we saw in the 2010 survey, familiarity with Think Blue is highest among those who say they have taken action to reduce pollution.

Twenty percent have heard “a great deal” or “some” about the Think Blue Hotline (very similar to what we found in 2010, although with a different question) and 4% overall (9% of those had heard a great deal or some about it) said they actually called the Hotline in 2010. By a wide margin, residents say they would call the Hotline to report pollution-causing activities (45%) with only 17% who said they would call the Hotline to get information about how to prevent pollution. The most commonly mentioned barriers to calling the Hotline were 1) not seeing pollution, and 2) not believing that the city would do anything about the pollution even if reported. These are certainly barriers that the Think Blue program can address by educating people about potential sources of pollution and how they affect the ocean, and by making clear that the city does enforce these laws to protect our beaches, our ocean, and our economy.

Changes in Behavior to Reduce Pollution

About one in three (32%) said they had changed their behavior as a result of seeing *“information about what polluted water in storm drains does to local creeks, the beaches, and the ocean.”* This figure has been very consistent since we began asking this question in 2009. Higher levels of response to this question are found among those who have greater familiarity with the Think Blue program, suggesting the effectiveness of outreach efforts in changing behavior. We also found higher levels of reported behavior change among Hispanics and especially Spanish speakers. We found much lower levels of response among those over age 70, those with lower education levels (no college degree), Black and Asian residents, and renters.

The reported changes in behavior that were made include using less water (28%), using a carwash instead of washing cars at home (19%), picking up trash and litter (18%), recycling more (13%), disposing of used motor oil properly (10%), and disposing of dog waste properly (4%). Reports of the latter two actions, which were the focus of Think Blue outreach efforts in 2010, were small but still greatly increased over what was seen in the 2010 survey.

Is Storm Water Treated Before Release?

Knowledge that the storm drain system is separate from the sewer system continues to expand among residents of San Diego. The proportion of city residents who know that storm water is not treated before flowing into creeks or the ocean has steadily risen from 39% in 2008 to 57% in 2011. The proportion of residents who believes that storm water is treated before being released has remained virtually static at 16%, but the proportion who said they weren't sure has declined from 46% three years ago to 28% today. Those least likely to know the correct answer include women, seniors, Hispanics and especially Hispanic women, and newcomers to the city (5 years or less).

Reusing Storm Water

For the first time, the 2011 survey asked residents about their reaction to possible ways of reusing storm water. We found very little opposition – and strong support – for using storm water for outdoor irrigation (88% in favor) and for industrial purposes (80% in favor). We found two-to-one support (58% to 29%) for using storm water *“to replace water now imported from the Colorado River.”* This would likely be a persuasive message in support of reusing storm water. We found divided support for *“purifying the water and adding it to drinking water supplies”* at 49% in favor and 44% opposed. Obviously the reference to purifying the water was crucial to the support levels we observed. Hispanics were much more likely than whites to favor the use of storm water for potable purposes, and Black and Asian residents were strongly opposed.

Storm Drain Pollutants

We observed a sizable increase in the proportion of residents who say they saw litter, motor oil, and dog waste “often” or “very often” on their block: from 19% to 30% for litter (comparing the 2010 and 2011 surveys); from 12% to 20% for motor oil on streets/driveways; and from 21% to 26% for dog waste. As these pollutants were mentioned in Think Blue outreach efforts in 2010, it would be reasonable to assert that this is at least in part responsible for the increase. Indeed, those who say they saw a Think Blue TV commercial or heard a radio commercial were more likely to report seeing these items on their block.

However, ratings for the seriousness of litter and motor oil declined in the 2011 survey compared to previous years. For litter, it went from 64% in 2010 to 53% in 2011 who said that litter was a serious source of pollution in storm drains. For oil, the rating went from 81% in 2010 to 69% in 2011. We did not test the seriousness of dog waste in previous years, but 46% rated it as a serious source of pollution of storm drains in the 2011 survey. Exposure to and familiarity with Think Blue program elements is positively correlated with concern about all of these pollutants.

One in three have heard from Think Blue about pollution from dog waste, and especially among Hispanics and Spanish speakers. Older residents, Black and Asian residents, and newcomers (5 years or less) were considerably less likely to recall hearing information about dog waste from Think Blue. Two of three respondents say they would be willing to ask a dog owner to clean up dog waste if they left it on the respondent's block. The main barriers to taking this action appear to be a concern about safety – and especially among women – and concern about appearing rude. While there is little that Think Blue can do about the former, it could certainly take actions to reduce concerns about rudeness.

Forty-six percent say they heard “a great deal” or “some” from Think Blue about pollution caused by leaking oil from vehicles, considerably more than the 33% who say they have heard from Think Blue about pollution from dog waste. As usual, Hispanics are most likely to have been reached on this message, with seniors least likely. Seventeen percent of vehicle owners report seeing a leak of fluids from their vehicle in 2010, up from 9% of vehicle owners in the 2010 survey. Non-white men and those who speak Asian languages at home were most likely to report seeing fluid leaks. Those with leaks were asked if they had taken action to stop them, and the proportion who had done so, at 86% of leakers, was higher than the 70% found in the 2010 survey. So more people admitted to having leaks, and more leakers said they did something about it. The most common reasons offered by respondents for not doing anything about the leaks is that their cars do not leak, and that they did not know that such leaks cause pollution of the oceans. The city can address both these issues in communication with the public.

Motivation Messages

The strongest concern about the effects of storm water pollution on San Diego was related to the impact of pollution on human health, and the impact of pollution on marine life. Still, we found fairly strong responses to the cost to taxpayers, the impact on tourism, and the pollution of potentially useful water. Women and especially women over age 50 were especially concerned about these issues. Exposure to the Think Blue resulted in higher levels of concern about these effects. A follow-up question found that 42% said they were most concerned that the pollution causes harm to marine life and to people who swim in the ocean, and 20% were most concerned that this pollution costs San Diego taxpayers a lot of money that could be used for other purposes.

Consistently, since 2007, we have seen in our surveys that the issue of greatest concern to San Diego residents related to storm water pollution is the impact on human health. The impact on marine life has also been a strong and consistent concern across all of our surveys.

The question we have been exploring in this and previous surveys is whether there is a persuasive third issue to serve as a motivation for action. These 2011 results suggest that the cost to taxpayers might be a solid “backup” issue, especially at present with the state and city cutting billions in spending.

CONCLUSIONS AND RECOMMENDATIONS

The 2011 survey shows progress for Think Blue outreach on several key fronts:

- An increase in awareness of the program to near-record high levels.
- Greater penetration of Think Blue TV and radio commercials and a possible increase in use of the Hotline.
- A substantial increase in the proportion who are aware that storm water is not treated, up by five points since the 2010 survey and up by nearly twenty points since 2008 (a 46% increase).
- An increase in awareness of dog waste, litter, and vehicle fluid leaks on their blocks, all of which were mentioned in Think Blue outreach. We also found an increase in reported vehicle leaks, and also action to stop such leaks. This could well be the result of Think Blue outreach efforts.

Perhaps more importantly, we find (as we have in recent previous surveys) a strong connection between exposure to Think Blue outreach and 1) desired knowledge/awareness and 2) reported behavioral change. That is, those who say they have heard the Think Blue slogan or say they have seen/heard Think Blue commercials, brochures, the website, and other efforts, are more likely to know that storm water is not treated, more likely to

be aware of pollutants and think they are serious, and more likely to say they have or would take action to reduce pollution.

The program has also done an excellent job in outreach to Hispanics and especially Spanish speakers. They tend to be more aware of the program, more aware of pollutants, and more willing to take action compared to others. However, Hispanics lag behind white and Asian residents in awareness that storm water is not treated. While the program has gained ground in this metric, work remains to bring Hispanic residents up to the same level as others.

We see three demographic groups where knowledge and willingness to act remain relatively low: seniors (and especially those over age 70), Black residents, and Asian residents. These residents tend to be less informed about Think Blue and less aware of pollutants. However, Black and Asian residents tend to be more concerned about litter, motor oil, and dog waste as sources of pollution.

We also see lower levels of awareness on some questions among newcomers to the city. Think Blue should consider ways of communicating directly with newcomers (e.g. it could buy lists of new arrivals) to help impart both expectations/norms and information to them about storm water pollution.

Women remain much less likely than men to know that storm water is not treated, and the same is true among those with lower education levels. More outreach is needed to women in particular to close this gender gap.

The survey this year tested public response to asking dog owners to clean up dog waste. Most residents (63%) said they would be willing to do so on their own block. However, substantial proportions (about 35%) expressed concern that they would not feel safe doing so, and that it would be rude to do so. While the former concern is beyond the scope of Think Blue, it is certainly possible to help empower residents to take action and ask offending dog owners to clean up after themselves.

When it comes to fixing oil and other vehicle leaks, we found the major barriers to action to be a sense that one's vehicle does not leak fluids, and lack of knowledge that such leaks pollute the ocean. Since most vehicles do leak fluids at some point, the city could increase compliance by asking residents to check their own cars – and to take action to protect our beaches.

The Hotline is used by a very small proportion of residents. But we know now what they would like to use it for: to report neighbors and businesses that are polluting. The main reasons they do not use it now (other than lack of awareness) is lack of awareness of pollution and a sense that nothing will happen even if they do bother to report pollution. These barriers can certainly be addressed in outreach messages.

There is solid support for reusing storm water for non-potable purposes. It is unlikely that serious opposition will emerge to such uses. There was mixed support for using storm water to supplement drinking water, and it is likely that this use would generate substantial opposition. However, we did find that San Diego residents were supportive (by a two-to-one margin) of using storm water to “replace” water now imported from the Colorado River.” This framing of the use of the water is likely to boost support.

The survey also offers valuable insight into the value of offering Think Blue materials in multiple languages. Twenty-nine percent of respondents say they speak a language other than English at home on a daily basis. Among Hispanics, 59% said they speak a language other than English at home, and that figure reaches 63% among Asian residents. Clearly, the availability of materials in multiple languages is a necessity in modern San Diego.

Detailed Findings

This report presents the study's findings in the following order:

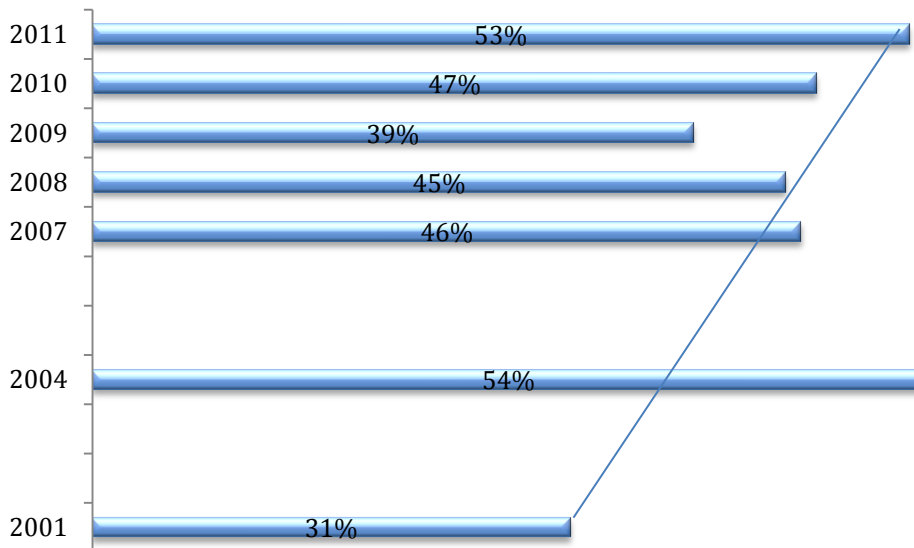
- The first section of the report considers the proportion of San Diego City residents who have heard the Think Blue San Diego slogan, and continues with findings on the general penetration level of several Think Blue elements: television commercials, radio advertisements, brochures, the Think Blue website and hotline, Facebook postings, email, and encounters with booths or signs at local events. Where appropriate, the results from these questions are compared with findings from previous surveys.
- The section continues with an examination of the proportion of residents who have made any changes in behavior that resulted from hearing more about the impact of pollution in storm drains. These findings include the proportion of residents who have made such a change, what types of changes have been made, and how these findings compare with those from previous surveys.
- The next section looks at the proportion of residents who know storm water is not treated before being released into local waterways. This question has been asked in previous surveys, and consideration is also given to the ways in which this awareness has and has not changed over time, both citywide and among various demographic subgroups.
- The next section looks at resident reaction to proposed re-uses of storm water, including supplementing drinking water supplies, industrial purposes, irrigation, and replacing imported water.
- The following section of the report presents findings from two batteries of questions that examine how San Diego City residents perceive storm drain pollutants. First, how often do they see motor oil, litter, and dog waste in their neighborhoods? The second series of questions provides a set of overall ratings for how concerned residents are about the seriousness of these potential storm drain pollutants.
- The next section of the report considers pollution specifically from dog waste. It begins by reviewing results from a question asking residents how much have heard from the Think Blue program about pollution caused by dog waste, and then asks how likely they would be to clean up dog waste if they saw it on their block. This section then examines a series of reasons people might give for not picking up dog waste that has been left lying in the street.
- The report then considers pollution from fluids leaking from vehicles. It reviews a question in which residents were asked how much they have heard from the Think Blue program about pollution caused by fluids leaking from cars, then shows results when residents were asked whether their vehicles are leaking fluids, and then asks those with leaking vehicles whether they took action to stop it. The section concludes by exploring possible barriers to fixing vehicle leaks.
- The final section of the report explores responses to questions exploring optimal messaging for pollution prevention communications.

I. Familiarity with the Think Blue San Diego Slogan

The first question in the survey, as it has been in previous years, was, “*In the past year, have you seen or heard the slogan ‘Think Blue San Diego?’*” This year, 53% said that they had, 45% had not, and 2% weren’t sure.

Figure 1 illustrates the proportion of San Diego City residents who had heard the slogan from city surveys going back to 2001. We have included findings from before 2008 for comparison purposes only. These results from earlier surveys should be viewed with some caution due to differences in question wording and survey methodology. That said, this is the highest level of reported awareness of the slogan that has been reported in any Think Blue survey since 2004, and is a statistically significant change compared to the 2010 survey results.

Figure 1: Heard the Slogan "Think Blue San Diego" Last Year in Surveys from 2001-2010.



There were some significant differences in awareness of the slogan by different demographic characteristics, including:

- **Age:** As shown in Table 1, awareness was significantly lower among those age 65 and older, at 38%, compared to the mid 50s for younger residents.

Table 1: Seen or Heard Think Blue Slogan by Age

	All	18-34	35-49	50-64	65+
Yes	53%	55%	56%	58%	38%

- Race: Awareness was much lower among Blacks, Asians, and other non-white and non-Latino residents. This is detailed in Table 2.

Table 2: Seen or Heard Think Blue Slogan by Race

	All	White not Hispanic	Latino	Black	Asian	All non-white, non-Hispanic
Yes	53%	57%	58%	46%	36%	35%

- Length of residency: Awareness increased with length of residency, from 42% among those living in San Diego for less than 6 years, to 53% among those living there for 6 to 19 years, to 57% among those living in San Diego for 20 years or more.

Table 3: Seen or Heard Think Blue Slogan by Length of Residency in San Diego

	All	0-5	6-19	20+
Yes	53%	42%	53%	57%

As we have seen in the past, rates of familiarity with the Think Blue slogan were positively correlated with encounters with city anti-pollution efforts, and with Think Blue program elements. Specifically, significantly higher proportions of awareness of the slogan were found among the following:

- More than eight out of 10 of residents who had seen a Think Blue television commercial (80%), heard an ad on the radio (88%), read a brochure (91%), seen or heard about the Think Blue website (88%), or seen a sign or booth at an event (89%).
- More than seven out of 10 (71%) who have heard of the Think Blue hotline.

These results are all very similar to what was found in the 2010 Think Blue survey.

In addition, we found that those who said they had heard from the Think Blue program about pollution from dog waste and vehicles leaking oil were also more likely to have heard the slogan (69% and 66%).

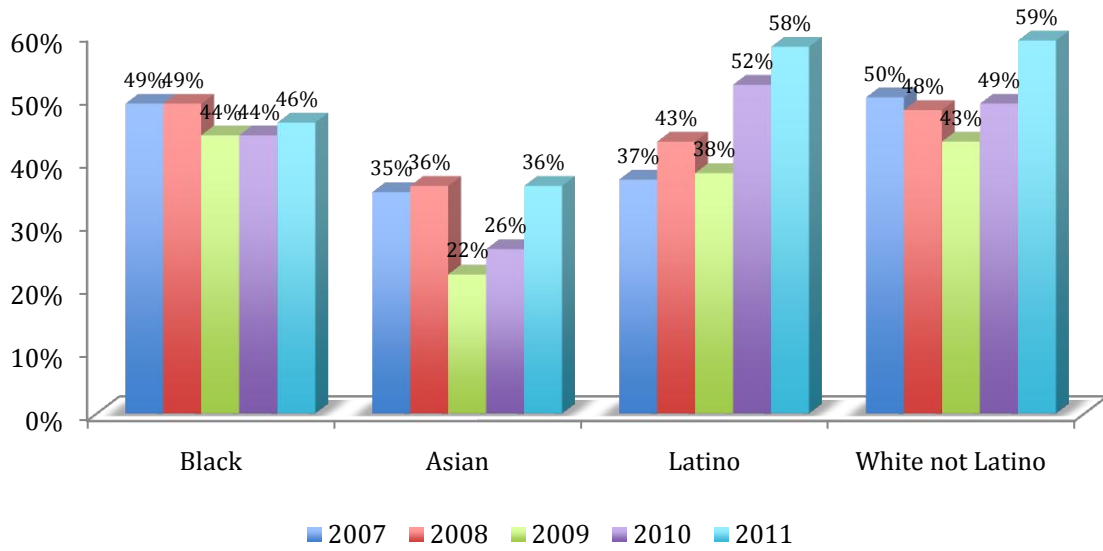
Finally, we observed a positive correlation between awareness of the slogan and understanding of the storm drain system, as well as the willingness to take action to reduce pollution. Specifically:

- Those who were aware that storm water is not treated were more likely to have heard the slogan (67%, compared to 56% of those who thought the water was treated).
- Those who said they had made changes in their behavior to reduce pollution were also more likely to have heard the slogan (at 66%, compared to 48% who have not heard the slogan).

Comparing results over time by demographic group, we find the following:

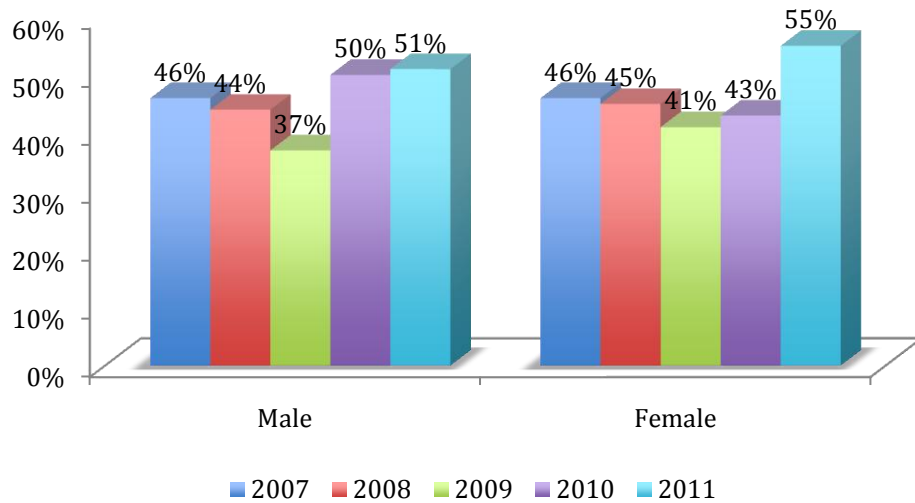
- Race: We find an increase in awareness of the Think Blue slogan among Asian residents, from 26% to 36%, although this difference is not statistically significant at this sample size. We found that the increase in awareness among Hispanics that emerged last year continued this year. Awareness among Black residents was generally unchanged. Among white residents, we observed a significant increase in awareness, from 49% to 57%. This is seen in Figure 2 below.

Figure 2: Change in Awareness of Slogan over Time by Race



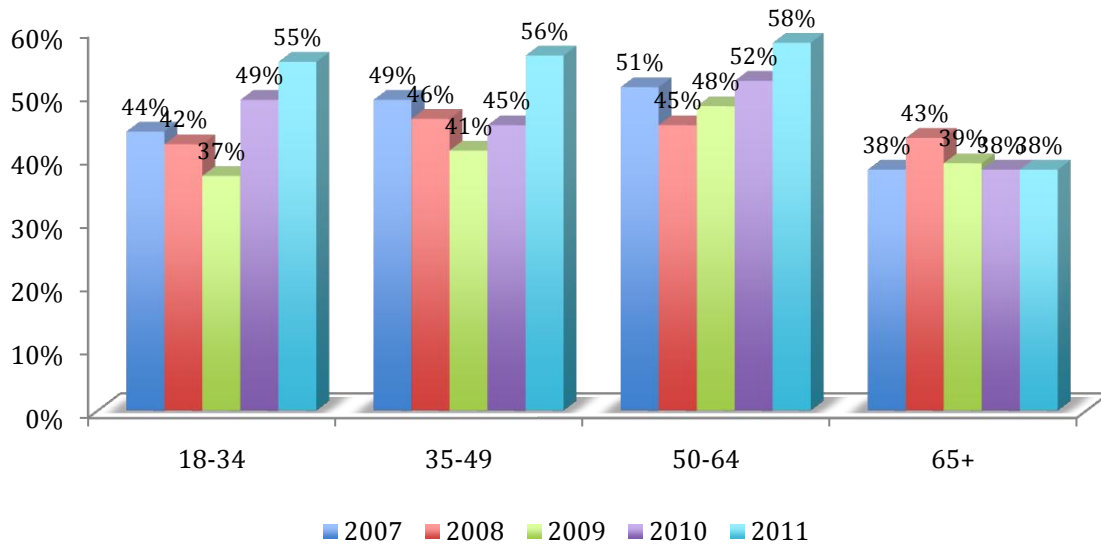
- Gender: We observe a sizable increase in awareness among women compared to 2010 survey results, from 43% to 55%. This is seen in Figure 3.

Figure 3: Change in Awareness of Slogan over Time by Gender



- Age: Compared to previous years, we found an increase in awareness of the Think Blue slogan among residents under age 65, with no change among older residents.

Figure 4: Change in Awareness of Slogan over Time by Age Range



In summary, the results suggest that the Think Blue program has been relatively successful in increasing awareness at least of its slogan among white and Latino residents, but awareness remains low among Black and Asian residents, as well as seniors.

Where Did You See or Hear the Slogan?

We asked city respondents who had heard the Think Blue slogan (N=427) “Where did you see or hear it?”

As has been the case in the past, television was, by far, the most often cited source. An aggregate of 59% of those who had heard the slogan said they’d encountered it on TV. This included 58% who just said they saw it on TV, plus 1% who saw it on TV news. The aggregate proportion of television mentions has fluctuated slightly over time, from 52% in the 2008 survey to 58% in the 2009 survey to 52% in the 2010 survey, and now 59% in the 2011 survey.

Other sources for hearing the slogan were mentioned much less frequently, and the proportions were not significantly different from previous surveys. These volunteered mentions, and their proportions, were:

- Billboard (10%)
- Radio ad (14%)
- Storm drain or gutter (5%)
- Buses (4%)
- Newspaper (5%).

We did see several significant variations in response to this question among groups large enough to analyze:

- Residents under the age of 50 were more likely to have heard a radio ad (17%, compared to 7% of older residents).
- Those with a post-college degree were far less likely than others to have seen the Think Blue slogan on TV (39%, compared to about 60% of less educated residents).
- Women over 50 were more likely to have heard the slogan on TV (70%) compared to others.
- Those who speak English only at home were more likely to have heard the slogan on TV (61%) than those who speak another language at home (48%).
- While the sample size is very small, it appears that Black residents were more likely to have seen the slogan on a billboard (33%) compared to about 12% of others.

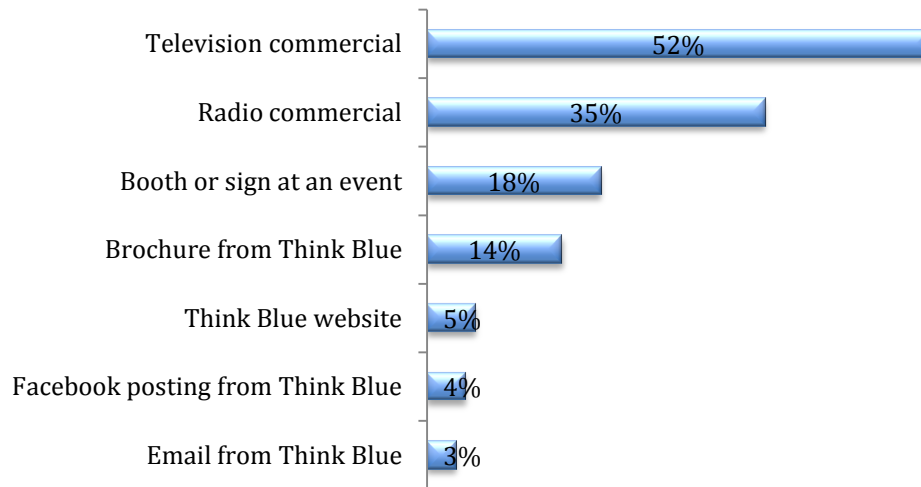
These findings and others in the study indicate that television advertisements continue to be the most potent way to reach San Diego residents, and that radio ads may be used to reach younger people in higher proportions.

Encounters with Think Blue Program Elements

In this section of the survey we tested the level of penetration of a series of seven Think Blue elements. Respondents heard that *“Think Blue is the City of San Diego’s program to reduce pollution of the water in the city’s storm drains, creeks, beaches, and the ocean.”* They were then asked to tell us if they had encountered the program on TV or the radio, at an event, or if they had seen a brochure or visited a website. In addition, for the first time this year we asked if they had received an email from Think Blue or seen a Facebook posting.

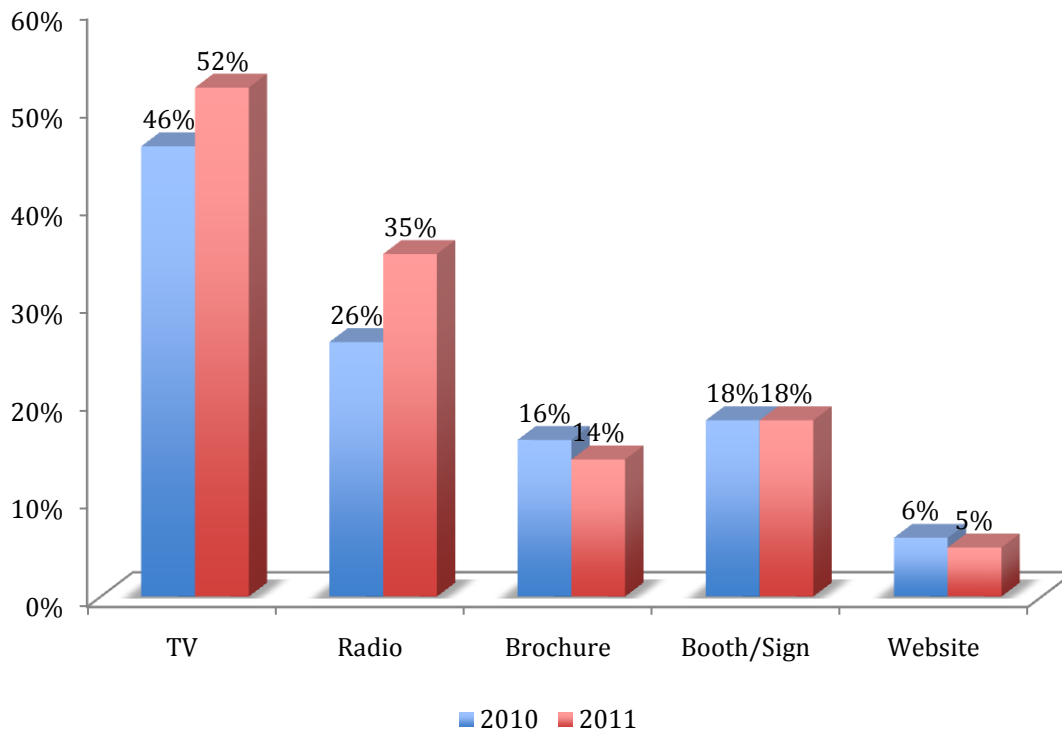
As illustrated in Figure 5, more than half of residents (52%) had seen a TV commercial while over a third had heard a Think Blue radio advertisement (35%). A sizable proportion (18%) said they had seen a Think Blue booth or sign at an event, and 14% say they have seen a brochure from the program. Relatively small proportions say they have seen the website (5%), seen a Facebook posting (4%), or received email from the program (3%). Not shown in Figure 5 is that about one in four had encountered both a television and a radio ad. This is similar to what was found in the 2010 survey.

Figure 5: Proportion Who Have Seen or Heard a Think Blue Program Element



Compared to results from last year, we found an increase in the proportion who say they saw a TV commercial, from 46% to 52%, and also an increase in the proportion who say they heard a radio commercial, from 26% to 35%. There were no significant changes for the other communications elements, as seen in Figure 6.

Figure 6: Proportion Seeing Think Blue Elements 2010 to 2011



We cannot make direct comparisons with previous studies (before 2010) due to differences in question wording and in the base of respondents who were asked the question. However, analysis indicates that these findings are consistent with what has been seen in previous years.

We next present a few interesting findings among subgroups in the city:

- As was the case in the 2010 survey, Hispanics encountered Think Blue more often than others in the city last year. They were more likely than non-Hispanics to have:
 - Seen a TV commercial: 62% compared to 49%.
 - Heard a radio commercial: 39% compared to 33% (a difference that is not statistically significant in 2011 but we did find that Hispanics were significantly more likely to have heard a radio commercial in the 2010 survey).
 - Seen a booth or sign at an event: 28% compared to 14% of others.
 - Seen the website: 12% compared to 3% of others.

TV commercials reached fewer seniors: just 37%, compared to higher proportions of younger residents. They were also much less likely to be seen by those with a post college degree (at 40%). The same pattern –lower penetration among older residents and the most educated – emerges when we look at radio ads. We do, however, see higher recall of the radio ads among those who live in multi-family homes (41%) compared to those in single-family homes (31%).

As we saw in the 2010 survey, further analysis provided another encouraging sign that Think Blue information may be leading to change; residents who have made a change in response to hearing more about pollution exhibited significantly higher proportions of encounters with each of the five elements. These results also tended to cluster. Residents who had heard the slogan, saw a television commercial, heard a radio ad, read a brochure, visited the website, or saw a booth at an event were significantly more likely to have encountered the other Think Blue elements as well.

Table 4 summarizes these results. As an example for how to read this table: among those who have made a change, 69% have seen a Think Blue television advertisement, 50% have heard a radio ad, etc.

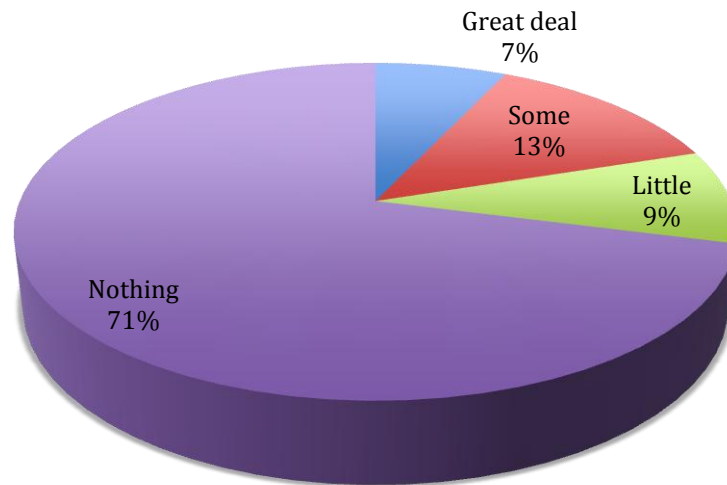
Table 4: Higher Proportions of Encounters with Think Blue Elements

Percentage of those who:	...saw a TV ad	...heard a radio ad	...saw the web site	...saw a brochure	...saw a booth or sign at an event
Made a change in behavior	69%	50%	11%	22%	24%
Heard the Think Blue slogan	77%	55%	8%	24%	29%
Seen a TV commercial	100%	54%	8%	23%	27%
Heard a radio commercial	81%	100%	8%	26%	27%
Seen a brochure	85%	66%	20%	100%	48%
Have encountered Think Blue at an event	79%	54%	13%	38%	100%
Heard of the Think Blue Hotline	67%	55%	13%	27%	24%

Telephone Hotline

We also asked residents several questions about the Think Blue telephone Hotline. The first question asked residents if they had seen or heard anything from the Think Blue program about *“a telephone hotline which you can call to report people or businesses that are causing pollution in storm drains.”* We found that 20% had heard a “great deal” or “some” about it, 9% had heard “a little” about it, and 71% said they had heard nothing about it. These results are reasonably similar to the 18% who had heard about the Hotline when we asked about it last year (using different question wording).

Figure 7: Seen or Heard About Telephone Hotline?



We found higher levels of awareness of the Hotline among Hispanics (at 28%, compared to 17% of others). We also found higher levels of awareness of the Hotline among those who had:

- Seen a Think Blue brochure (38%).
- Seen a Think Blue sign or booth at an event (26%).
- Heard a Think Blue radio ad (31%).
- Heard the Think Blue slogan (26%).
- Seen a Think Blue television commercial (5%).
- Made a change after hearing more about pollution (26%).

Thus, encounters with Think Blue increased the likelihood of having heard of the Hotline.

Later in the survey, we asked all respondents if they had ever called the Hotline, which we described at that point as *“a hotline that can be used to report activities that may be polluting our local beaches and storm drains, or to get information about how to prevent pollution.”* We found that 4% overall said they had called the Hotline, and this includes 9% of those who said earlier that they had heard “a great deal” or “some” about it (see Figure 7). In the 2010 survey, only about 1% of all respondents said they called the Hotline. It is hard to determine whether this difference is due to a real increase in use of the Hotline, or is simply the result of the change in how we asked about it.

The follow-up question asked residents to choose a single “main reason” from among two options to explain why they might call the Think Blue Hotline in the future. As shown below, reporting polluting activities was by far the most likely reason to call, with far fewer who would call the Hotline to get information about pollution prevention. This was especially true among people unfamiliar with the Hotline; those who had heard a great deal or something about it were somewhat more likely than others to use it to get information about how to prevent pollution.

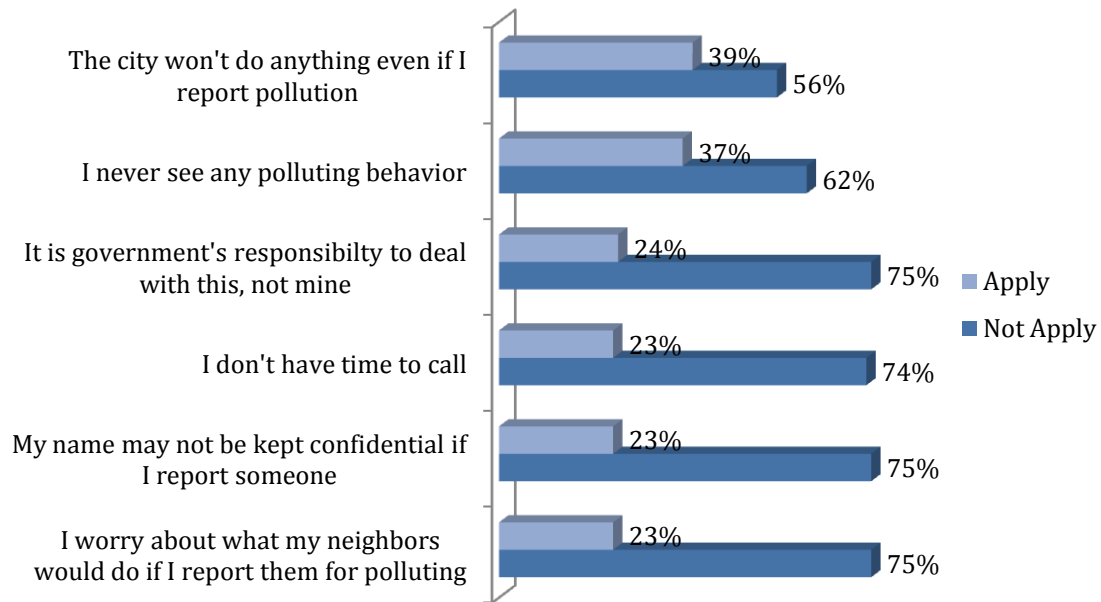
Table 5: Main Reason You Might Call the Think Blue Hotline

	All	Heard of Hotline	Had Not Heard of Hotline
To report activities that might be polluting our beaches and oceans	45%	55%	43%
To get information about how to prevent pollution of our beaches and oceans	17%	26%	15%

We also found that Spanish speakers and Black residents were much more interested than other residents in calling the Hotline for more information about how to prevent pollution – although it was still a secondary choice even for these groups. White men were especially likely to call to report polluting activities.

We then tested six potential barriers to calling the Hotline. As shown below, the two most common reasons for not calling the Hotline were 1) not seeing any pollution and 2) not believing the city would do anything about the pollution even if reported. These are certainly barriers that the Think Blue program can address by educating people about potential sources of pollution and how they affect the ocean, and by making clear that the city does enforce these laws to protect its beaches, ocean, and economy. Note that each potential reason was read to only half the sample.

Figure 8: Does This Reason For Not Calling the Hotline Apply to You?



Men and especially non-white men and men under 50 and whites under 50 are especially convinced that the city would not act if they called the Hotline.

Women, and everyone age 50 and older and especially seniors, are especially likely to say they never see pollution. “This is pollution” messages would be useful for these older audiences.

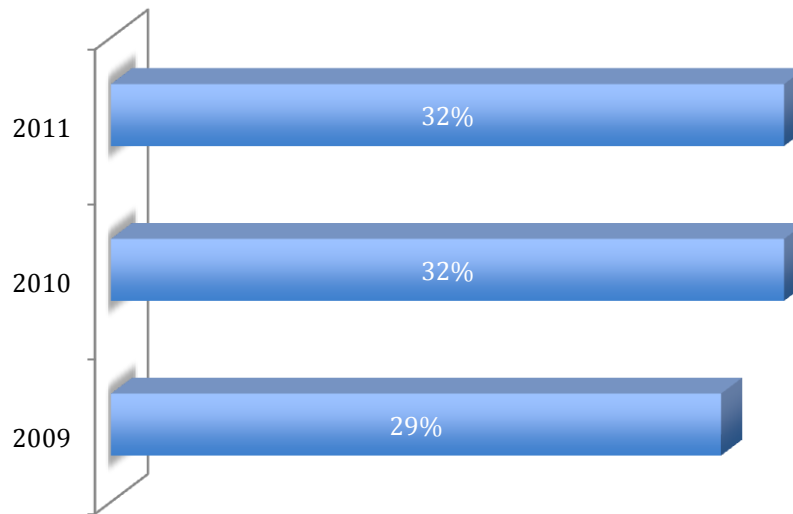
II. Changes in Behavior to Reduce Pollution

The survey read residents the following statement: *“Anything that goes into storm drains can end up in local creeks, rivers, or the ocean, without any filtering or treatment. Motor oil, leaves and grass, dirt, litter, and pesticides are all examples of pollution that goes into storm drains in San Diego. They end up untreated in our creeks, on our beaches, or in the ocean.”* This is very similar (although not exactly) the statement read to respondents in the 2010 survey.

We then asked if, in the past year, *“you made any changes in your behavior that was the direct result of seeing any information about what polluted water in storm drains does to local creeks, the beaches, and the ocean.”* Again, this is very similar to what was asked in the 2010 survey, although the question that preceded this was different in 2010.

We found in 2011 that 32% said they had made such changes to their behavior, which was exactly the result we found in 2010 and similar to the 29% found in 2009.

Figure 9: % Who Changed Behavior in Past Year After Hearing About Storm Water Pollution



As was the case in previous years, we found ongoing indications that residents who had encountered Think Blue San Diego, or who are aware of the city’s anti-pollution efforts, were significantly more likely to have made a change:

- Those who recalled hearing the Think Blue slogan before (39%) were more likely to have made a change than those who did not (24%). The converse is also true: those who had *not* heard of Think Blue were more likely *not* to change (67%), compared others (53%). These findings are nearly identical to those from the last several years.

Significantly higher levels of change were also found among residents who:

- Have seen a Think Blue brochure (51%).
- Have heard of the anti-pollution hotline (36%) .
- Have seen a Think Blue TV ad (43%) or heard a radio (45%) commercial.
- Seen a Think Blue booth or sign at an event (48%).

There were some important variations by demographic group in response to this question:

- As in the past, Hispanics were more likely at 41% than non-Hispanics (29%) to have made a change. This result is very similar to what we found last year and suggests that continued outreach efforts focused on Hispanics may have not only raised knowledge levels, but also possibly resulted in reported behavioral change. Among those who say they speak Spanish at home, fully 46% report having made a change in behavior.
- Non-Hispanic minorities were much less likely to have made a change (at 20%) than either non-Hispanic whites (32%) or Hispanics (41%). There is clearly work to be done with Black and Asian residents.
- Those over age 70 were much less likely to have made a change, at 13% compared to about 33% of younger residents.
- Those with a college degree were less likely (at 27%) than less educated residents (35%) to have made a change.

- Among non-Hispanic whites, 64% of men did NOT make a change to their behavior compared to 53% of women who said they did NOT change. There was no significant difference in the proportion of each group that did claim to make a change, just a higher proportion of white women who did not recall.
- Those living in single-family homes were more likely (at 35%) than those living in multi-family homes (at 26%) to have made a change.
- Forty-two percent of dog owners said they had made a change. This is similar to the result in the 2010 survey, but much higher than the 32% of dog owners who made a change in the 2009 study. By comparison, 26% of non-owners in this survey made a change. Recent outreach by Think Blue to dog owners appear to be making a difference.

Changes That Were Made

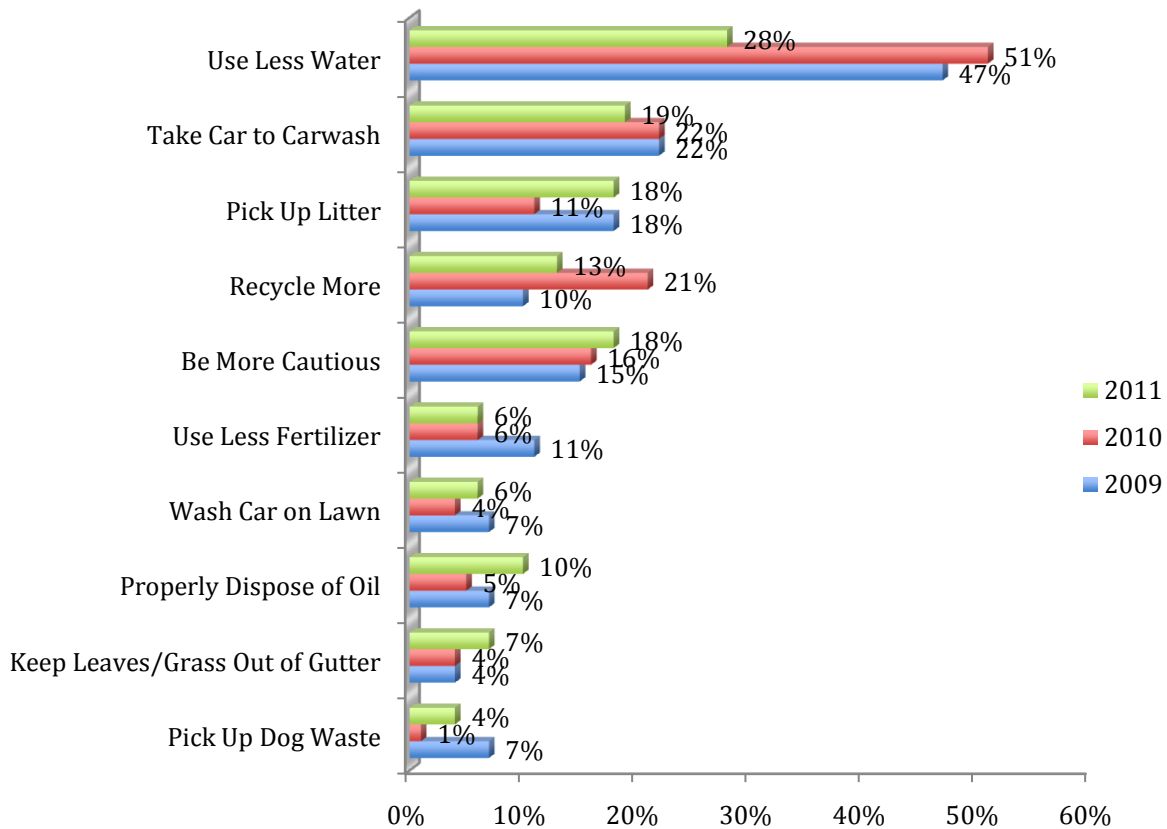
Residents who had made a change over the past year to prevent pollution were asked, in an open-ended question, to describe briefly what changes they had made. The question was asked of 256 respondents and up to two responses were accepted.

As was the case in previous years, the largest percentage (28%) of this group volunteered that they are using less water. In this survey and in those of previous years, we have observed that some residents did not distinguish between water conservation and efforts to reduce pollution of storm drains. However, the proportion who said the change in their behavior was to reduce water was much larger last year, at 51%. This probably reflects the reduced concern about water conservation given the copious rain we have enjoyed in recent months.

Other actions named by substantial proportions include:

- Nineteen percent said they have begun taking their car to a carwash rather than washing it at home. A further 6% said they washed their car on their lawn to keep the runoff out of storm drains. This is very similar to what we found in 2010 (22% and 4%).
- Eighteen percent reported picking up trash and litter and another 3% said they cleaned trash out of gutters and off the street. The comparable numbers in the 2010 survey were 11% and 6%.
- Thirteen percent said that they are recycling more, down from 21% in the 2010 survey but similar to the 10% of mentions in 2009.
- Thirteen percent gave answers that can be characterized as "*just being more cautious about polluting in general.*" This compares to 16% in the 2010 survey.
- Ten percent reported properly disposing of used oil rather than pouring it into drains or the street. This is up significantly from 5% in the 2010 survey.
- Seven percent are keeping leaves and grass out of the gutter, up slightly from 4% in the 2010 survey.
- Six percent said they have reduced or eliminated fertilizers and pesticides, the same as in the 2010 survey.
- Four percent say they are picking up after dogs, up from 1% in the 2010 survey.

Figure 10: Actions Being Taken to Reduce Pollution (2010 N = 257, 2011 N = 256)



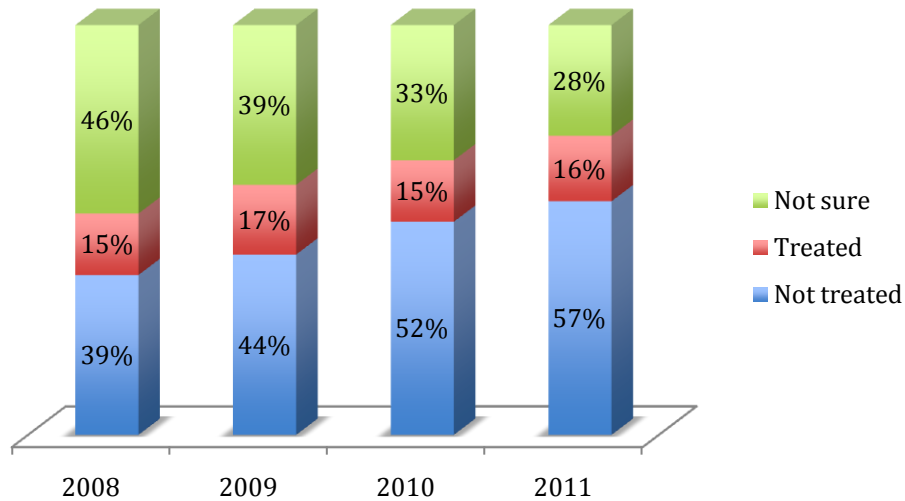
We saw few differences in the likelihood of taking such actions depending on exposure to Think Blue outreach efforts, although we did find that among those who saw a TV commercial from Think Blue, 21% said they picked up trash and litter, compared to 10% who had not seen a TV commercial.

III. Is Storm Water Treated Before Release?

The study also tested the proportion of residents who believe storm water is processed like sewage in treatment plants, compared to those who know that it is released directly, without treatment, into San Diego’s waterways. Respondents were asked, “Storm drains are the gutters, pipes, and concrete channels that collect water from streets. When water goes into the storm drains, does it go to a sewage treatment plant before it is released, or is it released into creeks or the ocean without treatment?”

As Figure 11 shows, knowledge that the storm drain system is separate from the sewer system continues to expand in the city of San Diego. The proportion of city residents who know that storm water is not treated before flowing into creeks or the ocean has steadily risen from 39% in 2008 to 57% in 2011. The proportion of residents who believe that storm water is treated before being released has remained virtually static at 16%, but the proportion who said they weren’t sure has declined from 46% three years ago to 28% today.

Figure 11: Storm Water Treated or Untreated, in Surveys From 2008 to 2010



Those who know correctly that storm water is not treated are most likely to be:

- Men (63%) compared to women (50%).
- Younger than age 70 (44% for the oldest residents, compared to roughly 60% for younger people).
- The most educated (72% for those with a graduate degree, compared to 59% with some college and 44% with no college).
- White, at 61% for non-Hispanic whites, 48% for Hispanics, and 53% for all others. Hispanic women were especially unlikely to know that the water is not treated, at 38%.
- Long-time residents, at 61% for those in the city 20 years or more, 58% for those in San Diego 6 to 19 years, and just 41% for those living in San Diego for 5 or fewer years.

Table 6 shows the percentage who answered this question correctly over the last three years by key demographic groups.

Table 6: Percentage Who Knew Storm Water Is Not Treated, in Surveys From 2008 to 2010

	% Storm Water Not Treated				Change in Percentage		
	2011	2010	2009	2008	From 2010	From 2009	From 2008
Men	63	55	45	46	+8	+18	+17
Women	50	49	42	32	+1	+8	+19
Ages 18-49	56	50	37	35	+6	+19	+21
Ages 50+	58	55	58	47	+3	0	+11
No College degree	51	48	40	30	+3	+11	+21
College Grad	67	59	51	51	+8	+16	+16
White	61	60	49	53	+1	+12	+8
Hispanic	48	44	40	25	+4	+8	+23

	% Storm Water Not Treated				Change in Percentage		
	2011	2010	2009	2008	From 2010	From 2009	From 2008
Asian	60	38	26	14	+22	+34	+46
Black	44	29	26	42	+15	+18	+3
Single-Family Homes	58	57	46	45	+1	+12	+13
Multi-Family Homes	54	41	41	37	+13	+13	+17

We will next explore some findings related to the particularly significant changes observed among:

- **Hispanics.** Awareness in this group has increased gradually since 2008, from just 25% then to 48% now who respond correctly to this question. However, Hispanics remain much less informed about this issue than whites or Asians. As in the past, we saw greater penetration of television and radio ads among Hispanic residents, which indicates that Think Blue should continue to direct resources toward Spanish and English educational outreach on this subject in both types of media.
- **Blacks.** While the cell size is very small (just 46 cases), it appears that Black residents remain much less informed about this issue than others. The proportion of Black respondents offering the correct answer to this question increased sharply this year (to levels last seen in 2008), but it still remains lower than what we found among white and Asian residents.
- **Asians.** The correct response to this question among Asian residents has increased at a very sizable pace over the past few years.
- **Residents who do not have a college degree.** While the proportion of correct answers continues to increase, and by an overall 21 points since 2008, members of this group were still significantly less likely than those who have not earned a degree to answer correctly (by 51% to 67%). This gap had closed last year, but opened up again.

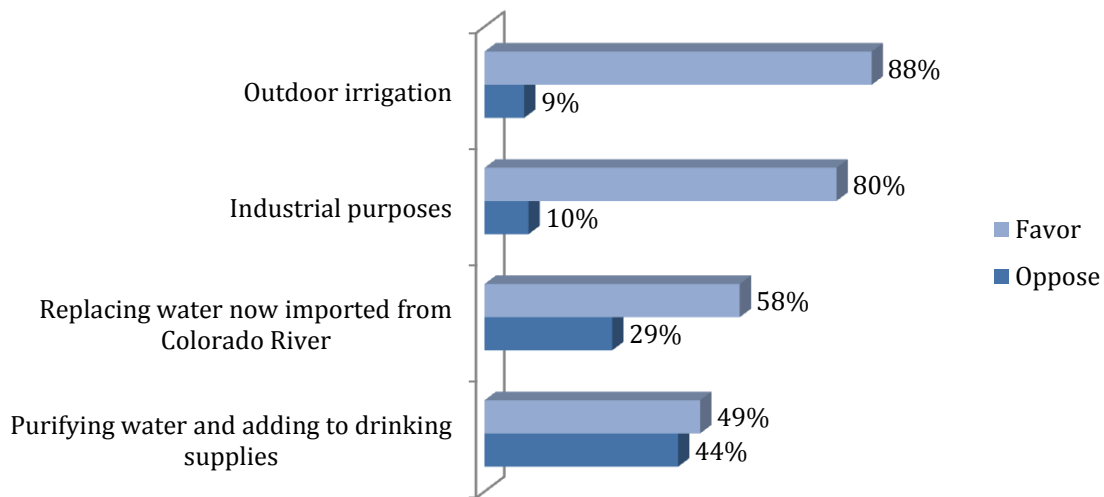
Given consistent survey findings over time showing this group observes higher proportions of storm drain pollutants in their neighborhoods, directing educational outreach to blue collar and other lower socioeconomic neighborhoods and raising awareness of how the storm drain system works may be the first step in focusing attention on the areas in the city that are most problematic in terms of storm drain pollution.

- **Women.** Awareness that storm drain water is not treated has been steadily growing among women, an increase of 19 points since 2008. Awareness has risen among men, as well, by 18 points since 2008. However, the gender gap, which became statistically insignificant in 2009 and 2010, widened again this year.
- **Younger people.** The knowledge gap by age closed this year, with residents under the age of 50 about as likely as older residents to know that storm water is not treated.
- **Multi-family home dwellers.** Residents of multi-family homes caught up with residents of single-family homes in the 2011 survey, erasing a very large gap that we found in previous surveys.

IV. Response to Possible Re-Use of Storm Water

For the first time, we asked San Diego residents about their response to the possible re-use of storm water for various purposes. As shown below, there was enthusiastic support for the use of storm water for outdoor irrigation and landscaping (88% favor) and for industrial purposes (80% favor). There was more mixed but still solid support for using it “to replace water that is now imported from the Colorado River” at 58% in favor and just 29% opposed. There was divided response to “purifying the water and then adding it to drinking water supplies” at 49% in favor and 44% opposed.

Figure 12 Favor/Oppose Possible Uses of Storm Water



There are several general points to be made in reviewing these results:

- First, we see that there would likely be no serious opposition to using storm water for purposes that are considered to be removed from human consumption. This is very consistent with findings from polling we have conducted in San Jose and other cities, looking at recycled water.
- Second, while support for reusing storm water for drinking water is mixed, it appears to be more enthusiastic in San Diego than in other cities where we have looked at this issue. For example, in a 2008 survey in San Jose, we found that only 20% would favor the use of recycled water for drinking purposes. This suggests the possibility that the phrase “water going into storm drains” (which we used in this question) is less offensive to respondents than “recycled water” (which we used in the San Jose survey).
- Third, the question wording specified that the storm water would be “purified.” Obviously, if any effort to use storm water for potable purposes moves forward, it will be critical to describe the water as purified.
- Finally, we did see two-to-one support for using storm water to replace “water that is now imported from the Colorado River.” This is clearly a persuasive message in support of storm water reuse.

As noted above, support for use of storm water for drinking purposes earned divided support from residents. We did find some interesting differences in reaction to this idea by demographic groups:

- Age: Support fell with age, from 60% among those under age 30 to just 35% for those over age 70. In fact, for all residents age 65 and above, opposition exceeded support by a wide margin: 37% in favor and 53% opposed. In a related finding, support is much lower among longtime (20+ years) residents compared to those more recently arrived.
- Gender: Views are divided evenly among women at 46% in favor and 47% opposed, while among men we find a solid majority (53%) in favor and 41% opposed. Looking at age/gender groups, we find solid support among men regardless of age and among women under 50, but strong opposition among women over age 50.
- Ethnicity/Race: Among Hispanics, 60% favor the use of storm water for drinking purposes, with 35% opposed. But among non-Hispanic whites, we found views evenly divided at 48% in favor and 45% opposed. Among Blacks and Asians, views are strongly negative: 34% favor and 59% opposed among Blacks, and 38% favor and 53% opposed among Asians.

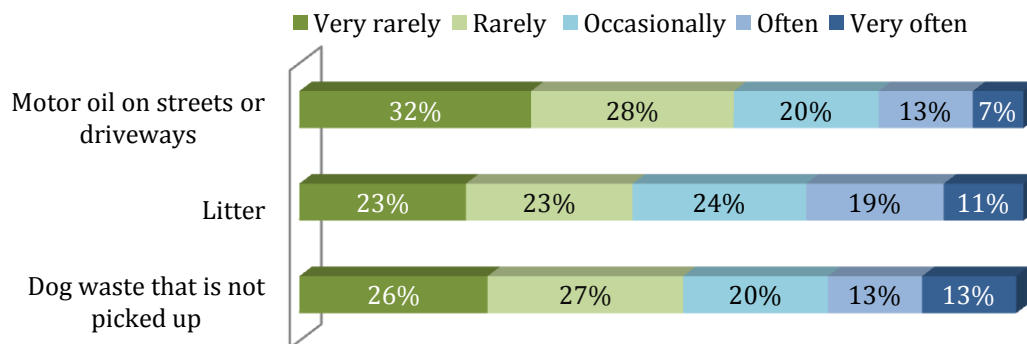
V. Prevalence and Seriousness of Storm Drain Pollutants

In this section, we turn to two series of questions which examine the perceptions of storm drain pollutants among San Diego residents. The first set of questions asked for ratings on how often they saw litter, dog waste, and leaking motor oil on their blocks. The second asked them to rate how serious these items are as a source of pollution in storm drains.

Prevalence of Pollutants

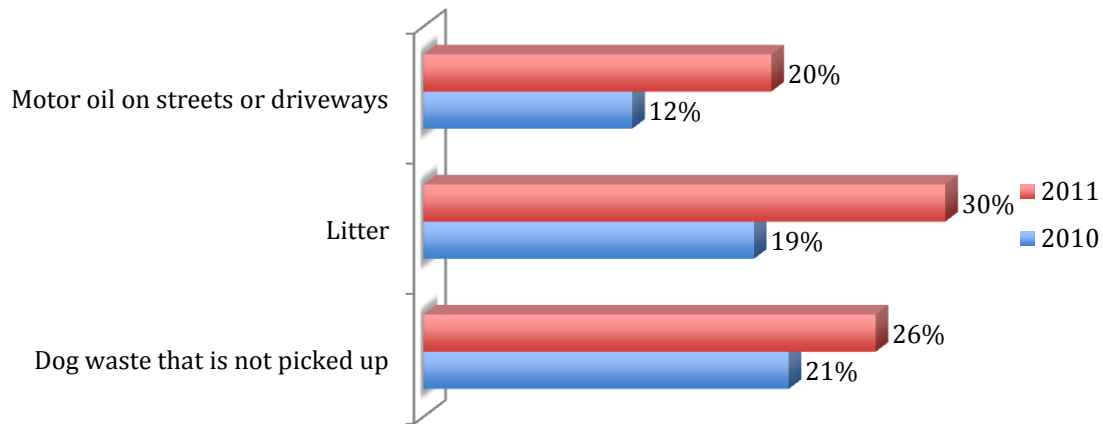
Figure 13 illustrates that relatively few residents regularly observed any of these polluting activities taking place on their block. About one in three saw litter on their block often or very often, about one in four saw dog waste on their block often or very often, and about one in five saw motor oil leaked onto driveways on their block often or very often.

Figure 13: How Often are These Pollutants Seen on Your Block?



A similar battery asked in the 2010 survey yielded somewhat different results. As shown in Figure 14, there was a significant increase this year in the proportion who report seeing motor oil, litter, and dog waste on their block often or very often. This could reflect higher awareness of these issues as a result of Think Blue outreach activities.

Figure 14: % Who Saw Each Pollutant on Their Block Often or Very Often in 2010 and 2011



Residents who have seen the Think Blue TV commercial or heard the radio ads were more likely to report seeing dog waste and motor oil (not litter). Specifically:

- Thirty percent who saw a TV commercial said they saw dog waste on their block, compared to 22% of others.
- Twenty-three percent of those who saw a TV commercial said they saw leaking motor oil on their block compared to 15% of others.
- Thirty-one percent who said they heard a Think Blue radio ad said they saw dog waste on their block, compared to 23% of others.
- Twenty-three percent who heard a radio ad said they saw motor oil leaking on their block, compared to 17% of others.

We also found significantly higher reports of dog waste (but not oil) among those who have seen a Think Blue booth or read a Think Blue brochure.

Men were more likely than women (23% to 16%) to report seeing motor oil.

Hispanics were much more likely to report seeing dog waste on their block (34%) than non-Hispanic whites (23%) and other minorities (about 25%).

As we saw in the 2010 survey, residents living in multi-family dwellings were more likely to see pollutants, and we also find that those with lower education levels were more likely to observe litter and motor oil on their streets.

Seriousness Ratings for Storm Drain Pollutants

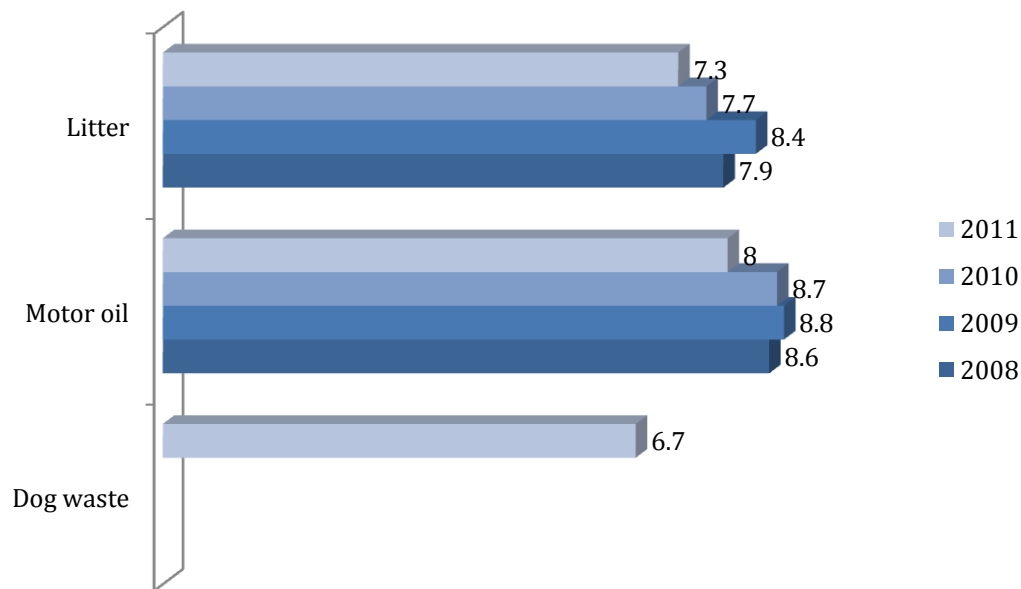
We next asked residents to rate these three items on a scale from 1 if they believed the item was not a serious source of pollution of water in San Diego storm drains, to 10 if they thought it was a very serious source of pollution. A rating will be referred to as “Serious” if it is eight or higher.

As was observed in previous surveys where these questions were asked, residents readily recognized motor oil, and litter as serious pollutants, assigning them a mean score rating of 8.0 and 7.3 respectively. Specifically, 69%

rated motor oil as a serious source of pollution and 53% rated litter as serious. The rating for dog waste was a lower 6.7 mean score, with 46% who rated it as a serious pollutant.

Figure 15 shows the average seriousness rating for litter and oil in this year’s study compared to how the items were rated in surveys done in previous years, plus a rating for dog waste (which was not asked in the past). This chart should be viewed with caution due to differences in placement of the question in the questionnaire in various years, and different items included in the battery. For example, we found a sizable decline in the mean score rating for the seriousness of motor oil comparing 2010 (8.7) to 2011 (8.0). This might be due to the fact that in earlier surveys, there were many other items in the battery that were considered by residents to be less serious than oil, such as leaves or water from washing down sidewalks. Perhaps motor oil was seen as relatively more serious when compared to those items, and less serious when compared only to litter and dog waste. However, we also found a decline in concern about litter, from a mean score of 7.7 in 2010 to 7.3 in the 2011 survey.

Figure 15: Mean Seriousness Rating in Surveys from 2008 to 2011 (1 to 10 Scale)



Perhaps a clearer way to look at the change is to compare those who rated each item as an 8, 9, or 10 on a 10 point scale of seriousness. For litter, that went from 64% in 2010 to 53% in 2011. For oil, that went from 81% in 2010 to 69% in 2011.

The series showed some other overall patterns of variation in the way groups of city residents rated the pollutants, lending itself to observations across demographic groups as well as by pollutant type. Once again, we found a great deal of encouraging difference in recognition of pollutants among those who had encountered the Think Blue program as follows:

Patterns by Familiarity with Think Blue, City Anti-Pollution Efforts, and Changed Behavior

Familiarity with Think Blue outreach efforts is positively correlated with higher awareness of dog waste, litter, and motor oil as serious pollutants. Specifically:

- Those who saw a Think Blue television commercial were significantly more likely to rate these items as a serious pollutants compared to those who had not. Those who heard the radio ad were more likely to rate dog waste as a serious pollutant, but not the other items. This is also true among those who were familiar with the website and brochure.
- Residents who saw a Think Blue booth or sign were more likely to rate all of these items as serious compared to others.
- Residents who had seen a Think Blue brochure ranked dog waste higher on average than others.
- Those who heard the Think Blue slogan were more likely to consider all of these pollutants as serious.
- Those who had heard from Think Blue about pollution caused by dog waste, and about pollution caused by vehicles leaking oil, were more likely on average to consider these items to be serious.
- Those who made a change last year in order to reduce pollution rated each one of the pollutants as more serious than those who didn't make a change.

Other Patterns by Demographic Groups

- Women were more likely than men to rate all of the items as serious sources of pollution. White men were especially unlikely to consider litter and dog waste to be serious.
- Residents under age 50 rated litter as more serious on average than older residents, while 50+ residents were more likely to rate dog waste as serious..
- As in the past, residents who did not graduate from college tended to rate each pollutant higher, on average, than residents who have degrees.
- This survey found Hispanics rated all of the items as more serious, and this finding echoes those from previous years.
- Those who often saw litter on their block ranked litter as a more serious pollutant, on average, than those who see litter less frequently. The same is true for those who saw motor oil leaking on their block.

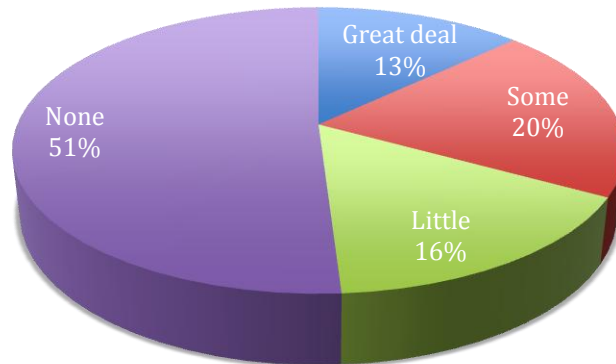
VI. Dog Waste

We asked several different questions with the intent of improving the Think Blue outreach effort related to encouraging residents to clean up dog waste.

Heard from Think Blue on Pollution from Dog Waste?

We asked residents if they have heard from Think Blue about pollution caused by dog waste. As shown in Figure 16, one in three (33%) say they heard “a great deal” or “some” from Think Blue about pollution caused by dog waste. This is not a question we asked in previous surveys.

Figure 16: Seen/Heard from Think Blue about Dog Waste Pollution



We again see very low penetration of the Think Blue message among older residents: only 22% of those over age 65 and 14% of those age 70+ have seen or heard from the program about pollution caused by dog waste. Among younger residents, roughly 35% have seen or heard such messages.

We also continue to see higher reported awareness among Hispanics, at 43% compared to 33% for whites and about 21% for Black and Asian residents. Among Spanish speakers, an even higher 44% had heard about dog waste and pollution. This again is a consistent pattern we are seeing repeatedly in the results for 2011.

Among newcomers, awareness is slightly lower: 22% of those living in San Diego five years or less have heard about dog waste and pollution, compared to about 35% of others.

We see solid correlation between acknowledgement of receiving information from Think Blue on dog waste and having recognized other contacts with the program. For example:

- Among those who recall the Think Blue slogan, 43% heard about dog waste (compared to 22% of others).
- Among those who recall seeing a Think Blue TV commercial, 44% heard about dog waste (compared to 20% of others). Among those who recall hearing a Think Blue radio ad, 46% heard about dog waste (compared to 25% of others).
- For those who have heard about the Think Blue website, 61% have heard about dog waste (31%) and the comparable number for those who encountered a Think Blue booth or sign are 51% and 27%. For Think Blue brochure recipients, the numbers are 52% and 29%.

Further, among those who say they have changed their behavior after hearing about storm water pollution in the past year, 45% heard from Think Blue about dog waste, compared to 28% of others.

Dog Ownership

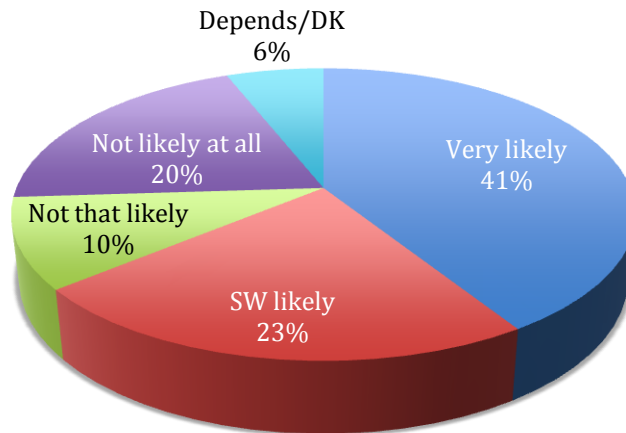
This year's survey found that 37% of San Diego City residents own a dog, a level of ownership slightly higher than that found in previous surveys. We found the same pattern of characteristics associated with dog ownership that has been observed in previous surveys. Dog owners were more likely to:

- Be Hispanic than other races or ethnicities.
- Live in single family homes.
- Be under 50 and especially women under 50.
- Say that they often see dog waste and motor oil leaks in their neighborhoods.
- Be aware of Think Blue outreach efforts, and to have made changes that were a direct result of hearing about what polluted water does to waterways and beaches.

Ask Dog Owner to Clean Up Dog Droppings: Willingness and Barriers

We asked residents *"If you saw someone walking their dog on your block, and they did not clean up the dog's droppings, how likely would you be to ask them to clean it up?"* We found that about two of three (64%) said they would be at least somewhat likely to ask the offender to clean up the waste. But, 30% would NOT do this.

Figure 17: Willing to Ask Dog Owner to Clean Up Droppings?

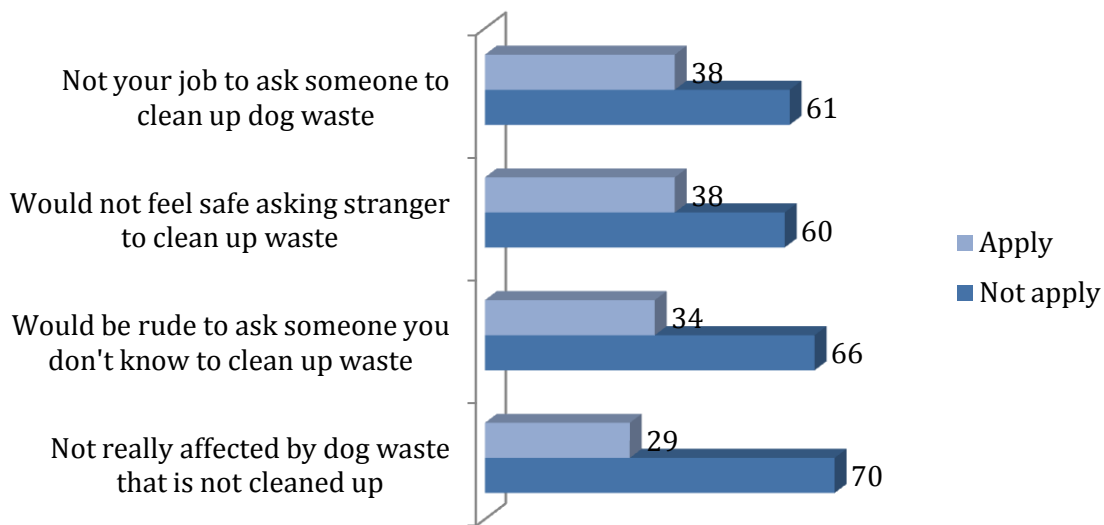


- Dog owners are more likely to ask others to clean up their dog waste: 71% of dog owners, compared to 61% of others.
- Asian residents are much less likely than others to ask others to clean up dog waste, at just 49% compared to about 65% of others. Forty-seven percent of Asian residents would NOT do this.

- While we do not see a significant difference in response to this question among Hispanics compared to non-Hispanic whites, we do see that Spanish speakers are considerably more likely to be willing to take this action: 74% would so do. We also find that white non-Hispanic men were more unlikely to take this action (33%) compared to white women (23%).
- Those who say they have changed their behavior after hearing about the impact of storm water pollution are also more likely to speak up about dog waste, at 72% compared to 61% of others.

In a follow up question, we then asked residents to respond to four possible reasons (barriers) to NOT ask dog owners to clean up their dog’s waste. Response was fairly similar to all of them, as shown in Figure 18, although the least important barrier appears to be a sense that dog waste does not affect them.

Figure 18: Does This Reason to Not Always Ask Dog Owners to Clean Up Waste Apply to You?



Women were more likely than men to be concerned about safety, at 44% compared to 32% of men who would not feel safe asking a stranger to clean up dog waste. This is especially true among women over age 50, at 52%. Otherwise there was little significant variation by demographic group.

However, we do see that among those who said they changed their behavior – the most responsive residents – the two key barriers were safety and concerns about rudeness. While the safety issue is probably not something we can address, concern about being rude is a barrier we can affect in outreach efforts.

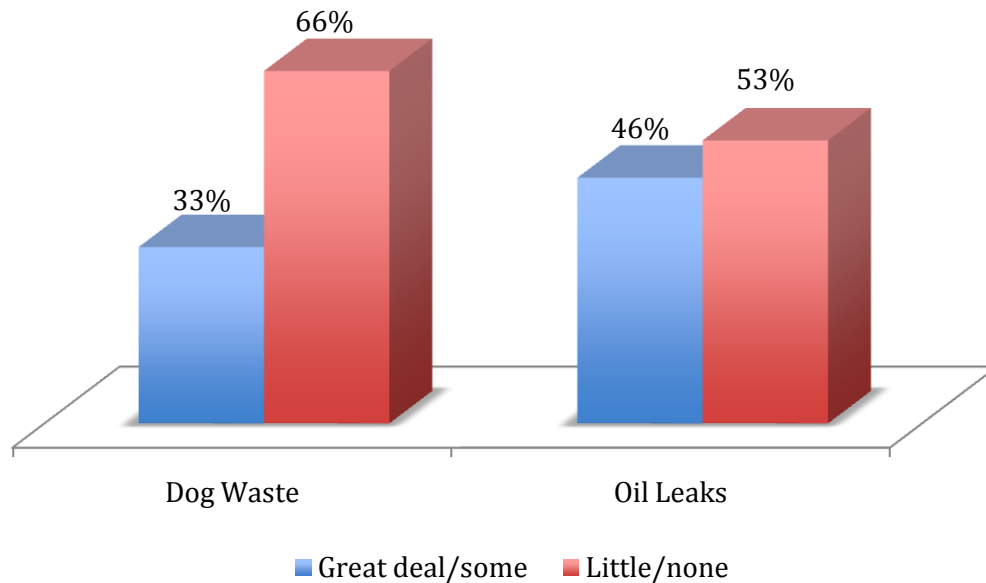
VII. Vehicle Fluid Leaks

As was the case with dog waste, the 2011 survey asked several different questions to explore the impact of the Think Blue outreach effort on issues related to pollution from fluids leaking from vehicles.

Heard from Think Blue on Pollution from Vehicles Leaking Oil?

We asked residents if they have heard from Think Blue about pollution caused by vehicles leaking oil. As shown in Figure 16, 46% say they heard “a great deal” or “some” from Think Blue about pollution caused by leaking oil from vehicles. This compared to just 33% who say they have heard from Think Blue about pollution from dog waste. These two issues have both been a major focus of Think Blue outreach in the past few years, but the higher awareness of oil-related messages might simply be a result of greater concern about the pollution from oil compared to dog waste.

Figure 19: Seen or Heard from Think Blue on Dog Waste/Oil Leaks



Those most likely to have heard from Think Blue about pollution from oil leaks fall into the pattern we have seen consistently in this survey: Hispanics and especially Spanish-speaking Hispanics are most likely, and older residents (65+) are least likely.

We also find that those who have seen or heard Think Blue TV commercials, radio commercials, the brochure, the Hotline, or the website are all more likely to say they have heard from the program about oil leaks. Those who have changed their behavior, and those who know that storm water is not treated, are both considerably more likely than others to be aware of messages about oil pollution.

Car Ownership

We found that 83% of residents said they own a “car or other motor vehicle,” down slightly from the 88% we found in the 2010 survey. Vehicle ownership was slightly lower among residents with no college degree (77%), among women (80%), those in multiple family homes (74%), those in San Diego five years or less (70%), and 50+ Hispanics (60%).

Awareness of Leaking Fluids from Vehicles

Next, we asked car owners, “In the last year, have you seen any oil or other automotive fluids leaking from a vehicle you own, or seen stains from such fluids on the pavement under your vehicle?”

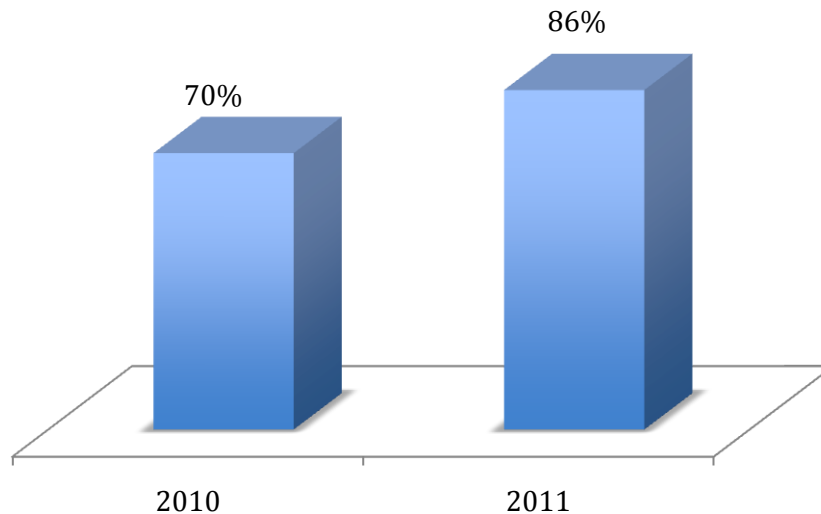
Seventeen percent of vehicle owners reported seeing such a leak, a large increase from the 9% of vehicle owners who had seen a leak in the 2010 survey.

The demographic groups where we observed the highest proportions who said they observed such leaks from their vehicles were non-white men (23%), Hispanic men (22%), single family home dwellers (20%), and those who speak Asian languages at home (43%). While there was no gender difference overall, we do see higher reports of leaks among non-white men (23%) than among non-white women (10%).

Taking Action to Stop Vehicle Leaks

We then asked those who had seen a vehicle leak if they took any actions that stopped the leak. Eighty-six percent of the leakers said they had taken action, up from 70% in the 2010 survey. So we find more people admitting to having leaks compared to the 2010 survey, and more leakers saying they resolved the problem.

Figure 20: Take Action to Stop Leaks in Last Year? (N = 66 in 2010, N = 113 in 2011)

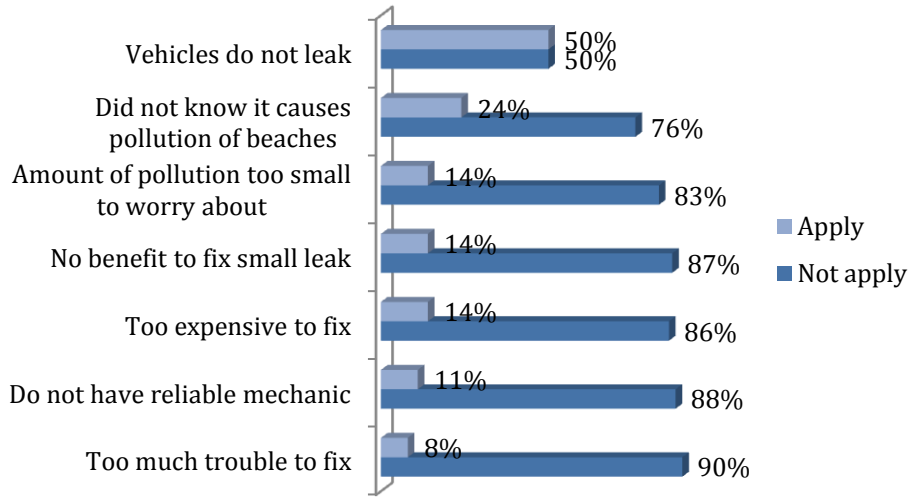


Men and especially men under 50 and non-white men appear least likely to have taken action to fix these leaks.

Reasons for Not Stopping Leaks

We then asked residents to rate eight possible reasons for not always fixing such leaks. Note that each item was asked only to about half the vehicle owners in the 2011 survey.

Figure 21: Does This Reason to Not Always Fix Vehicle Leaks Apply to You?



Note first that the most important barrier to taking action to fix vehicle leaks is that half the vehicle owners say it does not happen to their vehicles. This alone is valuable information, for it tells us that awareness that most cars leak is the first thing the city needs to increase.

We then see that one in four vehicle owners did not realize that fluids leaking from their vehicles might end up polluting the ocean. Other barriers were considerably less common.

There is little significant variation to indicate groups most likely to say that their vehicle does not leak fluids. One exception is Asian residents, where 68% of vehicle owners say their car does not leak. But we do see that among those familiar with the Think Blue slogan, only 44% said their car does not leak compared to 56% of those not familiar with Think Blue. This suggests that exposure to the Think Blue program has helped residents understand that their car might be leaking oil.

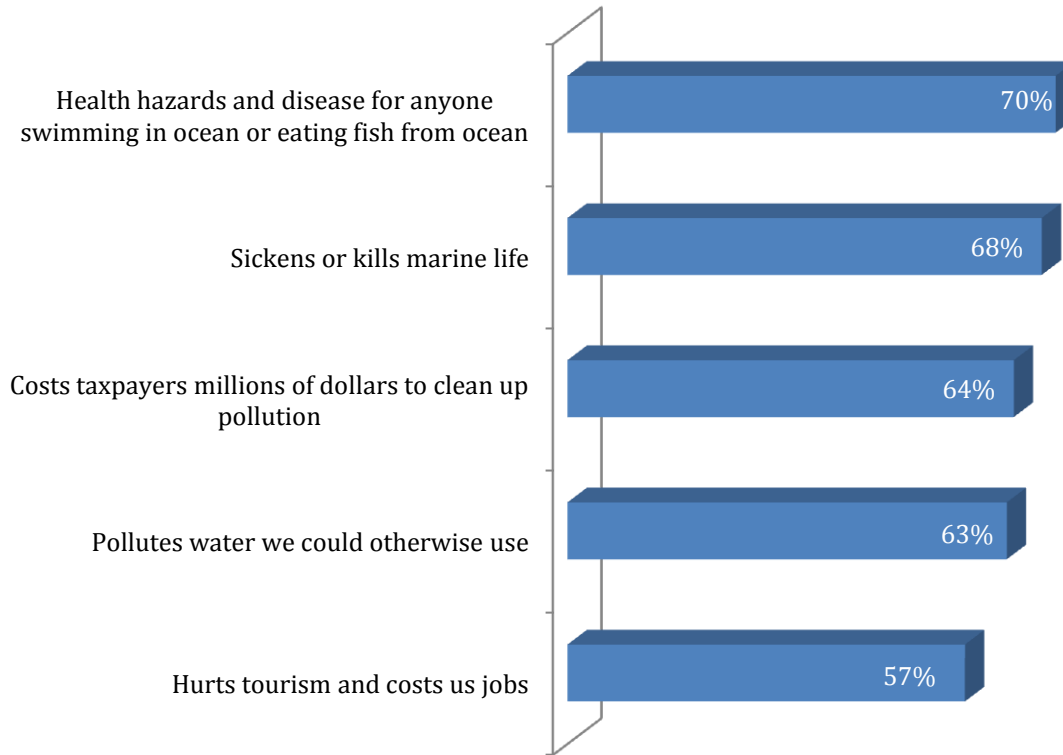
When it comes to awareness that leaking vehicles might be polluting the ocean, we find a correlation with education. That is, lesser educated residents are less aware that their leaking cars might be polluting the ocean, while those with more education are more aware of the impact on the ocean.

It is also interesting to note that among those who believe that storm water is treated, 44% say they did not know that vehicle leaks pollute the ocean, compared to just 17% who knew correcting that the water is not treated. Thus lack of information about how the storm drain system works is a predictor of lack of information about how oil and other materials on the driveway can end up in the ocean.

VIII. Motivation Messages

We tested five possible reasons to be concerned about the “*effects of storm water pollution on San Diego.*” We asked residents to rate each item on a scale of 1 to 10, with 1 meaning not concerned at all, and 10 meaning very concerned. The responses to each item were fairly similar, although the strongest concern was related to the impact of pollution on human health, and the impact of pollution on marine life. Still, we found fairly strong responses to the cost to taxpayers, the impact on tourism, and the pollution of potentially useful water.

Figure 22: % Very Concerned (9 or 10 Rating) About Possible Effects of Storm Drain Pollution on San Diego



Women were generally concerned more than men about all of these items, and especially women over age 50. We also found much higher levels of concern among less educated residents compared to those with a college degree. Non-whites were generally more concerned than whites about these effects of pollution, and especially Black residents.

Those aware of the Think Blue slogan, those who have seen or heard Think Blue commercials, brochures, or signs or booths, and those who say they have changed their behavior as a result of something they heard from the city, were all considerably more concerned than others about the impact of pollution on San Diego.

We have asked similar although not identical questions in previous years, and found comparable results, as summarized below:

- 2011: Health hazards and environmental impacts were seen as more concerned, although we also found levels of concern nearly as high regarding cost to taxpayers, pollution of water, and impact on the economy.
- 2010: The highest levels of concern were found for the impact of pollution on “our drinking water supply,” on “children,” and on “your health” and “your safety.” It seems likely that a mention of drinking water in 2010 raised concern more than the more generic reference in the 2011 survey to polluting “billions of gallons of water that we could otherwise use for other purposes.”

- 2008: We found the highest levels of concern about how the pollution “*can make children sick.*” The impact on marine life and how the pollution “*spoils our beaches when litter and trash wash up there*” were close behind. Just slightly less important was the cost to the city to clean up the mess.
- 2007: Marine life and human health were the top reasons to help prevent storm drain pollution.

We asked one follow-up question in the 2011 survey on the topic of what concerns residents about the impact of storm water pollution. We asked them to pick one of four statements that concerns them the most:

- 42% were most concerned that “*it causes harm to marine life and to people who swim in the ocean.*”
- 20% were most concerned that “*it costs San Diego taxpayers a lot of money that we could otherwise use on needs like police and fire protection.*”
- Just 14% were most concerned that “*it pollutes water that we could otherwise use for other purposes.*”
- Only 6% were most concerned that “*it hurts San Diego’s tourism industry and costs us jobs.*”

Clearly and consistently, we have seen that the issue of greatest concern to San Diego residents related to storm water pollution is the impact on human health. It is immediate and easily understandable, with a clear and tangible connection that residents can grasp between cause and effect.

The impact on marine life has also been a strong and consistent concern across all of our surveys.

The question we have been exploring in this and previous surveys is whether there is a strong third issue to serve as motivation for action. These results suggest that the cost to taxpayers might be a solid “backup” issue, especially at present with the state and city cutting billions in spending.

We find that the tax dollar concern is stronger with men than with women, and especially with men under 50, Hispanic men, and those who have not changed their behavior to help prevent pollution. It is not the top concern for any of these groups, but it does have more impact than with other groups.

The impact on human and marine health is relatively more important for those who know that storm water is not treated, but it is slightly less likely to be identified as the most important concern by those who have had the most contact with the Think Blue program. For those residents, the health effect is still by far the greatest concern they have about storm water pollution, but they are slightly less likely to name it as their top concern and more likely to mention the waste of polluted water.

IX. Sample Demographics

This survey was conducted on both landlines and cell phones, in Spanish and in English. Responses were weighted to account for overlap in households that have both landlines and cell phones, and to adjust for sample non-response. Unless otherwise indicated, all frequencies and percentages reflect the proportions after weights were applied.

Hispanics and Race

In Table 7 are the self-described racial categories of the respondents in this survey. These categories include those who identify as Latino or Hispanic, which is determined by a separate question.

Table 7: Racial Categories (including Hispanic/Latino)

	%
White or Caucasian	65
Asian or Asian-American	14
Black or African-American	6
Native American	1
Mixed Ethnicity	5
Other	9
Refused	2

Table 8 shows the proportion of San Diego residents who said they consider themselves Latino or Hispanic, and breaks down the non-Hispanic category into racial categories, corresponding to categories used in the analysis of this report.

Table 8: Hispanic/Non-Hispanic and Non-Hispanic Racial Categories Referenced in the Report

	%
Hispanic	23
Non-Hispanic, which includes:	76
Non-Hispanic White	58
Non-Hispanic Other	19

In this survey, 34% of those who said they were Latino or Hispanic categorized themselves racially as white, 6% were black, 3% were Asian, 17% mixed ethnicity; 35% said they were some other race, and 5% of Hispanics refused to give a racial category.

Language

Twenty-nine percent said they speak a language other than English at home on a daily basis. Of those, 45% (or 13% overall) said that they speak Spanish at their home, and 25% of them (7% overall) said they spoke an Asian language (Chinese, Vietnamese, Tagalog, or Korean) at home.

Table 9: Language Other Than English Spoken at Home on Daily Basis

	%
English Only	71
Other Language, which includes:	29
Spanish	13
Chinese	2
Tagalog	4
Other	4
English/No	5

Among Hispanics, 59% said they speak a language other than English at home, and that figure reaches 63% among Asian residents. Clearly, the availability of materials in multiple languages is a necessity in modern San Diego.

Educational Attainment

Table 10 provides the frequency and percentages of the educational categories of respondents in the survey and the combined categories used for analysis in this report.

Table 10: Categories of Educational Attainment Referenced in the Report

	%
No B.A. Degree (net) includes:	64
No High School Diploma	12
High School Graduate	21
Some College	22
Associate Degree	9
B.A. Degree + (net) includes:	36
Four Year Degree	23
Graduate Degree or more	13

Age

Table 11 gives the proportion of each age group, in decade cohorts, for San Diego residents overall, and the frequency and percentage for the age categories used in the analysis of this report. The mean age for respondents in this survey was 43 and the median age was 41.

Table 11: Categories of Resident Age Referenced in the Report

	%
18 to 49 includes:	67
18 to 29	27
30 to 39	19
40 to 49	19
50 or older includes:	35
50 to 59	15
60 to 69	9
70 or older	11
Refused	1

Type of Residence

In the analysis of this report we referred to residents living in “single family dwellings” (SFD) and “multi-family dwellings” (MFD). About two-thirds of the survey’s respondents live in SFDs, and one third in an apartment, condo, duplex, triplex, or any other dwelling which is not a single family home, as shown in Table 12.

Table 12: Type of Residence as Referenced in the Report

	%
Single Family Homes (SFD)	63
Multi-Family Homes (MFD) includes:	36
Condo or Apartment	27
Duplex, Triplex	4
Townhouse	5
Other	1
Don’t know/NA	1

Length of Residency in San Diego

The mean length of residency in the city is 23 years, with a median of 20 years. Only 15% have lived in the city for 5 or fewer years, and 51% have lived in San Diego for 20 or more years.

Table 13: Length of Residency in San Diego

	%
0-5 Years	15
6-19 Years	32
Refused	2
Mean	23
Median	20

Language of Interview

Twenty-two of the 800 interviews in this survey were conducted in Spanish, and the rest (778) were in English. Spanish language interviews account for 3% of the weighted sample.

Gender

Fifty-one percent of respondents were male and 49% percent female.

Appendix 1: Questionnaire and Weighted Marginal Results

March 2011
PROJECT 3105

San Diego Citywide
Storm Water Study #5

N = 800
Weighted Marginal Results

Hello, I'm _____ from California Opinion Research, a public opinion research firm. We've been asked by the city of San Diego to conduct a survey of local residents, and your telephone number was selected at random. We are not trying to sell you anything, and we are only interested in your opinions.

CELL PHONE RESPONDENTS SKIP TO Q.A

LAND LINE SAMPLE ONLY READ

According to the research procedure, may I speak to the person in the house who is 18 or older who had the most recent birthday? [IF RESPONDENT SAYS NO OR NOT NOW, ASK TO MAKE AN APPOINTMENT FOR LATER].

[REPEAT INTRODUCTION IF RESPONDENT IS NOT PERSON WHO FIRST ANSWERED PHONE]

LAND LINE RESPONDENTS SKIP TO Q.D

CELL PHONE SAMPLE ONLY ASK Q.A:

A. This sounds like a cell phone. Are you in a place where you can safely talk on your cell phone?

Yes safe place **(SKIP TO Q.C)**-----96%
No not safe----- TERMINATE
No not cell phone **(ASK Q.B)**----- 4
(DON'T READ) DK/NA ----- TERMINATE

IF RESPONDENT SAYS NOT IN SAFE PLACE, TELL THEM YOU WILL CALL BACK AND TRY TO REACH THEM WHEN THEY CAN TALK SAFELY. THEN THANK AND HANG UP AND CALL BACK LATER

ASK Q.B ONLY IF NOT CELL PHONE (PUNCH 2) ON Q.A

B. You said this was not a cell phone I reached you on. Did you forward your cell phone number to this phone, or was this not a cell phone number that I called you on?

Forwarded **(ASK Q.C)** ----- 100%
Not cell phone ----- TERMINATE
(DON'T READ) Other ----- TERMINATE
(DON'T READ) DK/NA ----- TERMINATE

C. According to the research procedure, I need to speak to someone who is age 18 or older. Are you age 18 or older?

Yes **(ASK Q.D)**----- 100%
No ----- TERMINATE
(DON'T READ) DK/NA ----- TERMINATE

D. Now, do you live in the City of San Diego, or do you live in some other city outside of San Diego?

Yes San Diego **(SKIP TO Q.1)**-----89%
No, other city **(ASK Q.E)**----- 11
(DON'T READ) DK/NA ----- TERMINATE

ASK Q.E IF OTHER CITY ON Q.D

E. What city do you live in?

(DON'T READ)

San Diego -----	33%
Carmel Mountain Ranch -----	0
Carmel Valley -----	2
Del Cerro -----	0
Del Mar Heights -----	3
Del Mar Mesa -----	3
Encanto -----	5
Hillcrest -----	3
Jamacha -----	0
La Jolla [la HOY- ah] -----	7
Mira Mesa -----	8
Mission Beach -----	0
Ocean Beach -----	13
Otay/Otay Mesa -----	6
Pacific Beach -----	0
Point Loma -----	1
Rancho Bernardo -----	8
Rancho Peñasquitos -----	0
Sabre Springs -----	2
San Carlos -----	0
San Pasqual -----	0
San Ysidro -----	3
Scripps Ranch -----	0
Tierrasanta -----	0
Tijuana River Valley -----	2
Torrey Highlands/Hills/Pines -----	0
University City -----	1
UTC -----	0
Any other response -----	TERMINATE
Not Sure/Refused -----	TERMINATE

1. Now, in the past year, have you seen or heard the slogan "Think Blue San Diego?"

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
Think Blue -----	53%	45%	2%

IF NO OR DK ON Q1, SKIP TO Q.3.
--

2. Where did you see or hear this? (RECORD VERBATIM, THEN SUPERVISOR CODE) (MULTIPLE RESPONSES ALLOWED) (N = 427)

(DON'T READ)

TV ad-----	58%
Radio-----	14
Billboard-----	10
Brochure-----	1
Community meeting-----	0
Event/at a booth at an event-----	1
TV news-----	1
Newspaper-----	5
Internet/web site-----	1
Side of truck-----	1
Friends/family/word of mouth-----	1%
At work-----	0
Storm drain stencil-----	5
Movie theaters-----	2
Bumper Stickers-----	1
Buses-----	4
Poster-----	1
Beach-----	2
School-----	2
Everywhere-----	2
Other-----	6
Not Sure-----	7

ASK EVERYONE

3. Next, I want to ask you some questions about storm drains. As you probably know, storm drains are the gutters, pipes, and concrete channels that collect water from streets.

Now, when water goes into the storm drains in San Diego, does it go to a sewage treatment plant before it is released? Or is it released into creeks or the ocean without treatment? If you are not sure, just say so.

Is treated-----	16%
Is not treated-----	57
Not sure-----	26
(DON'T READ) NA -----	2

4. In fact, anything that goes into storm drains can end up in local creeks, rivers, or the ocean, without any filtering or treatment. Motor oil, leaves and grass, dirt, litter, and pesticides are all examples of pollution that goes into storm drains in San Diego. They end up untreated in our creeks, on our beaches, or in the ocean.

In the past year, did you make any changes in your behavior that were a direct result of seeing any information about what polluted water in storm drains does to local creeks, the beaches, and the ocean? If you don't recall, just say so.

Yes (ASK Q.5) -----	32%
No (SKIP TO Q.6) -----	59
Don't recall (SKIP TO Q.6) -----	7
(DON'T READ) DK/NA (SKIP TO Q.6) -----	2

IF YES ON Q.4 ASK:

5. Can you very briefly describe that change you made in your behavior to prevent pollution? (ACCEPT UP TO 2 RESPONSES) (n=256)

Conserve/use less water	28%
Take car to carwash/don't wash at home	19
Pick up trash and litter	18
More cautious (in general)	18
Recycling more	13
Don't use or use less fertilizers/pesticides/chemicals	6
Wash car on the lawn or so water does not go in street	6
Clean gutters/streets/remove trash from street	3
Pick up after dog	4
Don't pour oil into street/take used oil for proper disposal/ fixed vehicle oil leak	10
Use less/don't use soap	2
Keep leaves and grass from going in street or gutter	7
Did not go in ocean/lake/creek	0
Other	2
Not sure	0

ASK EVERYONE

6. As I mentioned, water that goes into storm drains in San Diego goes straight into the ocean without treatment. Some people have proposed using some of this water as a resource. Please tell me if you would favor, or oppose using storm water for each of the following purposes. **(IF FAVOR/OPPOSE ASK):** "Is that strongly (favor/oppose) or somewhat?" **(ROTATE)**

	STR. FAV	S.W. FAV	S.W. OPP	STR. OPP	DK/ NA
<input type="checkbox"/> a. Purifying the water and then adding it to drinking water supplies	31%	18%	11%	33%	7%
<input type="checkbox"/> b. Using it for industrial purposes	62	18	4	6	10
<input type="checkbox"/> c. Using it for outdoor irrigation and landscaping	72	16	4	5	3
<input type="checkbox"/> d. Using it to replace water that is now imported from the Colorado River	34	24	10	19	13

7. Earlier, I mentioned the slogan "Think Blue San Diego." Think Blue is the City of San Diego's program to reduce pollution of the water in the city's storm drains, creeks, beaches, and the ocean. Have you seen or heard any of the following from the Think Blue program? **(ROTATE)**

	YES	NO	DK/NA
<input type="checkbox"/> a. A TV commercial	52%	47%	2%
<input type="checkbox"/> b. The Think Blue website	5	95	0
<input type="checkbox"/> c. A radio commercial	35	63	2
<input type="checkbox"/> d. A brochure from Think Blue	14	84	2
<input type="checkbox"/> e. A Think Blue booth or a sign at a local event	18	80	2
<input type="checkbox"/> f. An email from Think Blue	3	97	0
<input type="checkbox"/> g. A Facebook posting from Think Blue	4	94	2

8. And again, have you seen or heard any of the following from the Think Blue Program? **(IF YES ASK):** "Have you seen or heard a great deal, some, or only a little?" **(ROTATE)**

	YES GREAT DEAL	YES SOME	YES LITTLE	NO	DK/ NA
[] a. About a hotline you can call to report people or businesses that are causing pollution in storm drains-----	7%	13%	9%	71%	1%
[] b. About pollution caused by dog waste-----	13	20	16	50	1
[] c. About pollution caused by vehicles leaking oil-----	19	28	16	37	0

9. Now, how often do you see each of the following on the block where you live? Very often, often, occasionally, rarely, or very rarely? **(ROTATE)**

	VERY OFTEN	OFTEN	OCC.	RARELY	VERY RARELY	DK/ NA
[] a. Litter-----	11%	19%	24%	23%	23%	0%
[] b. Dog waste that is not picked up-----	13	13	20	27	26	1
[] c. Motor oil that has leaked onto streets or driveways-----	7	13	20	28	32	1

10. Now, I want to read you a brief list of items that may pollute water in storm drains in San Diego. Please rate each item on a scale of 1 to 10. Use a 1 if you think it is NOT a serious source of pollution, and a 10 if you think it is a VERY SERIOUS source of pollution of water in storm drains. Or you can use any number in between. **(ROTATE)**

	NOT			VERY SER			DK	MEAN				
[] a. Litter-----	3%	3%	4%	4%	13%	9%	11%	16%	6%	31%	0%	7.3
[] b. Motor oil-----	4	2	2	3	8	6	6	13	7	49	1	8.0
[] c. Dog waste that is not picked up-----	6	5	6	7	14	7	10	13	5	28	1	6.7

11. OK, do you have a dog in your household?

Yes-----	37%
No-----	63
(DON'T READ) DK/NA-----	0

12. If you saw someone walking their dog on your block, and they did not clean up the dog's droppings, how likely would you be to ask them to clean it up? Would you be very likely, somewhat likely, not that likely, or not likely at all?

Very likely-----	41%
SW likely-----	23
Not that likely-----	10
Not likely at all-----	20
(DON'T READ) Depends-----	5
(DON'T READ) DK/NA-----	1

13. I'm going to mention some reasons given by other people for NOT asking dog owners to clean up their dog's waste. Please tell me if each one definitely applies to you, probably applies to you, probably does NOT apply to you, or DEFINITELY does not apply to you. (ROTATE)

Table with 5 columns: DEF. APP, PROB. APP, PROB. NOT, DEF. NOT, DK/NA. Rows include: a. You would not feel safe asking a stranger to clean up after their dog; b. You feel it would be rude to ask someone you don't know to clean up after their dog; c. You feel it is not your job to ask someone else to clean up after their dog; d. You feel you are not really affected by dog waste that is not cleaned up.

14. Now do you own a car or other motor vehicle?

Yes (ASK Q.15) 83%
No (SKIP TO Q.18) 17
(DON'T READ) (SKIP TO Q.18) DK/NA 0

IF YES ON Q.14 ASK Q.15:

15. In the last year, have you seen any oil or other automotive fluids leaking from a vehicle you own, or seen stains from such fluids on the pavement under your vehicle? (n=665)

Yes (ASK Q.16) 17%
No (SKIP TO Q.17) 83
(DON'T READ) (SKIP TO Q.17) DK/NA 0

IF YES ON Q.16 ASK Q.17: (N = 113)

16. In the last year, did you take any actions that successfully stopped fluids from your vehicle from leaking onto the street or your driveway?

Yes 86%
No 13
(DON'T READ) DK/NA 1

IF YES ON Q.14 (OWN CAR) ASK Q.17

17. I'm going to mention some reasons given by other people for NOT always immediately fixing oil leaks or other fluids leaking from their vehicle. Please tell me if each one definitely applies to you, probably applies to you, probably does NOT apply to you, or DEFINITELY does not apply to you. (ROTATE)

Table with 5 columns: DEF. APP, PROB. APP, PROB. NOT, DEF. NOT, DK/NA. Rows include: a. You think it is too expensive to fix it; b. You didn't know it causes pollution of the beaches and ocean; c. Your vehicles never leak.

[] d. You do not see a real benefit to you to fix a small leak like that -----7-----6----- 15----- 72-----0

SPLIT SAMPLE B (n=322)

[] e. You don't have a reliable mechanic to fix the leak -----4-----7----- 10----- 78-----2

[] f. You think the amount of pollution your vehicle causes is too small to worry about -----6-----8----- 18----- 65-----3

[] g. You think it is too much trouble to fix a small leak -----2-----6----- 12----- 78-----1

ASK EVERYONE

18. The City of San Diego's Think Blue program has a hotline that can be used to report activities that may be polluting our local beaches and storm drains, or to get information about how to prevent pollution. In 2010, did you call the Think Blue hotline?

Yes----- 4%
 No -----95
(DON'T READ) DK/NA ----- 1

19. What would be the main reason you might call the Think Blue hotline in the future? **(READ-ROTATE)**

[] A. To get information about how to prevent pollution of our beaches and oceans-----17%

OR

[] B. To report activities that might be polluting our beaches and oceans-----45

(DON'T READ) Neither/not interested ----- 8

(DON'T READ) Both equally-----23

(DON'T READ) Other----- 2

(DON'T READ) DK/NA ----- 4

20. Now, following are some reasons that people have given for NOT calling the Hotline to report pollution. Please tell me if each one definitely applies to you, probably applies to you, probably does NOT apply to you, or DEFINITELY does not apply to you. **(ROTATE)**

DEF. PROB. PROB. DEF. DK/
APP APP NOT NOT NA

SPLIT SAMPLE A (n=404)

[] a. I worry about what my neighbors would do if I reported them for polluting-----5% ----- 18% ----- 22% ----- 53% -----3%

[] b. I never see any polluting behavior ----- 16----- 21----- 25----- 37-----1

[] c. It is the responsibility of government to deal with this, not me----- 12----- 12----- 22----- 53-----1

SPLIT SAMPLE B (n=398)

[] d. I am concerned that my name will not be kept confidential if I report someone for polluting-----9----- 14----- 20----- 55-----3

[] e. I don't have time to call-----7----- 16----- 23----- 51-----4

[] f. You figure the city won't do anything even if you do report pollution ----- 11----- 28----- 21----- 35-----5

21. Now, again, on a scale of 1 to 10, please rate how concerned you are about each of the following effects of storm water pollution on San Diego. Use a 1 if it does not concern you at all. Use a 10 if it makes you very concerned. Or use any number in between. **(ROTATE)**

	NOT CONC.	VERY CONC	DK	MEAN
[] a. That it costs taxpayers hundreds of millions of dollars a year to clean up the pollution	2% --- 1% --- 1% --- 1% --- 10% --- 4% --- 6% --- 9% --- 8% - 56%		1	8.45
[] b. That it ends up polluting the ocean, hurting tourism, and costing us jobs	2 --- 1 --- 3 --- 2 --- 9 --- 5 --- 9 -- 12 --- 7 --- 50		1	8.77
[] c. That it pollutes billions of gallons of water that we could otherwise use for other purposes	2 --- 1 --- 2 --- 1 --- 6 --- 4 --- 10 -- 12 --- 7 --- 56		0	8.76
[] d. That it causes health hazards and disease for anyone swimming in the ocean or eating fish caught in the ocean	2 --- 0 --- 1 --- 1 --- 6 --- 2 --- 6 -- 11 --- 6 --- 64		0	8.95
[] e. That it sickens or kills marine life, including dolphins and seals	1 --- 1 --- 1 --- 1 --- 9 --- 2 --- 7 --- 9 --- 6 --- 62		0	8.96

22. Of the following, which one concerns you the most about the impact of storm water pollution? **(ROTATE)**

- [] A. That it costs San Diego taxpayers a lot of money that we could otherwise use on needs like police and fire protection ----- 20%
- OR
- [] B. That it hurts San Diego's tourism industry and costs us jobs ----- 6
- OR
- [] C. That it pollutes water that we could otherwise use for other purposes ----- 14
- OR
- [] D. That it causes harm to marine life and to people who swim in the ocean ----- 42
- (DON'T READ) None/other ----- 1
- (DON'T READ) Equal ----- 17
- (DON'T READ) DK/NA ----- 1

I HAVE JUST A FEW ADDITIONAL QUESTIONS FOR STATISTICAL PURPOSES ONLY

23. Are you of Hispanic or Latino origin or descent, or do you consider yourself Hispanic or Latino?

Yes ----- 23%

No ----- 76

Refused ----- 1

24. Would you describe your race as Black or African-American; Asian or Asian-American; White or Caucasian; Native American, mixed ethnicity, or something else? **(IF RESPONSE IS "LATINO," TRY AGAIN TO GET ONE OF THE RACE RESPONSES LISTED BELOW OR RECORD AS "OTHER").**

African-American	6%
Asian-American	14
Caucasian	65
Native American	0
Mixed ethnicity	5
Other	9
Refused	2

25. Are any languages other than English spoken in your home on a daily basis?

Yes	29%
No	71
(DON'T READ) DK/NA	1

IF YES ON Q.25 ASK:

26. What language is that? **(ACCEPT MULTIPLE RESPONSES) (n=232)**

(DON'T READ)	
English	14%
Spanish	45
Chinese	7
Korean	2
Tagalog	13
Vietnamese	3
Other (record)	14
No	2
Refused	4

ASK EVERYONE

27. Do you live in a single family home, a duplex or triplex, a townhouse, or an apartment or condominium?

Single family	63%
Duplex/triplex	4
Townhouse)	5
Apartment/Condo)	27
(DON'T READ) Other	1
(DON'T READ) DK/NA	1

28. How many years have you lived in the city of San Diego? _____ (IF NOT SURE OR REFUSED, RECORD AS 999)

0-5 years	-----	15%
6-10 years	-----	14
11-19 years	-----	18
20-29 years	-----	14
30+ years	-----	30%
Refused	-----	2
Mean	-----	23 years
Median	-----	20 years

29. What was the last level of school you completed? (IF COLLEGE GRAD, CLARIFY IF 2 YEAR ASSOCIATE OR 4 YEAR BACHELOR DEGREE)	LESS THAN GRADE 12	-----	12%
	HIGH SCHOOL GRADUATE	-----	21
	SOME COLLEGE, NO DEGREE	-----	22
	ASSOCIATE DEGREE	-----	9
	BACHELOR'S DEGREE/COLLEGE GRAD	-----	23
	POST GRADUATE DEGREE	-----	
	PROFESSIONAL DEGREE	-----	13
	REFUSED	-----	1

30. What is your age, please? (RECORD IT EXACTLY AND CIRCLE APPROPRIATE CATEGORY BELOW.)
AGE: _____ (IF RESPONDENT DECLINES TO STATE AGE, WRITE "999" IN BLANKS ABOVE AND THEN ASK:)

Which of the following categories includes your age? (READ LIST.)

18-29	-----	27%
30-39	-----	19
40-49	-----	19
50-59	-----	15
60-64	-----	5
65-69	-----	4
70 or older	-----	11
(DON'T READ) REFUSED	-----	1

31. What is the zip code where you live? (**DON'T READ**)

91902 (San Diego Bay)	-----	1%	92065 (San Dieguito River)	-----	1
91911 (San Diego Bay)	-----	2	92067 (San Dieguito River)	-----	0
91913 (San Diego Bay)	-----	1	92075 (San Dieguito River)	-----	1
91915 (San Diego Bay)	-----	0	92101 (San Diego Bay)	-----	3
91932 (Tijuana River)	-----	1	92102 (San Diego Bay)	-----	3
91942 (San Diego River)	-----	1	92103 (San Diego Bay/River)	-----	3
91945 (San Diego Bay)	-----	1	92104 (San Diego Bay)	-----	2
91950 (San Diego Bay)	-----	2	92105 (San Diego Bay)	-----	3
91977 (San Diego Bay)	-----	1	92106 (San Diego Bay)	-----	1
92014 (the Penasquitos [pen-ahs-KEY-toe] and San Dieguito [dee-A-GEE-toe Rivers])	-----	1	92107 (San Diego Bay)	-----	1
92020 (San Diego River)	-----	2	92108 (San Diego River)	-----	1
92025 (San Dieguito River)	-----	1	92109 (Mission Bay)	-----	2
92027 (San Dieguito River)	-----	1	92110 (Mission Bay)	-----	2
92029 (San Dieguito River)	-----	1	92111 (San Diego River)	-----	2
92037 (Mission Bay)	-----	1	92113 (San Diego Bay)	-----	5
92064 (Penasquitos River)	-----	2	92114 (San Diego Bay)	-----	3
			92115 (San Diego Bay and San Diego River)	-----	2

92116 (San Diego Bay) -----	2	92131 (Penasquitos River) -----	2
92117 (Mission Bay) -----	3	92133 (San Diego Bay) -----	0
92118 (San Diego Bay) -----	0	92134 (San Diego Bay) -----	0
92119 (San Diego River) -----	1	92135 (San Diego Bay) -----	0
92120 (San Diego River) -----	3	92136 (San Diego Bay) -----	0
92121 (Penasquitos) -----	1	92139 (San Diego Bay) -----	1
92122 (Mission Bay) -----	2	92140 (San Diego Bay) -----	0
92123 (San Diego River) -----	2	92145 (Mission Bay and San Diego River) -----	0
92124 (San Diego River) -----	2	92152 (San Diego Bay and Tijuana River) -----	0
92126 (Penasquitos) -----	4	92154 (Tijuana River and San Diego Bay) -----	1
92127 (San Dieguito River) -----	2	92173 (Tijuana River) -----	0
92128 (the Penasquitos and San Dieguito Rivers) -----	4	Other -----	5
92129 (Penasquitos River) -----	3	Not sure/refused -----	6
92130 (Penasquitos River) -----	3		

ASK Q.31 OF LANDLINE SAMPLE ONLY

32. Do you have one or more cell phones as well as this landline?

Yes (ASK Q.33) -----	77%
No (TERMINATE) -----	22
(DON'T READ) DK/NA (TERMINATE) -----	1

IF YES ON Q.32 ASK:

33. Do you get personal phone calls on a cell phone when you are at home, or is your cell phone used only for business calls?

Yes, get personal calls on cell -----	89%
Cell used only for business -----	8
(DON'T READ) USE IT ONLY FOR EMERGENCIES -----	3
(DON'T READ) DON'T USE IT -----	0
(DON'T READ) DK/NA -----	0

IF PUNCH 3 OR 4 ON Q.33 ASK:

34. If I had called you on that cell phone number, would you have answered it?

Yes -----	21%
No -----	69
(DON'T READ) DK/NA -----	10

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
My supervisor may be calling you to confirm that this interview took place. May I have your first name so she can call and ask for you?

Name Telephone #

That's all the questions I have. Thank you very much for participating in the survey.

CALCULATE AND RECORD INTERVIEW LENGTH. RECORD GENDER ON THE FIRST PAGE.

I AFFIRM THAT THE ABOVE INFORMATION IS ACCURATELY RECORDED FROM THE RESPONDENT'S STATEMENTS.

Interviewer's Signature

Date

Name_____

Interviewer_____

English-----97%

Spanish----- 3

Wireless sample-----33%

Land line sample-----67

Appendix II: AAPOR Disposition Rates

Rate Definitions

Response Rate. These are ratios of complete interviews compared to all eligible respondents plus cases where eligibility cannot be determined. Response rates RR2 and RR4 count partial interviews as completes. Response rates RR3 and RR4 include an estimate of the proportion of unknown eligibility cases which are actually eligible.

Cooperation Rate. These are ratios of the proportion of all respondents interviewed compared to all eligible households contacted. Cooperation rates COOP2 and COOP4 include partial interviews as respondents. Cooperation rate COOP3 excludes those who are unable to do an interview from the base.

Refusal Rate. These are ratios of contacts who have refused to do an interview compared to all potentially eligible cases. Refusal Rate REF2 includes an eligibility estimate of the proportion of cases for which eligibility was unable to be determined. Refusal rate REF3 eliminates the cases of unknown eligibility from the base.

Contact Rate. These are household level, rather than respondent level, ratios of the proportion of all cases in which a household was reached, based on contact with households, rather than contact with respondents only. Contact rate CON1 assumes that all cases of undetermined eligibility are actually eligible. Contact rate CON2 includes only the estimated eligible cases among the undetermined. Contact rate CON3 includes in the base only cases of known eligibility.

Estimate of Eligibility (e). Estimate of e for the calculations in Table 14 is based on proportion of eligible households among all numbers for which a definitive determination of status was obtained.

Table 14: AAPOR Sample Disposition Rates For This Survey

	Landline Sample	Wireless Sample
Response Rate 1	4%	2%
Response Rate 2	4%	2%
Response Rate 3	5%	2%
Response Rate 4	5%	2%
Cooperation Rate 1	17%	12%
Cooperation Rate 2	17%	12%
Cooperation Rate 3	20%	13%
Cooperation Rate 4	20%	13%
Refusal Rate 1	18%	11%
Refusal Rate 2	19%	14%
Refusal Rate 3	72%	76%
Contact Rate 1	25%	15%
Contact Rate 2	27%	19%
Contact Rate 3	100%	100%