

**Findings from  
Opinion Research**

**2009  
SAN DIEGO  
STORM WATER SURVEY**

**Conducted for  
Think Blue San Diego**

**Goodwin Simon Victoria Research**

**April, 2009**

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## METHODOLOGY

Think Blue San Diego, a program of the San Diego Storm Water Pollution Prevention Division, asked Goodwin Simon Victoria Research (GSVR) to conduct a telephone survey of adult residents living in San Diego. The purposes of the survey include:

- 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 reported pollution-causing behaviors.
- To identify polluting behaviors that are fruitful targets for future outreach efforts because residents believe 1) they are important sources of pollution and 2) appear willing to alter these behaviors.
- To assess different potential motivations for behavioral change.
- To test ideas for improving Think Blue outreach activities.

This study was conducted between March 1 and March 8, 2009. GSVR conducted 800 telephone interviews with adult residents randomly identified from across the city using a random-digit-dial methodology, in which a random list of all active residential telephone numbers served as the sample. Of these interviews, 20% were completed with residents with wireless telephone numbers, and 3% were completed in Spanish.

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% of the actual population proportions.

Results were weighted slightly to match U.S. Census data.

This is the third year that GSV Research has conducted a survey of San Diego residents for Think Blue San Diego. There are three differences to note in comparing results from this study with ones from previous years:

- First, we used wireless telephone numbers for the first time. Because wireless numbers can be ordered only on a county-wide basis, we then screened wireless respondents to ensure they were in fact San Diego city residents.
- Second, with the assistance of Action Research, we used geocoding to classify respondents into watersheds. In doing so, we discovered that 74 cases (out of 800 in total) were geocoded with locations that may be outside of the city of San Diego. That is, these were people who told the interviewer that they live in San Diego or a neighborhood of San Diego (e.g. Pacific Beach) but when we geocoded their reported zip code and/or closest intersection, we found that they were located outside of the city limits. However, all but nine of these do appear to be located within the watersheds of interest to the city. The responses of these 74 cases are quite similar to those from the other respondents.
- Respondents were classified by watersheds based on the results of the geocoding, while in past surveys watersheds were defined by zip code.

**Table 1: Methodology**

Technique	Telephone interviewing
Interview Length	20 minutes
Universe	Adult residents of San Diego
Field Dates	March 1 to March 8, 2009
Sample	Random-digit-dial wireless and land lines
Sample Size	800
Margin of Error	+/- 3.4% for the sample overall
Languages	English and Spanish

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 Victoria Research (GSVR) to conduct a telephone survey of adult residents living in San Diego.

This study was conducted between March 1 and March 8, 2009. GSVR conducted 800 telephone interviews with adult residents randomly identified from across the city using a random-digit-dial methodology, in which a random list of all active residential telephone numbers served as the sample. Of these interviews, 20% were completed with residents with wireless telephone numbers, and 3% were completed in Spanish.

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% of the actual population proportions.

## OVERVIEW AND RECOMMENDATIONS

This survey, the third in a series, once again found very high levels of concern about storm water pollution among San Diego City residents and a willingness to take action to do something about the problem. Many residents told us that they had made such a change last year as a direct response to learning more about pollution issues during 2008.

Survey findings pointed out a significant relationship between concern over the consequences of storm drain pollution and behaviors that lead to reduction of such pollution. In particular, people were concerned about the negative effect of storm drain pollution on children's health, on the city's beaches, and on the health and safety of wildlife. Most residents, and particularly those who were most concerned about the consequences of water pollution, said they were willing to make changes that would reduce pollution, especially sweeping driveways instead of hosing them, cleaning up yard waste (or instructing their gardener to do so), picking up litter in front of their homes, and keeping sprinklers from washing chemicals into the street. Those most concerned about pollution were also more likely to recognize many common neighborhood trash items such as cigarette butts, dog droppings, and grass clippings as serious pollutants.

The existing high levels of concern, and this correlation, indicate that outreach efforts could acknowledge resident awareness of the seriousness of storm drain pollution, and take advantage of public distaste for the consequences of that pollution, to move individuals toward making specific everyday changes in their behavior. There is evidence that the public, and particularly women, will be motivated by seeing how these changes will have a direct and immediate impact on the cleanliness of storm water and thus the health of children and wildlife, and the usability and cleanliness of local beaches and the bay. Women were found to be significantly more concerned than men about storm drain pollution, more likely to have already made a change in their behavior, often more willing to change, and more motivated by concern over the consequences.

While the survey found that anti-pollution messages are clearly getting through to residents across San Diego, and there is good penetration by Think Blue San Diego television advertising, little progress has been made in educating the public about the particulars of watersheds and storm drains, or in increasing resident familiarity with the Think Blue San Diego slogan. Fewer than one in 10 residents know they live in a watershed, similar to the level found last year. Forty-four percent (up slightly from 39% last year, and similar to 2007's 46%) were aware that storm water is not handled by sewage treatment plants. Fewer residents recalled encountering the Think Blue San Diego slogan this year than last (39% compared to 45%). About the same proportions as last year had heard of steps the city is taking to prevent storm drain pollution (roughly a third), or were aware that they live in a watershed (8%).

The news on this front is not all bad. Significant positive increases in the knowledge that storm water is untreated in this survey compared to last year's were found among women (particularly those over age 50), residents under the age of 35 and over the age of 64, those with no college education, Asians, and Latinos.

A new question this year found that two-thirds of all San Diego residents know that gutter water goes into storm drains, just as the survey last year found that most residents know what the term "storm drain" means. We also uncovered signs of progress; indications that anti-pollution messages are having a measurable effect. Nearly three out of 10 residents told us that they made some change in their behavior last year as a direct result of seeing information about the impact of polluted storm water on beaches, rivers and the ocean. Those who remembered the Think Blue slogan, and those who saw the program's television commercials, were twice as likely as others to have made a change.

The survey found two encouraging trends between this year and last among single family home dwellers: fewer reported hosing down their driveways, and using pesticides and weed killers in their yards, than in last year's survey.

Further outreach is needed, however, to raise awareness of the polluting potential of washing off sidewalks and driveways, and over-watering lawns. These behaviors are candidates for synergistic messages that could take advantage of the survey finding that there is some public conflation of storm drain pollution and water conservation, by pointing out how changes in these behaviors can lead to two positive and complimentary outcomes. Another possible candidate is the persistent behavior of home car washing. Forty-two percent of San Diego residents said they do this, virtually the same proportions found in the last two surveys. Most likely to wash their car at home were younger men, and Latino men of all ages, indicating that Spanish language outreach and messages targeting younger men might have the most impact.

Survey findings indicate that television is by far the most effective and popular means of disseminating program information. Think Blue San Diego's television advertisements reached a majority of city residents last year: more than half remembered seeing one or both of the ads. In particular, 46% remembered the "dog waste" commercial and 36% remembered the spot that featured a man having spaghetti and other trash dumped on him. (For comparison, last year's survey found that 44% remembered seeing the "yellow ducks" commercial.) Most of those who remembered hearing or seeing the program's slogan saw it on television. About half of residents, when asked for how they would most like to get information about pollution in the future, said that they would prefer seeing it on television.

Other outreach methods are effective to a lesser extent: 17% of all residents recalled encountering the program's slogan on a billboard or bus ad, 11% in a brochure, seven percent encountered it at a local event, five percent saw the website, and two percent received a giveaway item. Billboards were particularly effective at reaching residents younger than age 50, college educated, and residents in single family homes, among others. The web site was most effective in reaching 18 to 34 year olds, Latinos, and non-whites.

We found that not only were residents aware of Think Blue advertisements, but the program's focus on the polluting potential of dog droppings last year paid off in higher seriousness ratings for that pollutant in the survey this year (average rating of 7.9 compared to 6.9 in last year's survey), as well as measurable changes in behavior among dog owners. Dog owners who saw the "dog waste" commercial were more likely to rate dog droppings as a serious pollutant, and more than one

out of five said that they made a change last year by beginning to pick up after their dogs.

Since dog owners were four times as likely to have heard the Think Blue slogan on the radio than other residents, and seven out of 10 dog owners live in single family homes, radio messages aimed at raising awareness of the polluting potential of dog droppings, yard waste, chemicals, and washing down sidewalks may be particularly effective. We found dog owners were also significantly more likely to say they would feel comfortable asking neighbors to reduce their polluting behaviors, increasing the likelihood that such messages could spread.

Another indication that Think Blue messages are raising awareness is that people who saw the program's television commercials more readily recognized that food and drink discarded in the street is a serious source of pollution, and (along with residents who were familiar with the Think Blue slogan), were also more likely to identify washing down driveways and sidewalks, over-watering lawns, and yard waste as serious.

## SUMMARY OF FINDINGS

### Storm Drain Pollution A Serious Problem

This survey found that San Diego city residents continue to consider storm water pollution a very serious issue. Like the rest of the country, San Diego residents are troubled about the current rocky economic climate (more than four out of five called "jobs and the economy" a very important problem for the city), but the survey shows that storm drain issues remain of very high importance to city residents, and that many are willing to take steps to do something about it.

- *Polluted water entering storm drains in San Diego* was rated as *very* important by 73% of residents, down an insignificant four points from last year's result. Concern was highest among the youngest and oldest age groups, those with less education, and apartment dwellers.
- *Pollution of San Diego's ocean, bays and beaches* was also rated as *very* important by 76%. This finding is virtually unchanged from those of the previous two surveys. Women, those under age 50, apartment dwellers, and cell phone users were among those with the highest levels of concern on this issue.
- *Broken or deteriorating water and sewer pipes* was called a *very* important issue by 76%, a finding is virtually identical to last year's result. Concern

was highest among residents who are fifty or older, Latino women, and Latino apartment dwellers. Residents in single family homes who had a home improvement or yard work project last year also were more likely to call this issue very important, as were those living in the San Diego River watershed area.

There was no significant variation in the level of concern over the issue of polluted water entering storm drains between those who have heard of the Think Blue program and those who have not.

### **Residents Very Concerned About Consequences Of Storm Drain Pollution**

A new series of questions this year revealed San Diego residents to be very concerned about the consequences that arise from pollution of the water in storm drains. On average, residents rated each of six issues well at over eight out of 10. Over 60% of respondents scored a nine or higher on the 10 point scale.

The lowest average ratings (which are still very high) were assigned to the costs that could accrue to city and taxpayer for cleaning up and paying penalties for polluted waterways as follows:

- *When people do things that pollute our beaches and waterways, it costs the city millions of tax dollars to clean it up. (8.45)*
- *The city has to pay expensive fines when San Diego residents do things that pollute out beaches and waterways. (8.47)*

Residents gave average ratings of 8.7 or above average ratings for issues that concerned the consequences that storm drain pollution imposes on children's health, on the city's beaches, and on the health and safety of wildlife.

- *It can make children sick if they play in polluted water. (8.90)*
- *It makes the beaches polluted and unsafe for people. (8.80)*
- *It spoils our beaches when litter and trash wash up there. (8.74)*
- *The pollution sickens or kills marine life, including birds, seals and dolphins. (8.74)*

## **Concern Positively Related to Behaviors That Prevent Storm Water Pollution**

A factor analysis showed that the six items on the scale measured a single construct which can be labeled “concern for storm water pollution.” Concern about consequences of storm water pollution was significantly and positively related to attitudes and behaviors that prevent storm water pollution:

- Concern about the consequences of storm water pollution was significantly and positively correlated to the perceived seriousness of various items that pollute water in storm drains. That is, people higher in concern rated cigarette butts, dog droppings, litter, plastic bags, leaves/grass clippings, over-watering, washing sidewalks, motor oil, and food/drink as more serious sources of pollution than those who were less concerned about the consequences of storm water pollution
- Concern about the consequences of storm water pollution was significantly and positively correlated with willingness to take various actions to prevent storm water pollution. That is, as concern about the consequences of storm water pollution increased, the likelihood that they would take actions to prevent storm water pollution (such as picking up litter in from of their home, or picking up dog waste in front of their home) also increased.

There were also some significant variations across groups in the city in average ratings of concern:

- Females (8.8) more than males (8.35). In particular, women fifty or older (9.11) were even more concerned than women under fifty (8.78).
- Latino women (9.01) were more concerned than white women (8.81) and white or Latino men.
- Those who reported changes in their behavior as a direct result of seeing information about storm water pollution had significantly lower levels of concern (9.03) than those who did not change their behavior.
- People who reported seeing a Think Blue brochure reported significantly higher levels of concern about storm water pollution (9.29) than those who had not (8.70). There was no difference in concern based on whether or not people saw Think Blue commercials, billboards, or the website.

As the results indicate that people are already highly concerned about pollution of water in storm drains, and about the various consequences of such pollution, outreach aimed at increasing concern is not indicated.

### **Most Pollution Sources Recognized As Serious**

Residents rated nine sources of storm drain pollution on a 10 point scale from “1” for pollutants that were “not at all serious” to “10” if they were very serious. This survey found that residents in this year’s survey more readily recognized many of the pollutants as serious than in previous years. Average ratings, ranked from high to low, were as follows:

- *Motor oil’s* rating of 8.8 was nearly identical to last year’s 8.6.
- *Litter* (8.4) was higher than 7.9 last year.
- *Plastic shopping bags* averaged 8.3, rated for the first time this year.
- *Cigarette butts* (7.9) and *food and drink thrown into the street* (7.5) also received high rankings as serious pollutants. In each case, their ratings differed only insignificantly from last year’s.
- More residents recognized *dog droppings* as a serious pollutant this year (7.9) than last (6.9).
- *Washing down sidewalks and driveways* averaged 6.8 this year, virtually identical to the 6.9 found last year.
- *Over-watering lawns* had an average rating of 6.6 this year, compared to 5.7 last year.
- *Leaves or grass clippings* received ratings that averaged 6.3 this year, compared to 5.6 last year.

## **Familiarity with Think Blue San Diego Increased Recognition of Pollutants**

Most residents are aware that motor oil, litter, plastic shopping bags, and cigarette butts thrown into the street are serious pollutants. More outreach may be needed to raise resident awareness of the seriousness of other pollutants.

The survey shows that the program is making an impact. Those familiar with the Think Blue slogan rated *food and drink, washing down driveways and sidewalks, over-watering of lawns, and leaves or grass clippings* higher on the seriousness scale than those who were not familiar with it, and each of those items had an overall higher seriousness rating this year than last.

In addition, those who saw either or both of the Think Blue commercials were more likely to recognize *food and drink thrown into the street* as a serious pollutant than those who had not seen the commercials.

Residents who had heard of steps the city has taken to fight pollution of storm drains gave higher average seriousness ratings to *washing down sidewalks and driveways* than did other residents.

## **Fewer Single Family Home Residents Report Hosing Their Driveways and Using Pesticides**

While a sizeable number of San Diego city residents continue to pursue each of the six potentially polluting behaviors we tested, the survey did spotlight two encouraging downward trends between this year and last: fewer residents who live in single family homes reported hosing their driveways, and fewer reported using pesticides and weed killers in their yards.

### **Car Washing: A Continuing Issue**

Possibly more intractable is the habit some in San Diego have of washing their car at home. The proportion who reported this behavior declined an insignificant four percentage points over the last two surveys from 46% in 2007 to 42% in this survey. Younger men and Latino men of all ages were most likely to wash their cars at home, indicating that Spanish language outreach and messages targeting younger men could have a direct effect on this behavior.

The good news in these results is that about three out of 10 residents who said they made a change in their behavior in order to reduce pollution volunteered that the change they made was to take their car to a carwash instead of washing it at home,



or to wash their car at home in a way that prevents runoff into the gutter. This represents about 8% of all residents. Among residents who reported washing their car at home last year, 34% said they were now taking it to a carwash or washing it more carefully at home.

This issue may also be a good candidate for drafting messages that stress both water conservation and the benefit of keeping pollutants out of storm drains.

### **Dog Owners Picking Up After Their Dogs**

Another potentially polluting behavior is dog ownership. The proportion of residents that have a dog has hovered just below or right at a third over the past three years. Dog owners can easily reduce pollution by picking up after their dogs, and we found some encouraging evidence that anti-pollution messages are getting through:

- Forty-two percent of dog owners reported having seen the “Dog Waste” commercial.
- About a third of dog owners overall said they made a change in their behavior last year to reduce pollution, rising to 38% among dog owners who saw the commercials. Twenty-two percent of dog owners who saw one of the Think Blue commercials said the change they made was to pick up after their dog.
- Among dog owners who saw the “Dog Waste” commercial, more than half ranked *dog droppings* as 10 out of 10 as a serious pollutant, compared to 36% of other residents.
- About seven out of 10 dog owners rated the likelihood that they would pick up dog waste in front of their homes at eight or higher and 50% said they would definitely do it. This compares to nearly three out of 10 residents who don’t own a dog and said they were unlikely to pick up dog waste near their homes.

Residents who live in single family homes, especially whites, are most likely to own a dog. High dog ownership levels were also found among those who said they hose down their driveways, and those who had a landscaping or home improvement project at home last year.

Another interesting finding is that dog owners who had heard the Think Blue slogan were significantly more likely to have heard the slogan on the radio than those who

don't own a dog. Similarly, dog owners rated themselves as more likely to talk to their neighbors about reducing polluting behaviors.

Since most dog owners are also single family home owners, there is an opportunity to target messages toward this group through radio advertisements that stress not only the importance of picking up after their dog, but also reducing the use of yard chemicals, sweeping their driveways instead of washing them, and making sure that landscaping and yard maintenance waste stay out of the gutters.

### **Information Resulted In Positive Change**

A new question on the survey this year found that nearly three out of 10 (29%) San Diego residents made a change in their behavior in 2008 as a direct result of seeing information about what polluted water in storm drains does to local rivers, the beaches and the ocean. This is another area in which Think Blue has made an impact.

- Forty percent of residents familiar with the Think Blue program slogan made a change, along with 36% of those who had seen one or both of the television commercials. In each case, they were nearly twice as likely to have made such a change than other residents.
- Other groups that were more likely to have made a change were women (33%), and 50-64 year olds (34%). Least likely to have made such a change were men, those in the age range of 35 to 49, and single family home dwellers who had a home improvement project last year.

### **Residents Willing To Take Action To Prevent Pollution**

Residents were asked to rate how likely they were to act in each of 10 specific ways that would help prevent pollution. Six of the 10 actions we tested received average ratings of more than eight on a 10-point scale from "will never do it" to "definitely will do it." Similar questions were asked in previous years, but a change in the format this year precluded direct comparison.

Four of the seven actions that averaged likelihood ratings of eight or close to it were asked only of residents living in single family homes (SFH). Picking up litter and fixing oil leaks immediately also received high ratings.

- Sweep driveway instead of hosing (8.4 among SFH only). This action was less likely among those who hosed their driveways last year.

- Ask gardener to keep leaves and yard trimmings out of the gutter (8.3 among SFH only).
- Clean up leaves and yard trimmings to keep them out of storm drains (8.3 among SFH only).
- Pick up litter near home (8.2).
- Fix oil leaks immediately if you notice oil stains on your driveway or parking area (8.2).
- Make sure your sprinklers do not wash fertilizers into the gutter (8.0 among SFH only).
- Use natural lawn care products instead of chemicals even if they cost more (7.5 among SFH).

The actions residents were least likely to do were those that involved talking to others to change their behavior, or that involved picking up after other people's dogs.

- Pick up waste from your dog and others (6.6). Dog owners are more likely to say they would do this, with an average rating of 7.6, compared to 6.2 among those who don't have a dog. Latino residents were the most likely of any racial/ethnic group to do this and Asians the least. (Asians are no more or less likely to own a dog than other residents.)
- Talk to a neighbor if you see them doing something that causes pollution to go into the street (6.5). Dog owners and Latino residents were more likely to do this than others.
- Ask local businesses to clean up litter in front of or behind their business (5.0). Once again, Latinos were the most likely to do this and Asians the least. Thirty-five percent of Asian residents said they would never do this.

In almost every case, residents familiar with Think Blue were significantly more likely to take action to prevent pollution. The exceptions were: sweeping their driveway, using natural lawn care products, picking up dog waste, and talking to neighbors.

### **More Than Half Remember A Think Blue Television Advertisement and TV is the Preferred Method of Obtaining Information**

We found that Think Blue messages about storm drain pollution are reaching a majority of San Diego residents through television advertising. Television was also

chosen by more than half as their preferred means of receiving information about preventing storm drain pollution.

- **Television ads:** More than half (55%) of San Diego residents say they saw one of the two Think Blue television advertisements last year.
  - Forty-six percent remembered the commercial asking dog owners to pick up dog waste. Thirty-six percent remembered the ad in which a man has spaghetti and other trash dumped over him.
  - Last year 44% said they remembered the “yellow ducks” commercial.
  - Seventy-eight percent of residents familiar with the Think Blue San Diego slogan (37% of all residents) said they saw or heard it on television.
  - Fifty-one percent said they preferred to receive information about pollution prevention through television. By comparison, 15% chose newspapers and 11% chose the website. Other sources were chosen by fewer than 10% in each case.
- **Billboards and bus ads:** Thirty-six percent of those who remembered the slogan (17% of all residents) saw it on a stationary or mobile billboard.
- **Brochures:** Just under one in four of those who remembered the slogan (11% of all residents) said they had seen a brochure from Think Blue.
- **Website:** Twelve percent (5% of all residents) saw the website. However, Internet use is highly variable by age and gender. Twice as many men than women had seen the website, and more than twice as many residents under age 50, than over.
- **Local events and Giveaway items:** Fifteen percent (7% overall) encountered Think Blue at a local event. Four percent (2% overall) received a giveaway item such as a calendar, pet waste bag, Frisbee, or dustpan.
- **Radio:** Eight percent remembered the slogan from hearing it on the radio (3% of all residents).
- **Street or Curb messages:** Five percent (2% overall) remembered seeing the slogan on a street or curb.

## **Awareness Of Think Blue San Diego and Anti-Pollution Efforts Remain Below 50%**

Despite the good penetration of the television ads, awareness of the Think Blue slogan and in particular of the city's efforts to fight pollution remains fairly low among San Diego residents.

- **Think Blue slogan:** Just under two in five (39%) remembered seeing or hearing the Think Blue San Diego slogan when asked at the very beginning of the survey. The proportion rose to 46% after reminders of what the program is about. Last year, 45% recalled it at the beginning, and 55% after being reminded.
- **City efforts:** Just over a third (34%) had heard of steps the city has taken to prevent pollution of storm drains. This is almost identical to the proportion who had heard of city efforts in the survey last year.

## **Lack of Familiarity With Watershed Persists**

The survey found that many residents remain unfamiliar with the basics of storm drains and water pollution. Only eight percent knew they live in a watershed, about the same percentage as last year.

Residents familiar with Think Blue were no more or less likely to know if they live in a watershed or not. We found only two significant variations in the proportion of residents who do or do not know they live in a watershed:

- Residents living in single family homes who had a landscaping or home improvement project last year were more likely (18%) to say they live in a watershed than the average single family home dweller (10%).
- Residents who have heard of steps the city has taken to reduce pollution are twice as likely (12%) to know they live in a watershed as others (6%).

## **Most Know Where Gutter Water Goes**

A new question this year found that most people (67%) do know that water flows from gutters into storm drains. Thirteen percent said that water does not flow into storm drains and 20% weren't sure. Residents most likely to think gutter water does not flow into storm drains included:

- Latinos (23%), particularly Latino women (30%).
- Those without college degrees (16%), compared to those with degrees (8%).
- Those familiar with Think Blue San Diego were 15 points more likely to know that gutter water flows into storm drains than those who hadn't heard the slogan. Residents who had seen a television ad were twelve points more likely.

### **Fewer Than Half Aware That Storm Water Is Not Treated**

Forty-four percent of San Diego residents knew that the water in storm drains runs directly into creeks and the sea without being treated in sewage plants, meaning that more than half weren't sure about this, or guessed wrong.

The good news in these results is that residents this year were more likely than they were last year to know that storm water is not treated. In particular, we noted significant increases among women (particularly those over the age of 50), residents under the age of 35 and over the age of 64, those with no college education, Asian, and Latinos. We will continue to keep an eye on this measure to see if the barely significant five point gain overall proves in subsequent surveys to be the beginning of an upward trend in storm drain knowledge among San Diego residents as the city continues its educational efforts.

There was some ambiguity in the results when it comes to familiarity with Think Blue. Those who said they had heard the slogan were nine points more likely to know that storm water is not treated in sewage treatment plants. On the other hand, residents who had seen one or both of the commercials were almost twice as likely to answer incorrectly that storm water is treated.

This may be a case where the visual aspects of television advertising are overwhelming the message. As mentioned earlier (see page 10), residents were more likely to recall Think Blue's "Dog Waste" commercial than they were to remember the "Trash Man" commercial. However, we found those who saw the commercials were more likely to rate food and drink thrown into the street as a serious pollutant; while no more likely to rate dog droppings as a serious pollutant.

## **Job Ratings Rise for San Diego On Pollution Issues**

City job approval ratings on water pollution inched toward six out of 10 this year, up from closer to five out of 10 last year.

- The city received the highest average rating of 5.74 for *Preventing pollution of San Diego's ocean, bay, and beaches*, up from 5.24 in 2007's survey and 5.36 in last year's survey.
- The city's average rating of 5.91 for *keeping polluted water out of storm drains* was higher than the 5.28 rating for the same question asked in 2008. In 2007 a similar question was asked that used the wording "preventing pollution in storm drains" which received a rating of 5.16.

We found no significant correspondence between awareness of the Think Blue program, or the city's anti-pollution efforts, and higher ratings. The survey did find that those who know that storm drain water is not treated gave the city lower approval ratings than others.

## **Water Conservation and Water Pollution**

The survey uncovered some areas of misidentification among residents between the related issues of water conservation and storm water pollution as follows:

- San Diego city residents who told us they had made a change in their behavior last year were asked to describe what that change was; almost half said they are conserving water or using less water these days. That figure represents about 13% of all city residents.
- Residents who had previously encountered the Think Blue slogan were asked to describe what they thought it was asking them to do. More said that they thought the slogan was a call to conserve water than said it was specifically about reducing storm drain pollution. This represents 12% of residents citywide who said that the slogan Think Blue San Diego was a call to conserve water, compared to 8% who said that the slogan referred to storm drains or storm water.

This fusion of concepts may be seen as a positive unintended consequence of the Think Blue San Diego program, and it is possible (although not measured in this survey) that storm water pollution issues are likewise benefiting from such cross-referencing of messages.

Targeting messages toward emphasizing multiple rewards for the same behavior could provide even greater positive reinforcement for changes. For example, residents who knew that such actions as sweeping their driveway or taking their car to a carwash accomplishes two important water related goals of conservation and keeping pollutants out of the storm drains may be even more likely to take such actions.



# DETAILED FINDINGS

## OVERVIEW OF FINDINGS

This report presents the results in the following order:

- We begin by looking at how San Diego residents rank the importance of five issues facing the city including issues involving storm drains and pollution.
- We then examine the level of concern San Diego residents feel about the consequences of storm drain pollution.
- Next, we see how residents view the job the city of San Diego is doing on three issues, including keeping pollution out of storm drains, and preventing pollution of the ocean, bays, and beaches.
- The next section of the report is a series intended to assess familiarity with storm drain issues: Do residents know they live in a watershed? Does gutter water go into storm drains? Is storm water treated in sewage treatment plants, or released into waterways untreated?
- We then look at questions relating to how familiar San Diego residents are with the city's anti-pollution programs. We begin with finding out whether residents were aware of steps the city has taken to fight storm drain pollution.
- Next in this section are the results of the very first questions on the survey: If residents had heard or seen the Think Blue San Diego slogan before, where they had seen it, and what they thought it meant.
- We then assess the penetration of two Think Blue television commercials, and take a look at where those who recalled seeing or hearing the slogan may have encountered it. We ask again if respondents recalled the Think Blue slogan, and finish the section with findings on how many residents were given a Think Blue San Diego giveaway item.
- The next section addresses questions which assess polluting behaviors among city residents. We begin by presenting the findings on how seriously residents rated a series of storm drain pollutants found in ordinary neighborhoods, then look at how willing they were to take specific actions to reduce pollution.
- Finally, we present the results of questions exploring how residents prefer to get information about storm drain pollution.

## WATER POLLUTION CONCERN AND CONSEQUENCES

This section looks at levels of concern about water pollution issues among San Diego City residents, and then examines how seriously they view several possible consequences of polluted storm water.

### A. IMPORTANCE OF SPECIFIC ISSUES FACING SAN DIEGO

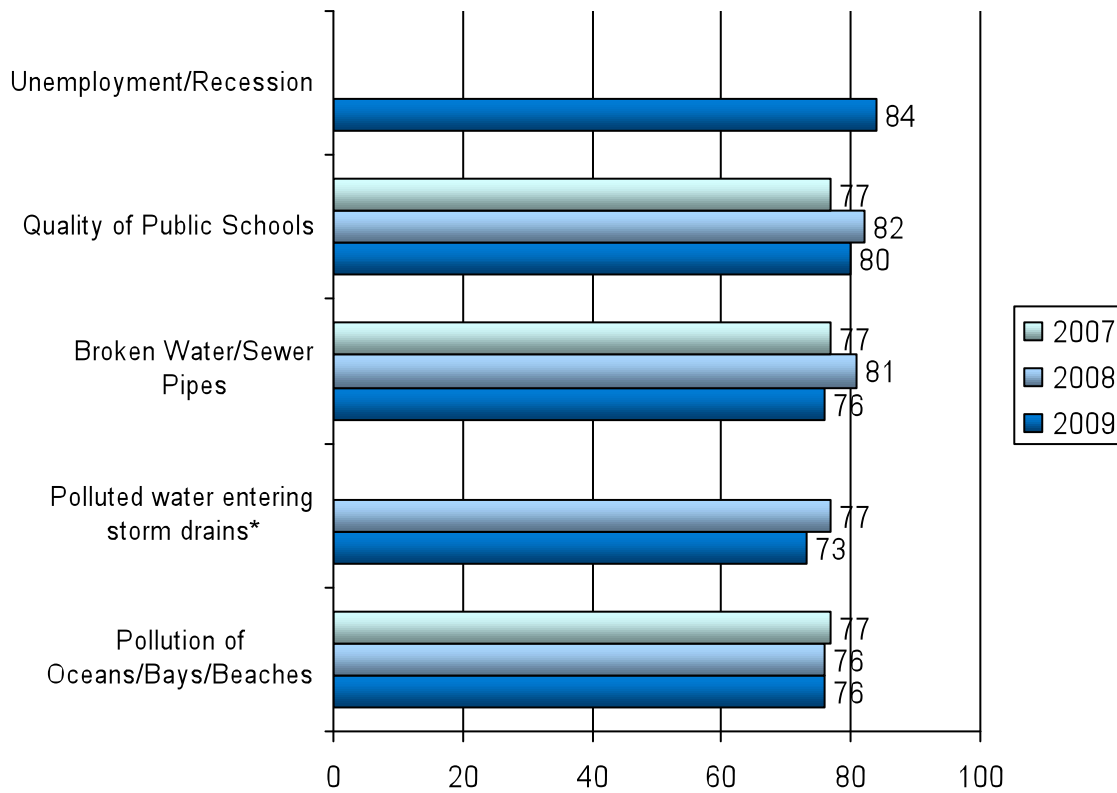
Early in the survey we asked city residents to rate the importance of five issues facing San Diego. These issues were: the quality of the city's water and sewage system, the public schools, pollution of the ocean and beaches, pollution of storm drains, and the increasing problems of unemployment due to the recession.

Residents were asked to rate each of the issues as either very important, somewhat important, not very important, or not at all important. Figure 1 shows the proportion who characterized each of these issues as *very* important. Some of these issues were ranked by respondents in previous surveys, and those findings are included for comparison. The chart shows that water pollution continues to be a salient issue for San Diego residents; more than seven in 10 characterized such issues as *very* important and virtually all called it at least somewhat important.

- *Polluted water entering storm drains in San Diego* was rated as *very* important by 73%, an insignificant four points lower than the 77% found in last year's survey. In 2007, the question was asked a different way and is not included for comparison.
- Seventy-six percent called *broken or deteriorating water and sewer pipes* very important, a finding similar to 77% in 2007's survey, and down only slightly from 81% last year.
- *Pollution of San Diego's ocean, bays and beaches* was also rated as *very* important by 76%. This finding is virtually unchanged from the previous two surveys.

As noted, public concern was intently focused on *unemployment and the recession*, a question included for comparison this year due to the troubled national (and global) economy. In San Diego, 84% of residents said that lost jobs and the recession were a *very* important problem. Residents also evinced a high level of concern (80%) for *the quality of public schools*, a result similar to findings from previous years.

**Figure 1: Percent Rating Each Issue as *Very Important*, 2007 to 2009**



\* In 2007 the question was asked in a split sample using the two wordings: “pollution of storm water” and “pollution of storm drains” and the results are not included in this chart.

## **1. Deterioration of Water and Sewage Pipes**

Overall, 96% of residents called the problem of deteriorating water and sewer pipes as an important issue for the city of San Diego, including 76% who said it is *very* important, and 20% who called it *somewhat* important. Three percent said it wasn't important and 1% weren't sure.

These results vary only slightly from 2008's survey in which 97% of residents characterized the issue as an important one. In that survey, the proportion who said it was *very* important was five points higher (81%), and the proportion who called it *somewhat* important was four points lower (16%).

We found the following groups in the city more likely to rate the issue of deteriorating water and sewage pipes as *very* important:

- Residents 50 or older (81%), compared to those younger than 50 (73%), especially those over age 64 (85%).
- Latino women (84%), compared to Latino men (64%), and Latinos living in apartments (87%) compared to those in single family homes (63%).
- Residents who said that pollution of the ocean, bays, and beaches was a *very* important issue were also more likely to say the same thing about this issue of deteriorating water and sewer pipes (84%), when compared to those who said pollution of waterways was at most *somewhat* important (52%).
- Single family home dwellers who had a home improvement project last year were more likely to call this issue *very* important (81%). Those in single family homes who said they hosed down their driveway last year were more likely to call it *somewhat* important (33%).
- Residents living in the San Diego River watershed were less likely to rate see this issue as important (90%) compared to 97% or higher in other watershed areas.

The survey last year found several demographic differences for this question that we did not see in this year's results including: women more than men, those with no college degrees more than the college educated, Latinos more than non-Latinos, and residents in the San Diego River watershed more than in other areas.

We did, however, continue to find a significant gender difference within the Latino demographic as noted above.

## **2. Pollution of San Diego's Ocean, Bays and Beaches**

The vast majority of residents (95%) called this issue an important one. More than three out of four (76%) said it is *very* important, the same proportion as last year. Another 19% called it *somewhat* important, a finding again virtually unchanged from 2008's 20%. In the current survey, 3% said it wasn't important and 2% weren't sure.

The groups most likely to rate the issue of pollution of ocean, bays, and beaches as *very* important include:

- Women (80%), compared to men (71%). This gender gap was found in 2008's survey only among whites.

- Residents under age 50 (77%), compared to those older (71%). This finding is comparable to a similar pattern of greater concern among younger people found in 2008.
- In particular, women under age 50 (82%) were the most likely to rate this issue as very important, and men over age 50 least likely (67%).
- Similarly, Latino women (84%) and white women (79%) were more likely, compared to white men (71%). This pattern replicates findings from 2008.
- Apartment dwellers (79%), compared to those living in single family homes (72%).
  - In particular: white (80%) and Latino (84%) apartment dwellers, compared to whites living in single family homes (70%).
- Cell phone users (82%) were more than those on landlines (74%) .

The 2008 survey found those without college degrees were fifteen points more likely to call pollution of the ocean, bays, and beaches a *very* important issue than those with degrees, but the education gap in the current survey was present only to an insignificant degree.

### **3. Polluted Water Entering Storm Drains**

The vast majority of residents (94%) said that polluted water entering storm drains is an important issue for the city of San Diego, including 73% who called it a *very* important issue, and 21% who called it a *somewhat* important one. Only 4% of residents said it was *not very* or *not at all* important and 2% weren't sure.

This finding is insignificantly lower than last year when 97% said it was an important issue, including 77% who called it *very* important. The proportion who called it somewhat important last year was virtually the same as this year at 21%.

In 2007 a similar question was asked with a split sample in which the wording "pollution of storm drains" was used in one half and "pollution of storm water" in the other, so the findings are not included. However, analysis shows that the pattern of overall results for both of those half-sample questions is also comparable to the findings this year.

We found groups in the city most likely to rate the issue of pollution of water in storm drains as *very* important included:

- The youngest respondents (ages 18 to 34) and the oldest (65 and older) at 77% in each case, compared to residents between the ages of 50 to 64 (64%).
- Residents without college degrees (76%), more than those who have earned a B.A. or higher (69%).
  - Men with college degrees were the least likely to say it is a *very* important issue (65%,) because they were most likely to call it *somewhat* important: 30% compared to approximately 20% among the other groups.
- Those who characterized the issue of pollution of San Diego’s bays, beaches, and ocean as *very* important were also more likely to call this issue *very* important (87%).
- Apartment dwellers (81% *very*, 15% *somewhat*) ranked it as more important than those in single family homes (68% *very*, 26% *somewhat*).
- Cell phone respondents (82% *very*, 14% *somewhat*), more than those on landlines (71% *very*, 23% *somewhat*).

#### **4. Economy and Unemployment**

We asked residents to rate the seriousness of the *economy and unemployment* for the first time this year, and found high levels of concern among the vast majority of residents: 97% characterized it as at least a *somewhat* important problem and 84% called it a *very* important one.

The findings show that highest levels of concern over economic issues were mostly correlated with age, and were only a matter of degree. Those most likely to call it *very* important included: 18 to 34 year olds (89%), residents who do not have a college degree (87%), cell phone users (90%), and residents who said pollution of ocean, bay, and beaches is a *very* important problem (89%).

#### **5. Quality of Public Schools**

Eight out of 10 residents overall said the quality of public schools is a *very* important issue, a finding that echoes the 82% found in last year’s survey.

Quality of the public schools was most likely to be an issue for: 18 to 34 year olds (87%), non-whites (84%) and in particular Asians (91%), those with graduate degrees or more (87%), and cell phone users (86%).

Residents who called pollution of San Diego's ocean, bays, and beaches a very important problem were also more likely (86%) than others to say the quality of public schools is a very important issue. There was also a small but significantly higher likelihood of having this view among those who had seen one of the Think Blue television commercials (83%).

## **B. CONSEQUENCES OF STORM WATER POLLUTION**

A series of questions was added to the survey this year to help assess the level of concern among San Diego residents about potential consequences of polluted water in storm drains. The six-item scale was aimed at identifying the underlying reasons for environmental concern, including egoistic concerns (e.g., costs for clean up), altruistic concerns (e.g., effects on health of children), and biospheric concerns (e.g., harm for animals and marine life). Respondents rated their concern for various consequences of storm water pollution using a 10-point scale from 1 (no concern) to 10 (great deal of concern).

As may be seen in Figure 2, a chart which shows the average rating of concern for each issue, the two problems involving tax and financial issues had the lowest (virtually identical) average ratings, hovering just under 8.5:

- *When people do things that pollute our beaches and waterways, it costs the city millions of tax dollars to clean it up. (8.45)*
- *The city has to pay expensive fines when San Diego residents do things that pollute our beaches and waterways. (8.47)*

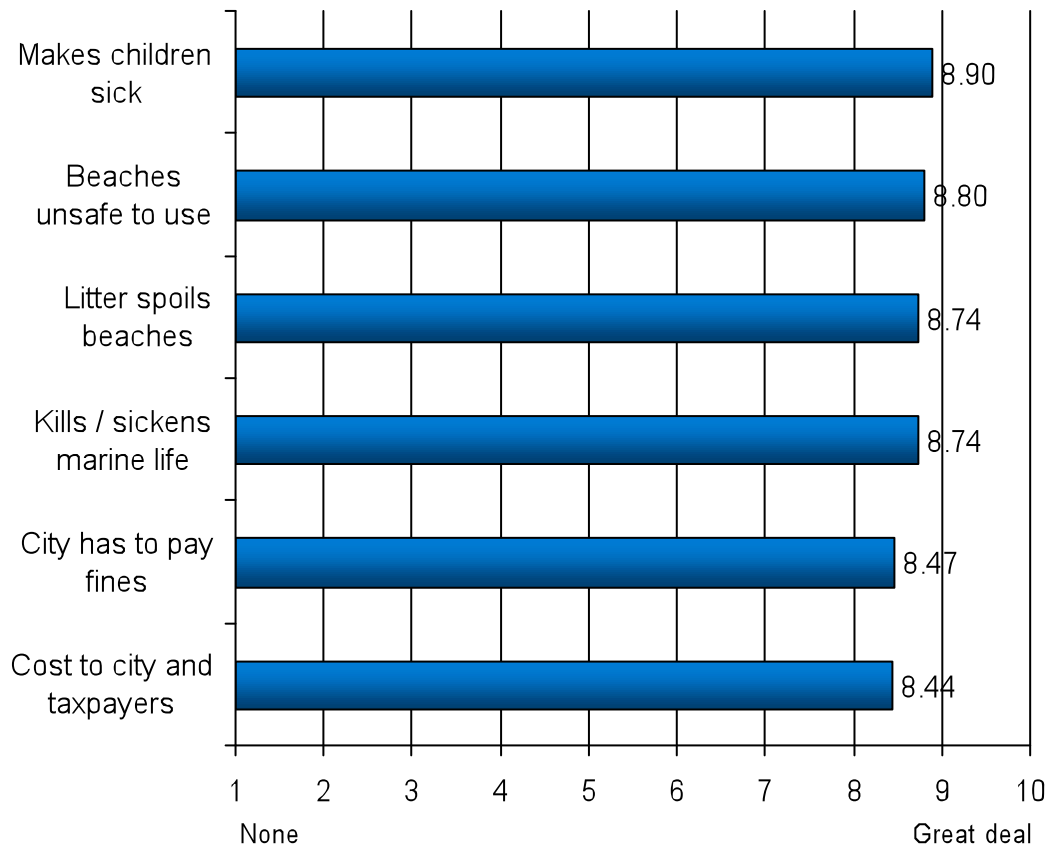
Nearly identical very high average levels of concern clustered around a mean of 9.0 were earned by:

- *It can make children sick if they play in polluted water. (8.90)*
- *It makes the beaches polluted and unsafe for people. (8.80)*

Absolutely identical average ratings of 8.74 were given to:

- *It spoils our beaches when litter and trash wash up there.*
- *The pollution sickens or kills marine life, including birds, seals and dolphins.*

**Figure 2: Average Rating of Concern on Six Consequences of Storm Water Pollution**





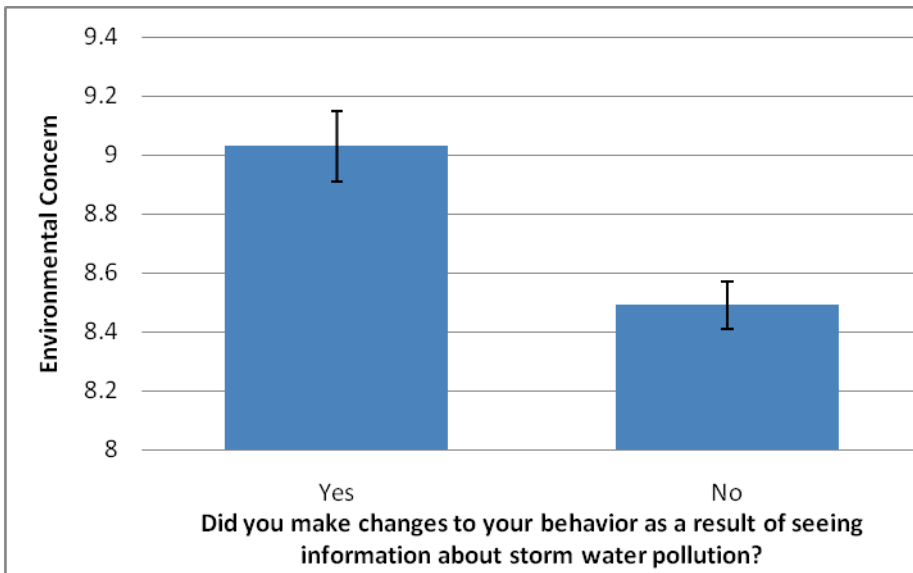
Results of a factor analysis conducted by Action Research showed that the six items on the scale measured a single construct which we have labeled “concern for storm water pollution.” The scale did not differentiate between egoistic, biospheric, and altruistic concerns. As a result, data were analyzed using a scale score created with the six items. The scale was highly reliable ( $\alpha = .93$ )

Results showed that overall concern about the consequences of storm water pollution was high among respondents to the survey. Responses ranged from one to 10, with a mean score of 8.68 ( $SD = 1.77$ ). Over 60% of the sample scored a nine or higher on the 10-point scale.

Although overall concern for the consequences of storm water pollution was high in the general sample, there were some differences across groups.

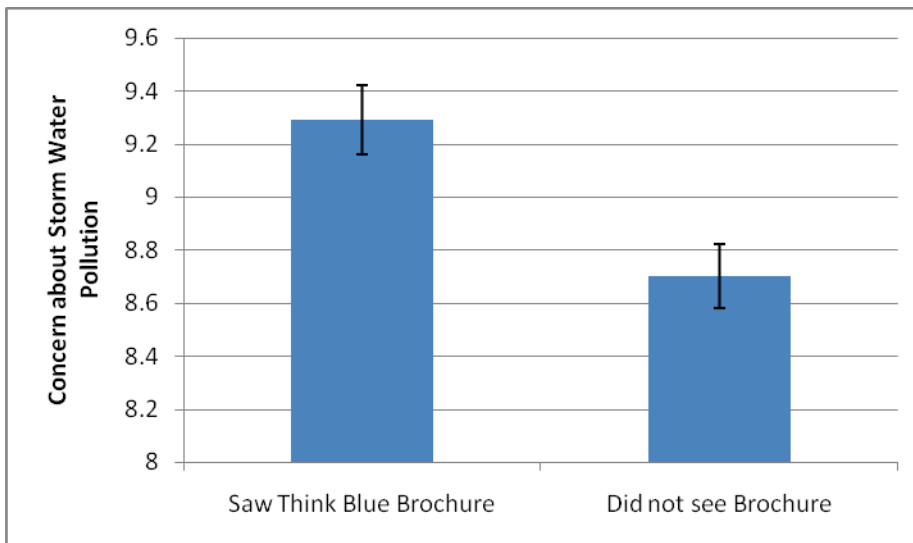
- Females (mean = 8.80) were more concerned about the consequences of storm water pollution than males (mean = 8.53),  $p < .05$
- Women over fifty (mean = 9.11) were significantly more concerned about the consequences of storm water pollution than women under fifty (mean = 8.78) or men,  $p < .05$ .
- Latino women (mean = 9.01) were significantly more concerned about the consequences of storm water pollution than white women (mean = 8.81) and white or Latino men,  $p < .05$ .
- People who reported that they made changes in their behavior that were a direct result of seeing information about storm water pollution had significantly higher levels of concern (mean = 9.03 on a scale from 0 to 10) compared to those who did not change their behavior (mean = 8.49),  $p < .05$ . (See **Error! Reference source not found.**)

**Figure 3: Impact of Information on Pollution on Behavior Change**



- People who reported seeing a Think Blue brochure reported significantly higher levels of concern about storm water pollution (Mean = 9.29) than those who did not receive a brochure (Mean = 8.70). There was no difference in concern based on whether or not people saw Think Blue commercials, billboards, or the website.

**Figure 4: Impact of Think Blue Brochure on Concern About Pollution**



Concern about the consequences of storm water pollution was also significantly and positively related to attitudes and behaviors that prevent storm water pollution:

- Concern about the consequences of storm water pollution was significantly and positively correlated to the perceived seriousness of various items that pollute water in storm drains. That is, people higher in concern rated cigarette butts, dog droppings, litter, plastic bags, leaves/ grass clippings, over-watering, washing sidewalks, motor oil, and food/drink as more serious sources of pollution than those who were less concerned about the consequences of storm water pollution.
- Concern about the consequences of storm water pollution was significantly and positively correlated with willingness to take various actions to prevent storm water pollution. That is, as concern about the consequences of storm water pollution increased, the likelihood that they would take actions to prevent storm water pollution (such as picking up litter in front of their home, or picking up dog waste in front of their home) also increased.

Concern about the consequences of storm water pollution did not differ for:

- People who had heard “Think Blue San Diego” (mean = 8.78) and those who had not heard the slogan (mean = 8.64).
- People who knew they lived in a watershed (mean = 8.46) and those who did not (mean = 8.61)
- People who know that water runs down the gutter into a storm drain (mean = 8.70) and those who did not know this (mean = 8.73).
- People who heard about the city of San Diego’s efforts to prevent pollution of storm water (mean = 8.72) and those who did not (mean = 8.68)
- Equal for people who knew storm water was not treated (mean = 8.83), compared to those believed storm water was treated (mean = 8.60) and those who were not sure (mean = 8.72).

Overall, the results indicate that people are already highly concerned about the various consequences caused by storm water pollution. Females, particularly Latino females and females over 50 were more concerned than other groups. Because concerns about the consequences of storm water pollution are already high, outreach aimed at increasing concern is not recommended.

Importantly, the data provide evidence that people who are more concerned are also most likely to take actions to prevent storm water pollution. Future survey work

should include items that will differentiate between people based on their underlying motives for concern about storm water pollution (i.e., biospheric, egoistic, or altruistic).

## SAN DIEGO CITY JOB RATINGS

Next, we will look at how residents rated the job the city of San Diego is doing in three areas: prevention of pollution in the city's ocean and beach areas, keeping polluted water out of storm drains, and spending tax dollars efficiently.

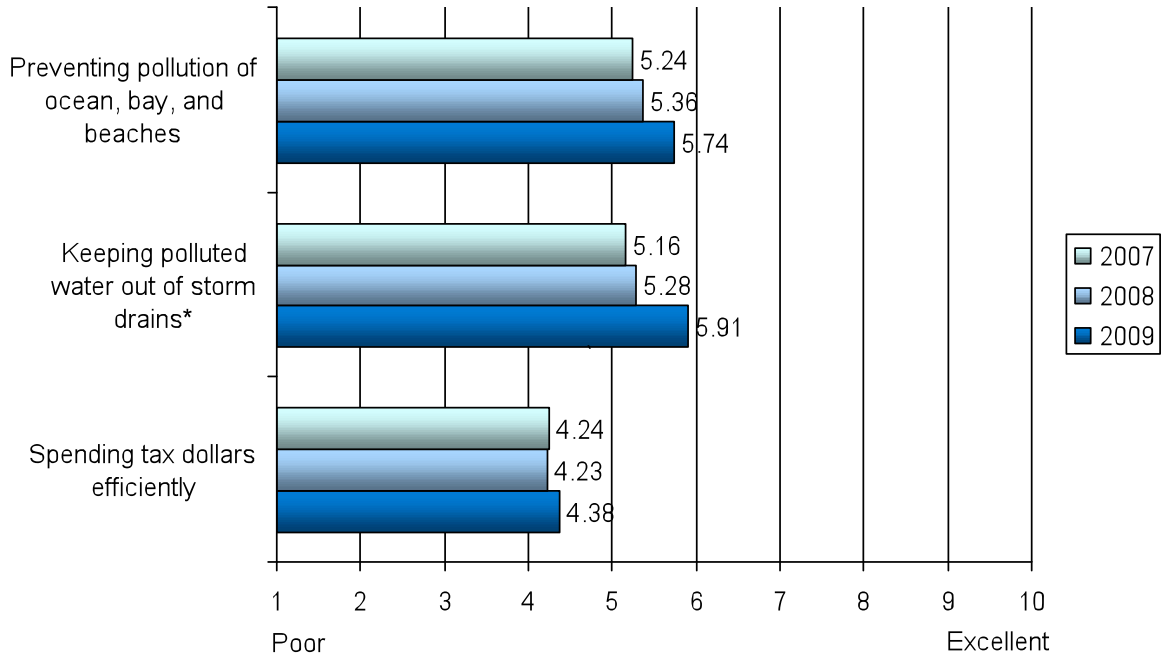
Residents used a ten-point scale to give the city a rating on each issue ranging from "1" if they felt it was doing a poor job, to a "10" if it was doing an excellent one. In Figure 5, we present the mean scores on each of these questions from the surveys completed in 2007, 2008, and 2009.

Overall, the city's average job ratings on each of the two pollution questions shows a slight upward trend over time. In previous years the rating mean for each hovered just over the mid-point of the scale (i.e. just above five). This year, however, in each case the average moved closer to six, indicating that more residents gave a rating higher than five than gave a rating of less than five.

- *Preventing pollution of San Diego's ocean, bays, and beaches* received the highest average rating of 5.74, up from 5.24 on a similar question in 2007's survey and 5.36 in last year's survey.
- The city's average rating of 5.91 for *keeping polluted water out of storm drains* was higher than the 5.28 rating for the same question asked in 2008. In 2007 a similar question was asked that used the wording "preventing pollution in storm drains" which received a rating of 5.16.

The city's average score of 4.38 for *spending tax dollars efficiently*, a question included for comparison purposes, remains very close to the findings from previous years: 4.24 in 2007, and 4.23 in 2008.

**Figure 5: City Job Ratings On Three Environmental Questions, 2007 to 2009**



\*Note slightly different wording in the 2007 survey: "Preventing pollution in storm drains."

## A. JOB APPROVAL COMPARED TO PREVIOUS SURVEY FINDINGS

Figure 6 is a chart of the proportion of residents who gave the city either low marks (ratings of 1, 2, or 3) or high ones (ratings of 8, 9, or 10) on the two water pollution job approval ratings. In the analysis that follows, ratings of three or less will be referred to as *low* or *negative* and ratings of eight or higher as *high* or *positive*.

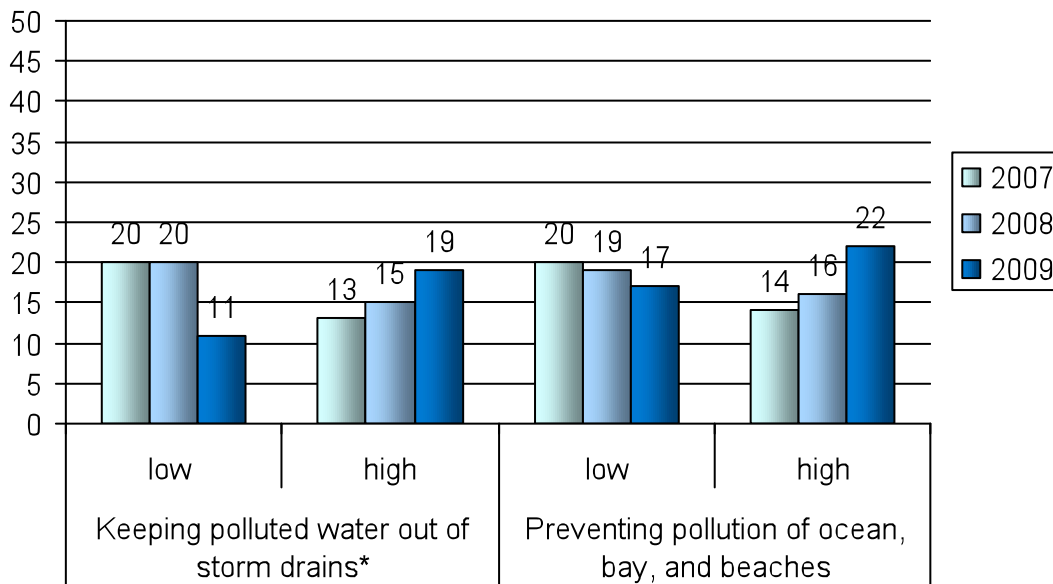
The chart shows a comparison of the current findings to those from surveys in 2007 and 2008 and illustrates some good news: the city of San Diego received a larger proportion of *high* ratings than *low* ones on both measures for the first time this year.

- More than one out of five (22%) gave the city *high* ratings for preventing pollution of ocean waters, compared to 17% who gave it *low* marks. In addition, a majority (56%) gave the city moderately low to high ratings of between four and seven, and 8% weren't sure.
- Nineteen percent gave the city *high* ratings for lowering pollution in storm drains, compared to 11% who gave *low* ones. Fifty-four percent gave a moderate rating of between four and seven, and 13% weren't sure.

The chart also provides a view of the upward trend in public opinion on these two issues over time. The proportion of residents who gave a *positive* rating on keeping pollution out of storm drains climbed six points – just at the margin of error - since a similar question was asked in 2007: from 13% then to 19% in this survey. The proportion who gave low marks is a significant nine points lower at 11% this year than the 20% found in each of the previous two years.

The proportion who gave the city *high* points for preventing pollution of ocean, bays, and beaches rose eight points from 14% in 2007 to 22% today, while negative ratings were similar to previous years, with the indication of a possible downward trend.

**Figure 6: Percent Rating the City’s Job as Low (1,2,3) or High (8,9,10). 2007 to 2009.**



\*Note slightly different wording in the 2007 survey: “Preventing pollution in storm drains.” Chart is scaled to 50%.

We found some interesting differences in how groups of respondents rated the city on these issues, and will begin this section by examining the results among the those who tend to be more aware and concerned about water pollution issues throughout the survey.

## **B. JOB APPROVAL AMONG THOSE FAMILIAR WITH CITY EFFORTS**

We note again this year some findings seen in last year's survey: residents who are aware of the Think Blue San Diego program, and those who have heard of steps the city has taken to fight storm drain pollution, are no more likely to give higher approval ratings to the city for its job on water pollution measures than are other residents.

However, residents who are aware that storm water is untreated tend to have a more negative view of the job the city is doing on water pollution issues than those who think it is treated.

- Those who know storm water is not treated were as likely to give the city negative ratings (16%) as positive ones (18%) on keeping pollution out of storm drains. Those who think such water is treated were more positive (26%) than negative (6%).
- Similarly, residents who know storm water is not treated split (21% negative and 18% positive) over the city's efforts to prevent pollution of San Diego's beaches, bays, and ocean; while those who believe it is treated were much more likely to be positive (29%) than negative (13%).

We see a similar pattern in the results of last year's survey. However, there is an even greater distinction between average ratings among those who think storm water is treated (6.4) and those who don't (5.7) this year than last when those ratings were 5.6 and 5.1 respectively.

## **C. JOB APPROVAL DEMOGRAPHIC DETAIL**

Further variations among demographic groups on the city's two water pollution job approval ratings are detailed in the sections that follow.

### **1. Keeping Polluted Water Out Of Storm Drains**

San Diego residents gave the city an average rating of 5.9 on this measure overall. We found some significant variations from that average among the following groups:

- Latinos tended to rate the city higher (6.6) than non-Latinos (5.7); and non-whites (6.4) gave the city higher ratings than whites (5.5). Asians

were also somewhat higher in ratings than whites at 6.8. In 2008, Latinos were higher than non-Latinos, by 5.9 to 5.0.

- Residents without college degrees (6.1) rated the city higher than those with degrees (5.6); a finding comparable to the pattern found last year. Education was inversely proportional to average rating:
  - Averages ranged from a low of 5.2 among those with graduate degrees to 6.2 among residents whose education ended with high school or less.
  - One out of four of those with at most a high school diploma gave the city a *high* rating while nearly one out of five (19%) of the most educated gave it a *low* one.
- The differences in educational attainment may at least in some part be a function of ethnicity. Among residents who did not graduate from college, average ratings were significantly higher among Latinos (6.7) than whites (5.7). Eighteen percent of college educated whites gave the city a *low* rating.
- A similar ethnicity-based pattern held in variations between average ratings among apartment dwellers and those in single family homes. Among all residents, there is virtually no difference between the two groups, but Latinos in apartments averaged ratings of 6.7 while whites in apartments averaged 5.6. There was no significant difference noted between these groups in 2008.
- The pattern of findings among age groups in 2008's survey was found the results of the current survey as well:
  - Those under age 50 averaged higher ratings (6.1) than older residents (5.5.)
  - Twenty-two percent of those younger than 50 gave the city a *high* job rating, compared to only 15% of older residents.
  - The youngest adults, under age 35, had an even higher average of 6.4 and one in four gave the city a *high* rating.
  - Women over the age of 50, who evenly divided between *positive* (16%) and *negative* (17%) marks, were twice as likely to say they were unable to give a rating at all (19% compared to 10% of everyone else).
- On average, cell phone users (6.5) ranked the city higher than those on landlines (5.8). There was no cell sample in the survey in 2008.
- Residents living in the San Diego Bay watershed were significantly more likely to give a positive rating (23%) than residents living in the San



Dieguito (10%), Los Penasquitos (14%), and Mission Bay (13%) watersheds. However, on average, the rating for San Diego Bay was significantly higher only than that for Los Penasquitos.

## **2. Preventing Pollution of Ocean, Bay and Beaches**

The city received an average rating of 5.7 among all residents for the job it has done preventing pollution of ocean waters and beaches. The general pattern of ratings found for the city's job in keeping storm drains clean were replicated in the ratings on this measure.

The next section is an examination of San Diego city residents view of issues related to storm water pollution.

## **FAMILIARITY WITH STORM DRAIN ISSUES**

The next series of questions focuses on storm drain issues. We first look at awareness of living in a watershed, then at what happens to water in the city's gutters. We end with ratings on how seriously residents view various sources of storm drain and storm water pollution.

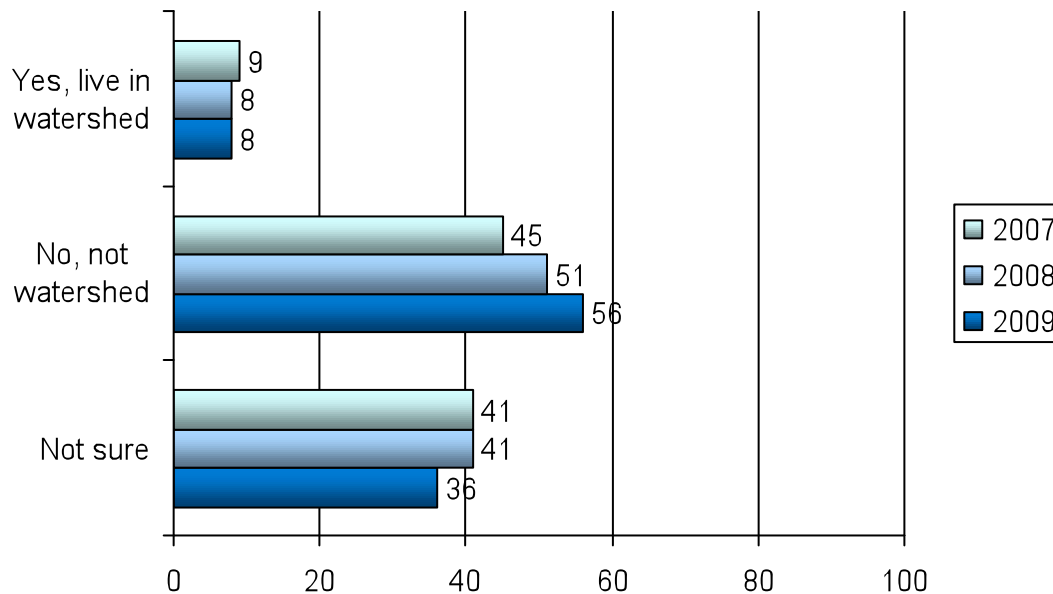
We began by finding out if residents know if they live in a watershed, or not.

### **A. LIVE IN A WATERSHED**

Residents were asked: *As far as you know, do you live in a watershed or not?* Eight percent said that they do, 56% said that they do not, and 36% weren't sure.

This identical question has been asked in two previous surveys and Figure 7 shows what may be an upward trend in the proportion of residents who think that they do *not* live in a watershed. In 2007 the proportion was 45%, in 2008 it was 51%, and 56% in this year's survey.

Figure 7: Do You Live in a Watershed? 2007 to 2009



In examining these findings among subgroups of city residents, we uncovered only a few significant variations:

- While there was no significant difference in “yes” responses between the genders, men were more likely to say they don’t live in a watershed (61%) than women (51%), because women were more likely to say they weren’t sure (39%) than men (32%). Forty-one percent of white women said they weren’t sure, compared to 29% of white men.
- Asians were the most likely (56%) of all of the ethnic/racial groups to say they weren’t sure, and the least likely to say they don’t live in a watershed (39%). There were no significant variations in “yes” responses among any of the racial/ethnic groups.
- Those who weren’t sure if storm water is treated or not were also more likely not to know if they live in a watershed (44%) than those who know that storm water is not treated (32%) or those who think it is (25%).
- Those who think storm water is treated were more likely to say that they don’t live in a watershed (63%), compared to those who know storm water is not treated (58%) and those who weren’t sure (50%).
- Residents who have heard of the steps the city has taken to prevent storm drain pollution were twice as likely to say that they live in a watershed than those who haven’t heard anything (12% vs. 6%). Those who haven’t

heard anything about what the city has done were significantly more likely to say they don't know if they live in a watershed or not (40% vs. 27%).

- Single family home dwellers who had a landscaping or home improvement project last year were more likely to say they live in a watershed (18%) than the average single family resident (10%).
- Mission Bay watershed residents were more likely to say incorrectly that they don't live in a watershed (65%) than those in the Los Penasquitos (46%) and San Diego River (52%) watersheds, but there was no significant difference in correct answers given between any of the watershed areas.

Table 2 shows the proportion of respondents who said they *do* live in a watershed, broken out by demographic groups that have been tracked in surveys taken in the last three years.

In looking at this table, it may first be noted that there has been little to no *significant* trend one way or the other in how many in each subgroup responded positively to the question over the last three years. In some cases, the survey's findings mirror the findings from 2007 more closely than those from 2008.

The other notable finding in Table 2 is that the few significant differences among these subgroups in the past have leveled out this year. For example, the gender gap from 2008 did not manifest in 2007, nor in this current survey. The same is true about differences by educational attainment.

**Table 2: Percentage Who Said They Live In a Watershed. 2007 to 2009**

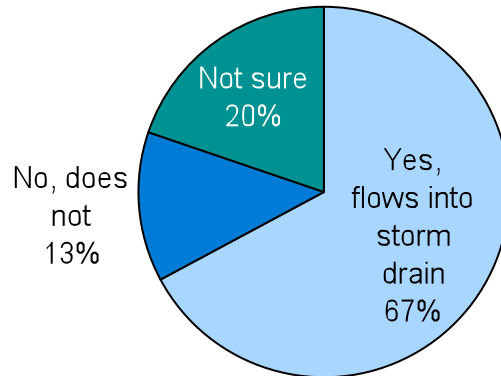
	2007	2008	2009
	Survey	Survey	Survey
	% Yes	% Yes	% Yes
Men	10	11	7
Women	7	5	9
18-34	8	4	6
35-49	9	9	9
50-64	9	13	10
65+	10	10	9
Men 18-49	9	7	6
Men 50+	11	19	8
Women 18-49	7	5	8
Women 50+	8	7	12
Less than college	7	4	8
Some college	7	7	9
College grad	10	9	10
Graduate degree+	13	17	7
White	10	12	9
Black	2	-	8
Asian	10	-	5
Latino	7	5	8
Single family home dwellers	11	11	10
Apartment/condo dwellers	5	4	6

**B. DOES GUTTER WATER FLOW INTO STORM DRAINS?**

Next, residents were asked a question new to the survey this year. *What happens to water when it runs down the gutter on your street. Does that water end up flowing into a storm drain?* As illustrated in Figure 8, 67% correctly said that it does, 13% said it doesn't, and 20% weren't sure or didn't say.

Note: Last year’s survey found that the vast majority of respondents (88%) were familiar with the term “storm drain.”

**Figure 8: Does Gutter Water Flow Into Storm Drains?**



While two out of three answered this question correctly, there was some significant variation among groups. These variations occurred mostly between those who answered correctly and those who weren’t sure.

- Men (73%) were more likely to answer correctly than women (62%). Women were more likely to say they don’t know (21%) than men (15%).
- Men over 50 or older were more likely to know what happens to gutter water (82%) than women of their age group (70%), younger men (70%), and especially younger women (61%).
- Age is proportional to being correct in responding to this question: 79% of those over age 65 said “yes,” along with 72% of 50-64 year olds, 70% of 35-49 year olds, and only 61% of 18-34 year olds. That youngest group were most likely to say they weren’t sure (21%), and the oldest group were least likely (7%).
- Latinos were more than two times more likely than non-Latinos to answer “no” (23% to 10%), and half as likely to say they weren’t sure (10% to 20%). The same pattern was found between non-whites and whites.
- There was a significant difference in “yes” answers between white men (74%) and white women (65%), and a difference in “no” answers between Latino men (16%) and Latino women (30%). Twenty-two percent of white women said they weren’t sure, compared to 12% of Latino women.

- Those with college degrees were more likely answer correctly (77% ) than those without (63%) degrees, and half as likely to incorrectly say “no” (8% compared to 16%).
- Residents living in single family homes were more likely to say “yes” than those living in apartment buildings by 72% to 64%. Apartment dwellers were more likely to say they weren’t sure by 21% to 14%.
- Those who had heard the Think Blue slogan were more likely to correctly say yes, and less likely to say they didn’t know (76% yes, 12% not sure), than those who had not heard the slogan (61% yes, 22% not sure).
- Residents who know that storm drain water is not treated were more likely to know that gutter water goes into storm drains (75%) than those who weren’t sure if it is treated or not (59%). The latter group were more than twice as likely than other residents to say they weren’t sure what happens to gutter water. Sixty-six percent of those who think storm drain water is treated knew that gutter water goes into storm drains.
- Seventy-five percent of residents who said they made a change in their polluting behavior last year answered “yes,” compared to 64% of those who did not make a change. Those who had not made a change were almost twice as likely to say they weren’t sure what happens to gutter water: 21% compared to 11%.
- Similarly, 73% of those who saw a Think Blue TV ad answered correctly, compared to 61% of those who did not. Those who had not seen either ad were more likely to say they weren’t sure about where gutter water goes (22%) than those who had seen an ad (14%).
- Residents in the San Diego Bay watershed were least likely to know where gutter water goes: 17% said it does not flow into storm drains, compared to between 8% and 13% of residents in other areas.

Next, we asked if residents believe storm water is processed like sewage in water treatment plants, or if it is released directly, without treatment, into San Diego’s waterways.

### **C. STORM WATER TREATED OR UNTREATED?**

Residents were told that *storm drains are the gutters, pipes, and concrete channels that collect water from streets*. They were asked if *storm drain water goes to a sewage treatment plant before it is released, or is it released into creeks or the ocean without treatment?*

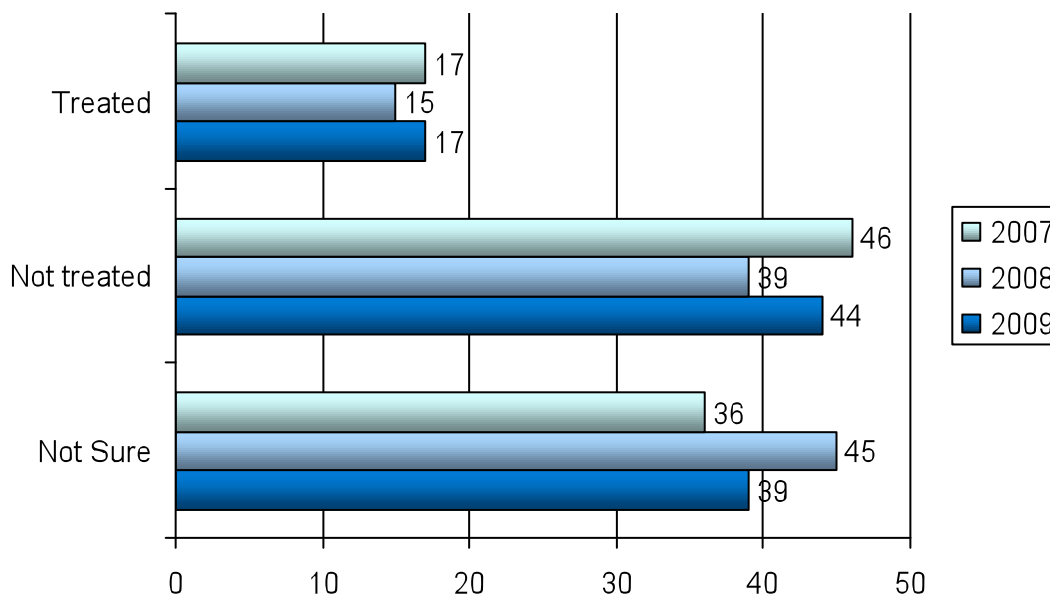
The findings in this survey are similar to the results from last year in that more than half of city residents do not know that storm drain water is untreated, or aren't sure.

However, Figure 9 shows that some progress has been made in raising resident awareness of this issue over the past three years. Last year, 60% of residents were either not sure what happened to storm drain water, or said that it is treated. That percentage slipped slightly to 56% this year.

In the current survey, a 44% plurality of residents correctly said that storm water is released untreated into San Diego's waterways in, up five points from 39% who said the same thing last year, and very similar to the findings in the previous (2007) survey.

This year, 17% incorrectly said that drain water is treated, a result similar to 2008's findings. Just under four in 10 (39%) weren't sure this year, compared to 45% in 2008 and 36% in the survey the year before.

**Figure 9: Percentage Who Said Storm Water Is Treated or Untreated. 2007 to 2009**



Note table scale from 0% to 50%.

Table 3 shows responses to this question among demographic groups in this year's survey and last year's and the percentage point difference in the results. While we

found some of the same patterns of differences among groups found in the survey last year, others, such as 2008's gender gap were not replicated this year.

The variance pattern in age found in last year's survey is again evident in this year's findings, and we found a significant increase in awareness among women over age 50, and the youngest and oldest age groups, since last year's survey.

- Residents younger than 50 were more likely to answer incorrectly or say they weren't sure (61%) than older residents (40%). Older residents were more likely to answer correctly by 58% to 37%. We noted an 11 point increase in correct answers among 18 to 34 year olds, and a 14 point increase among those 65 and older.
- Those under age 35 were more likely to say that storm water is treated or to answer than they weren't sure (65%) than their next highest age cohort of 35-49 year olds (55%).
- More than half (55%) of women over the age of 50 knew that storm water is untreated, up from 38% last year.

Another result that follows a similar pattern to that found last year is the knowledge differentials between residents of different educational attainment levels, and differences by race. We found significant increases in awareness among residents with less than college educations, and among Latinos and Asians, since last year.

- There was little difference between those with college educations and without who thought storm water is treated, but college educated respondents were more likely to answer correctly (51% vs. 40%) and less likely to give the wrong answer or say they weren't sure (46% vs. 59%).
- Correct answers among residents who never attended college rose dramatically - from 23% last year to 43% this year.
- Similar to findings last year, whites (49%) were more likely than non-whites (36%) to answer correctly, and in particular more likely than Asians (26%).
- There was a 12 percentage point increase in correct responses among Asians (from 14% to 26%) and a 15 point increase among Latinos (25% to 40%).



**Table 3: Percentage Who Know Storm Water Is Not Treated**

	2008 Survey	2009 Survey	Difference 2008 to 2009
	% Untreated	% Untreated	Pctg point □
Men	46	45	-1
Women	32	42	10
18-34	21	32	11
35-49	52	43	-9
50-64	51	58	7
65+	43	57	14
Men 18-49	41	35	-6
Men 50+	58	64	6
Women 18-49	30	39	9
Women 50+	38	54	16
Less than college	23	43	20
Some college	37	36	-1
College grad	47	48	1
Graduate degree+	58	55	-3
White	53	49	-4
Black	-	-	-
Asian	14	26	12
Latino	25	40	15
Single family home dwellers	45	46	1
Apartment/condo dwellers	37	41	4

Familiarity with Think Blue had a positive effect on understanding that storm drain water is not treated, but seeing a television spot for the program had a negative one.

- Residents familiar with the Think Blue slogan were more likely to correctly answer the question (49%) than those who were not (40%) and less likely to say they weren't sure (32% compared to 41%).
- However, those who saw one or both of the two Think Blue television spots were almost twice as likely to answer incorrectly (21% to 11%). There was almost no difference between the two groups in how many answered correctly, with the difference made up with a higher "not sure" among those who had not seen either of the commercials.

This last finding shows that while television advertising images are effective in creating lasting impression about the program, the messages that are taken away from those images may not always correspond to the intent. It will be seen in a later section of this report (beginning on page 80) that residents who recalled seeing the commercials were more likely to rate food and drink thrown into the street as a serious pollutant than those who have not seen the commercials, indicating that the commercial's image of spaghetti and other food trash dumped on a man in a suit raised awareness of those items as pollutants. However, residents who saw the commercials did not retain the idea that such food and drink would then be washed into the sea without being treated.

Finally, we found residents in the Mission Bay watershed area were more likely to know that storm water is not treated (56%), compared to residents living in the Los Penasquitos (37%) and San Diego Bay (46%) areas.

The next section of the report inquires into how aware residents are of the city of San Diego's anti-pollution programs and how much contact they have had with those programs.

## **AWARENESS OF POLLUTION PREVENTION PROGRAMS**

This section included several questions measuring awareness of San Diego's anti-pollution programs. We begin with a general question measuring resident awareness of the city's efforts to prevent pollution, then go on to look at the penetration of the Think Blue San Diego program including awareness and understanding of its slogan before and after being reminded of what the program is about. Next is a measure of familiarity with the program's television commercials, and then how many residents have encountered signs, brochures, the internet web site, and program giveaways.

We begin with the question asking residents to report whether they saw or heard anything last year about steps the city of San Diego has taken to fight pollution in storm drains.

### **A. FAMILIARITY WITH CITY EFFORTS TO FIGHT STORM DRAIN POLLUTION**

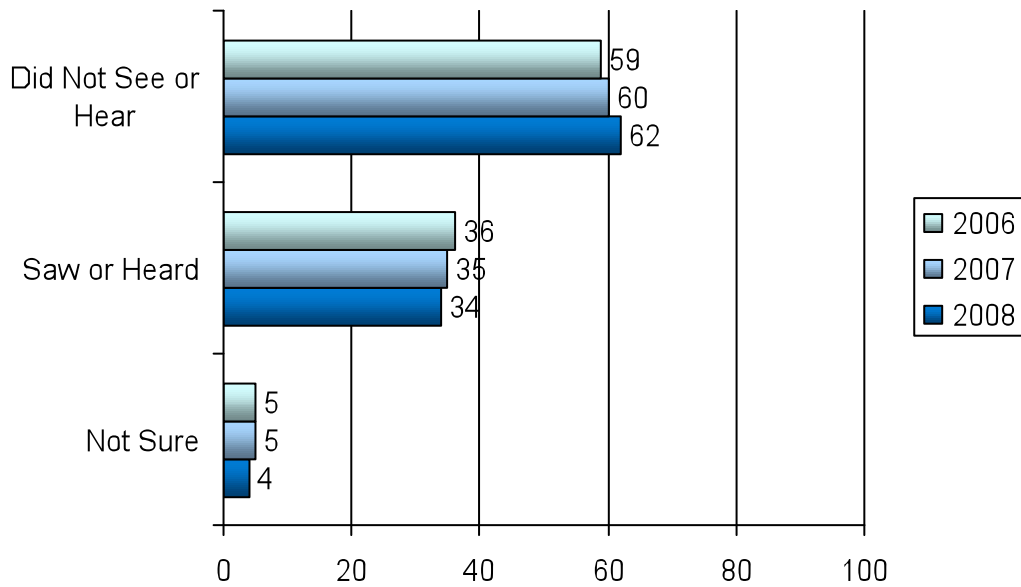
We introduced this question by telling respondents: *... anything that goes into storm drains can end up in local creeks, rivers, or the ocean, without any filtering or treatment.*

*Motor oil, leaves and grass, dirt, litter, and pesticides are all examples of pollution that goes into storm drains in San Diego, and ends up untreated in our creeks, rivers, and the ocean.*

Residents were asked if, in the previous year (2008), they had seen or heard anything about the steps the city of San Diego is taking to prevent pollution of storm water. Just over a third said they were aware of such efforts by the city while roughly six out of 10 were not; a level of awareness similar to that found in previous surveys.

These findings are illustrated in Figure 10, a chart showing the proportion who had and had not heard of the city's efforts this year, compared to the findings from surveys taken in 2007 and 2008. Findings in this figure refer to 2006, 2007 and 2008, from surveys in years 2007 to 2009.

**Figure 10: Did You See or Hear About Steps The City Is Taking To Prevent Pollution of Storm Water?)**



Higher proportions of residents who had encountered Think Blue San Diego last year in some way said that they were familiar with steps the city is taking to prevent pollution in storm drains.

- Forty-four percent of residents familiar with the Think Blue slogan, and 41% of those who had seen one or both of the TV ads, said they had heard of the city's anti-pollution efforts. This compares favorably to the 34% average among residents overall.

- Residents who were not familiar with the slogan (68%) and those who had not seen either commercial (70%) were more likely to than the overall average (62%) to say they had not heard of any steps the city has taken.

Another interesting finding was that residents who made some sort of change in their behavior last year to reduce pollution were much more likely to be aware of the city's efforts (50% were and 45% were not) than those who had not made any change last year (25% were and 71% were not). We will look at this particular finding and other findings related to changes in residents' behavior in more detail in the section beginning on page 75.

We found other significant variations in groups who had heard of steps the city is taking as follows:

- As was seen in 2008's survey, residents under the age of 35 were least likely to say they had heard of anything the city has done: 26% had and 70% had not. Among those 35 and older, 38% had heard and 57% had not.
- Whites were more likely to have heard (37%) than non-whites (30%). Asians were the most likely of all groups to not have heard anything (22% had, and 78% had not).
- In last year's survey nearly half of white men had heard of the steps but this year's findings are the opposite. White women were significantly more likely to have heard something (42% had and 55% had not) than white men (32% had and 63% had not).
- The least educated and the most educated were less likely to have heard anything (28% in each case) than those with some college (38%) or a 4 year degree (40%).
- College educated women were more likely to have heard (44%) than men with degrees (28%).
- While we found no significant difference between those in single family homes and apartment dwellers, whites living in apartments were more likely not to have heard anything (64%) than whites living in houses (55%).
- Seventy percent of cell phone users had not heard anything, compared to 60% of landline users.

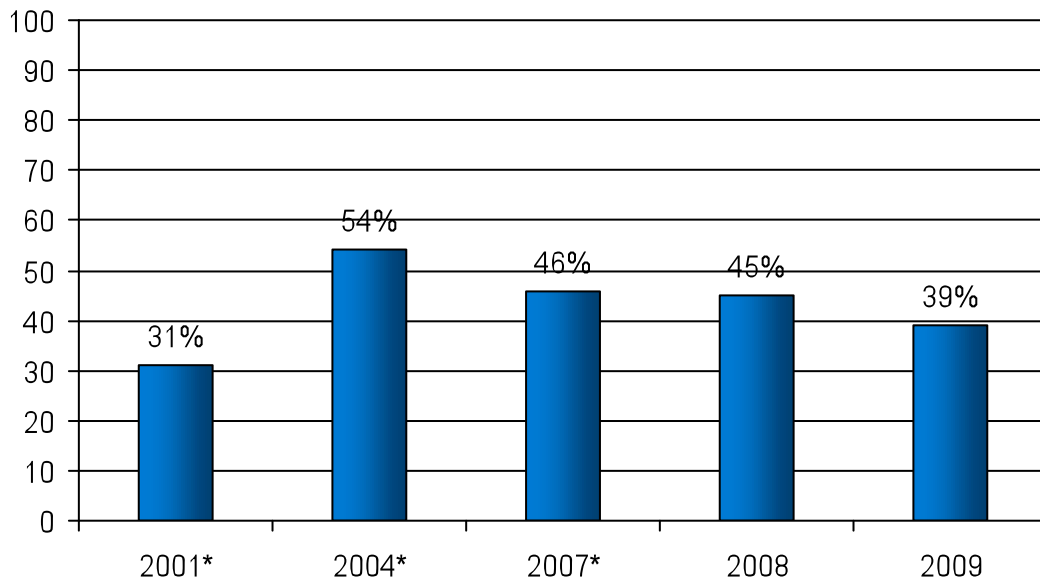
## B. SAW OR HEARD THE SLOGAN "THINK BLUE SAN DIEGO" BEFORE?

Very early in the survey, prior to asking questions about environmental issues or how the city has been doing on them, residents were asked to respond "yes" or "no" to the question: *In the past year, have you seen or heard the slogan "Think Blue San Diego?"* The question was asked again later in the survey, once residents were reminded about the program.

When asked the first time, 39% said they were aware of the slogan, 59% said they were not, and 2% weren't sure. When asked later in the survey, the proportion who recalled the slogan increased to 46% (see section beginning on page 60.)

Figure 11 is a chart showing positive responses to the initial question going back to surveys taken as long ago as 2001. The chart illustrates how awareness of the slogan has been more widespread in previous years and has declined somewhat over time.

**Figure 11: Awareness of the Slogan "Think Blue San Diego," 2001 to 2009**



\* Prior to 2008, the question asked if residents had *ever* heard the slogan, rather than *in the past year*.

As we saw in the previous section (beginning on page 44), there is a correlation between familiarity with Think Blue and familiarity with city anti-pollution

programs. More than half (51%) of residents who later said that they had heard of steps the city is taking to prevent pollution in storm drains recalled encountering the Think Blue slogan when first asked, increasing to 59% when they were asked a second time after being reminded about the Think Blue program.

Similarly, 52% of residents who recalled seeing one or both of the Think Blue TV ads said that they had seen or heard the Think Blue slogan. That proportion increased even more dramatically to 65% when asked the second time, after having been reminded of seeing the commercials.

However, looked at another way, more than half of each of those groups did not associate the Think Blue slogan or commercials with steps the city is taking. Fifty-three percent of residents who were initially familiar with “Think Blue San Diego” said they had not heard of anything the city is doing; nor had 55% of those who had seen one or both of the Think Blue commercials.

Looking at those who recalled the slogan at the start of the survey, there was no significant variation among responses when looked at by watershed area, but there were a few significant variations in responses among other subgroups of residents as follows:

- While there was little difference between those who think storm water is treated and those who do not in their recall of the slogan, residents who weren't sure if storm water is not treated or not were least likely to recall the slogan (34% did and 65% did not), compared to those who know that storm water is not treated (44% recalled the slogan and 54% did not).
- As was found in previous years, residents under age 35 were more likely not to recall the slogan than those 35 or older (62% compared to 55%). In particular, nearly half (48%) of 50 to 64 year olds were aware of the slogan, compared to 37% of those under age 35.
- Awareness was higher among whites (43%) than non-whites (35%) and in particular, Asians (22%). Seventy-eight percent of Asians said they had not heard the slogan, compared to 55% of whites and 61% of Latinos.
- Women over age 50 split almost evenly between those who recalled the slogan and those who did not (49% to 47%). Men of all age groups were 24 points more likely not to recall it (37% did and 61% did not). Forty percent of women younger than 50 recalled the slogan and 58% did not.
- Landline users were more likely to recall the slogan than cell phone users. More than seven out of 10 (72%) cell phone users did not recall the slogan,

compared to just under three in 10 (27%) who did. Among landline users, 55% did not recall it and 42% did.

Table 4 charts changes in how various groups in the city recalled the slogan this year, compared to findings from previous surveys. The question was the same this year and last. A similar question on 2007's survey asked residents if they had *ever* seen or heard the slogan, while the more recent version asked if they encountered it during the *previous year*. The 2007 version is close enough that we included for comparison here, but such comparisons should be viewed with caution.

The chart reveals that there were a few significant variations in the level of recall of the Think Blue San Diego slogan between groups, compared to last year, as follows:

- Awareness among men over the age of 49 declined 16 points, compared to an insignificant increase of 3 points among women of that age group.
- Women under 50 declined nine points in awareness, compared to no significant change among men of the same age group.
- Asians declined 14 points, while all other groups declined by only 5.
- Single family home dwellers were down by eight points while apartment dwellers remained virtually the same.

**Table 4: Did You Encounter the Think Blue San Diego Slogan Last Year\* ? Initial response. Surveys in 2007, 2008 and 2009**

	2007 * Survey	2008 Survey	2009 Survey	Compare 2008 to 2009 percentage point □
	% Yes	% Yes	% Yes	
Men	46	44	37	-7
Women	46	45	41	-4
18-34	44	42	37	-5
35-49	49	46	41	-5
50-64	51	45	48	3
65+	38	43	39	-4
Men 18-49	46	36	37	1
Men 50+	47	53	37	-16
Women 18-49	47	49	40	-9
Women 50+	45	46	49	3

	2007 *	2008	2009	Compare
	Survey	Survey	Survey	2008 to 2009
	%	%	%	percentage
	Yes	Yes	Yes	point □
Less than college	36	44	37	-7
Some college	55	45	43	-2
College grad	46	48	42	-6
Graduate degree	45	38	35	-3
White	50	48	43	-5
Black	49	49	44 <sup>†</sup>	-5
Asian	35	36	22	-14
Latino	37	43	38	-5
Single family home dweller	51	47	39	-8
Apartment/condo dweller	42	42	40	-2

\* Prior to 2008, the question asked if residents had *ever* heard the slogan, rather than *in the past year*.

<sup>†</sup> Very small N=36 for African-Americans in 2009, view with caution.

The 39% of residents overall who were aware of the slogan when asked at the beginning of the survey (N=315) were then asked where they encountered it. We now turn to an examination of those findings.

### **1. Where Residents Saw or Heard the Think Blue Slogan**

Residents who were familiar with the Think Blue slogan at the beginning of the survey were asked an open-ended question to find out where they had encountered it, and allowed three responses. Television advertisements were by far the most often referenced source, as has been seen in previous surveys.

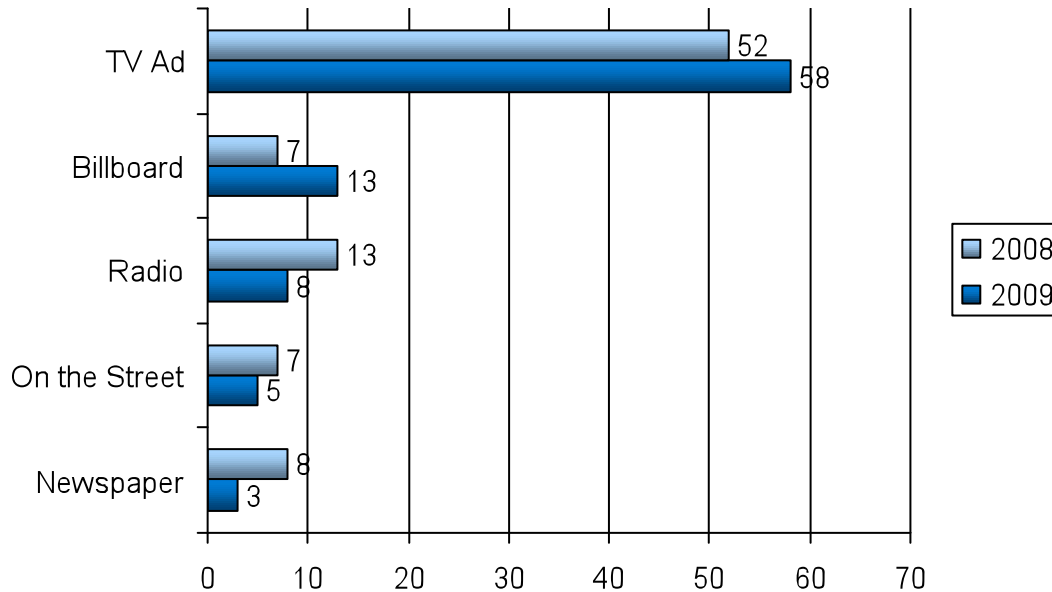
Figure 12 is a chart of the top five responses to this question this year, compared to the level of those responses in last year's survey. It shows a few increases, right at the margin of error of plus or minus three percentage points for each of the surveys:

- Television ads comprised 58% of mentions, compared to 52% last year.
- Billboards were 13% of citations, up from 7% last year.
- Eight percent said they heard the slogan on the radio, change just within the margin, from 13% last year.



- Similar proportions saw the slogan on the street or curb this year (5%) and last (7%).
- Newspapers were cited by 3%, compared to 8% last year.

**Figure 12: Where Residents Saw/Heard “Think Blue San Diego,” 2008 (N=415) and 2009 (N=315)**



Percentages may add to more than 100% as multiple responses permitted. Top five responses shown.

Not shown on the chart were the 12% this year who said they weren’t sure where they encountered the slogan, and the following smaller proportion of mentions:

- Two percent in each case said they saw the slogan on a bus or bus stops, on the website, or at school.
- One percent in each case mentioned friends/family/word of mouth, Think Blue program flyers, or “downtown.”

Sample sizes were too small to analyze differences between many subgroups, including watershed areas, for this question. However, we found a few variations at a significant level in the top three categories. Note that groups with small sample sizes, if cited, will be indicated and should be viewed with caution.

### **Television (58%)**

- Men with college degrees (N=52) were less likely to mention television (50%) than men without degrees (67%).
- Television mentions were higher among residents who know storm water is not treated in sewage plants (62%) than among those who think it is treated (45%, N=54).

### **Billboard (13%)**

- Nineteen percent of residents who made a change in response to hearing more about pollution last year said they encountered the slogan on a billboard, compared to 8% of those who did not make changes.
- Residents under the age of 50 were more than twice as likely to have encountered the slogan on a billboard (17%) than older residents (7%).
- Those with college degrees (17%) saw billboards more often than those without degrees (9%).
- There was not an overall gender gap but white women (22%) saw a billboard more often than white men (9%).
- Residents in single family homes (17%) were almost twice as likely than apartment dwellers (9%) to see the slogan on a billboard.
- Those who think storm water is treated (N=54) mentioned seeing a billboard twice as often as others (22% compared to 11%).

### **Radio (8%)**

- Residents who saw one of the Think Blue ads on television mentioned hearing the slogan on the radio more often (10%) than those who did not see either ad (4%).
- Dog owners were more than four times as likely to mention hearing the slogan on the radio (17%) than non-dog owners (4%), indicating that radio could be a good way to target dog owners to pick up after their dogs.

### **Street or Curb (5%)**

- Seven percent of those who know storm water is not treated cited seeing the slogan on the street or curb, compared to 3% of all other residents.

- Similarly, 7% of those in single family homes saw it on a street or curb, compared to 2% of residents who live in apartments.

### **Web Site (2%) and Bus Ads (2%)**

These sources were cited by only a very few residents, but some interesting and significantly higher (but still very small) proportions of groups in the city preferred them as follows:

- **Internet or web site** was mentioned more often by 18-34 year olds (5%), Latinos (7%, N=68), non-whites (5%), residents who have heard of city anti-pollution programs (4%), and residents who made a change to reduce pollution last year (4%).
- **Buses or Bus stops** were mentioned by 4% of women, including 6% of women under age 50, along with 5% of residents with college degrees and 4% of apartment dwellers.

## **2. What Does The Slogan *Think Blue San Diego* Mean?**

All residents, whether they were familiar with the slogan or not, were asked to answer the following open-ended question: *In a few words of your own, what do you think that the slogan "Think Blue San Diego" is asking you to do?* We again accepted three responses.

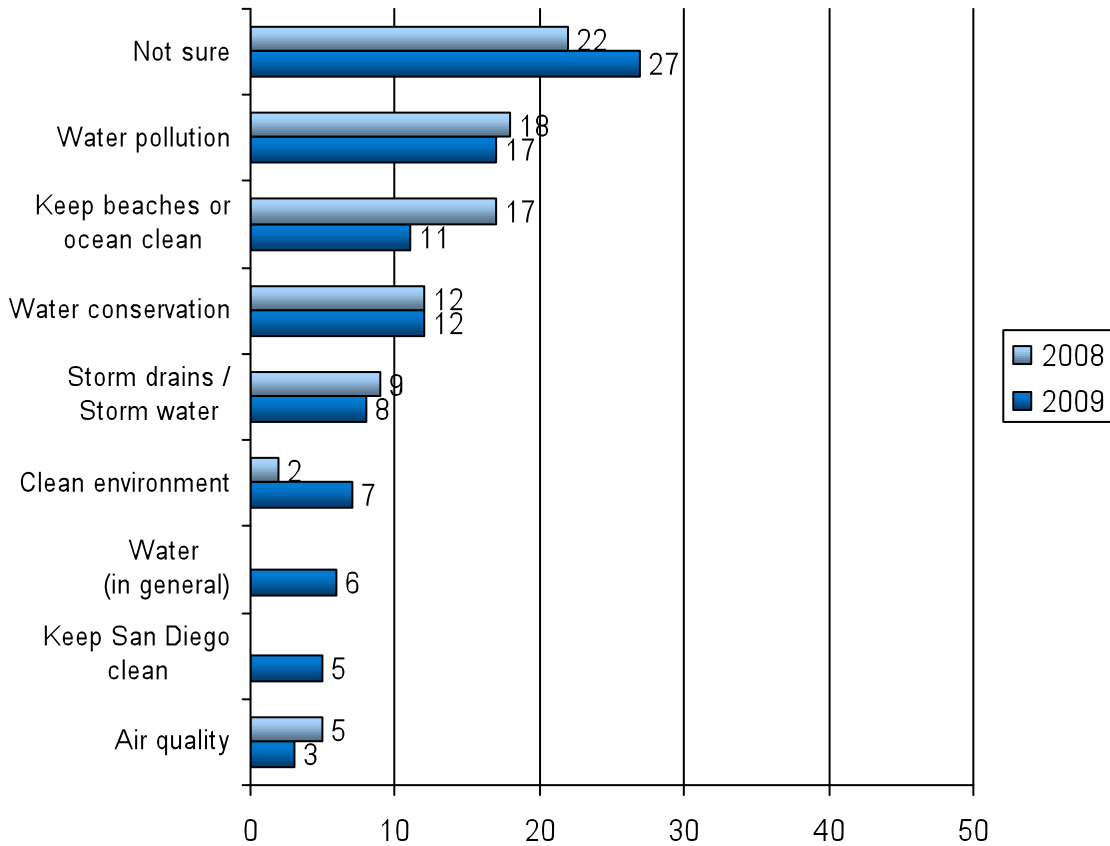
As shown in Figure 13, just over one in four (27%) said they weren't sure what the slogan conveyed. A misperception among respondents in last year's survey persists in this most recent survey: city residents are still more likely to associate the *Think Blue* slogan with water conservation (13%) than specifically with storm drains (8%).

Looked at another way, however, the survey found that a plurality of residents (42%) associated the slogan with issues that are related to storm drain pollution, including: water pollution (17%), clean beaches and ocean (11%), storm drains (8%) and water (in general). Other responses mainly referred to environmental efforts such as recycling (1%), clean air (3%), keeping San Diego clean (5%), pollution in general (3%), and other mentions of the environment (7%).

These findings indicate that the city might wish to target its messaging for a tighter correlation between the Think Blue program and a set of specific actions residents must take to reduce water pollution in storm drains, since a plurality already associate the slogan with water and water pollution.

In addition, given that the equally important issue of water conservation is benefiting from Think Blue publicity as an unintended positive consequence of the program, messages could target both of the desired outcomes of conserving water and protecting the city's waterways from pollution.

**Figure 13: What is "Think Blue" Asking You To Do? 2008 and 2009**



Percentages may add to more than 100% as three responses were accepted. Top nine responses shown. Note scale from 0% to 50%.

In Table 5, a chart of associations with the slogan among residents who had encountered the Think Blue slogan last year and those who had not, illustrates some good news in the findings. Residents who had encountered the slogan *Think Blue San Diego* last year were much more likely to associate it correctly with storm drains (or with one of the related concepts), than those who had not.

Only 9% of those who recalled the slogan when first asked said they weren't sure what it was asking them to do, compared to 40% unsure among those who had not

encountered the slogan. Overall, seven out of 10 of those who had encountered the slogan thought that it was a call to clean up storm water, deal with storm drains, or one of the related issues.

However, having heard the slogan or not did not vary the likelihood of believing it is a call to conserve water.

- Nineteen percent of those who recalled hearing the slogan before said it was about *storm drains or storm water*, compared to 1% of those who did not recall the slogan who gave the correct response.
- *Water pollution* was mentioned by 26% of residents who recalled the slogan, and by 11% of those who did not.
- *Clean beaches or other mentions of keeping the ocean clean* was cited by 14% of residents who recalled the slogan, and 9% those who did not.
- The same proportion of those who had and had not encountered the slogan mistakenly associated the slogan with water conservation (13% in each case).

**Table 5: Storm Drains and Other Selected Mentions By Encounters With The Slogan Last Year**

Encountered <i>Think Blue</i> slogan last year:	%	
	Yes	No
Storm drains/Storm water	19	1
Water pollution	26	11
Clean beaches / Clean ocean	14	9
Water	3	8
Water conservation	13	13
Don't know	9	40

Only selected mentions shown. Three responses accepted.

Turning back to the overall question, significant variation among groups of residents citywide who correctly associated the slogan with storm drains or storm water were found as follows:

- Eighteen to 34 year olds were least likely (3%), compared to 9% of 35-49 year olds, 15% of 50-64 year olds, and 11% of 65 year olds.

- Those who know storm water is not treated (12%) were more than twice as likely as others (5%).
- Residents who had not heard of anything the city is doing to prevent pollution of storm drains (5%) were less likely than those who had heard of the city's programs (14%).
- Those who did not see the television advertisements (4%) were less likely, compared to those who did (11%).
- Apartment dwellers (5%) were less likely than those in single family homes (10%).
- Single family home dwellers who are Latino (13%) or white (11%), and whites living in apartments (7%), were more likely than Latinos in apartments (1%).
- Residents with landlines (9%), compared to cell phone users (2%).
- People who are 50 or older (13%), compared to those younger than 50 (5%). In particular:
  - 18-34 year olds (3%) were less likely than 35-49 year olds (9%).
  - Women 50 and over (16%).

### **C. FAMILIARITY WITH *THINK BLUE SAN DIEGO* TELEVISION COMMERCIALS**

Next, we asked San Diego residents if they recalled seeing any television commercials last year on the subject of pollution, specifically one that *featured a man walking down the street and having trash, leaves and spaghetti dumped on him*, or another that *asked dog owners to help prevent pollution by cleaning up their dog's waste*.

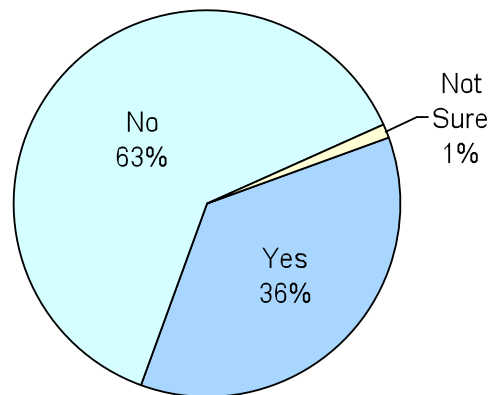
Overall, 55% saw one or both of the commercials this year. Of the two, the "Dog Waste" ad was more effective in remaining in resident's awareness. Nearly half (46%) recalled seeing it. This is comparable to last year's finding that 44% of residents recalled the television ad in which yellow ducks were washed down storm drains and out to sea. The "Trash Man" commercial this year was less memorable, recalled by only 36%.

## 1. "Trash Man" Commercial

As illustrated in Figure 14, just over a third (36%) of San Diego residents said that sometime in the last year, they had seen the television commercial that featured a man walking down the street and having trash, leaves, and spaghetti dumped on him. Sixty-three percent said they had not seen the commercial, and 1% weren't sure.

Figure 14: Saw "Trash Man" Television Commercial Last Year

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Residents who had some knowledge of the city's efforts to fight pollution, either through familiarity with the Think Blue slogan or with steps the city has taken, along with those who have taken steps in their own lives to change pollution-causing behaviors, tended to remember the commercial significantly more often than other residents.

- Those who had encountered the Think Blue slogan were more than twice as likely to recall the commercial (52%) than residents who hadn't heard the slogan before (25%).
- Residents who had heard of steps the city has taken to fight pollution were more likely to remember the commercial (44%) than those who had not (32%).
- Similarly, residents who said they made changes last year away from polluting behaviors as a result of hearing about pollution remembered the commercial more often (43%) than did residents who did not make any such changes (33%).

We found some other significant variations in the proportions of residents who remembered the “Trash Man” commercial as follows:

- Forty-two percent of those under the age of 35 recalled the commercial , compared to 33% of 35 to 49 year olds, and 25% of those ages 65 and older. At 37%, the 50 to 64 year old age cohort was more likely than older residents to remember the commercial as well. This is a different pattern than was found for the “Yellow Ducks” commercial last year.
- Even though cell phone usage is heavily correlated with younger age, the findings indicate that cell phone users were significantly less likely to have seen the commercial (26%) than landline users (38%).
- Nearly half (47%) of Latinos remembered the commercial and half did not. Non-Latinos were twice as likely to have missed it as to have seen it (66% to 33%). Last year’s survey found that 60% of Latinos recalled the “Yellow Ducks” commercial, compared to 51% of non-Latinos.

Further significant findings among Latinos in this year’s survey:

- Latino men in particular (54%) remembered seeing the commercial.
- While there was no significant difference between apartment dwellers and those in single family homes overall, Latinos in apartments were more likely to recall the commercial than not (53% yes to 44% no) while Latinos living in single family homes were more likely not to have seen it (43% yes and 55% no).
- Half of Latino residents without college degrees remembered the commercial, compared to 34% of whites with a similar level of educational attainment.
- White (37%) respondents recalled the commercial less often than Latinos (47%), but more often than Asians (22%).
- Forty-two percent of men under age 50 said they saw the commercial and 58% did not, compared to 29% of older men who recalled seeing it while 68% did not.
- More residents who think storm water is treated (44%) recalled the commercial compared to residents who know storm water is not treated (33%).
- Residents in the San Diego Bay watershed area were more likely to recall seeing this commercial (40% did and 59% did not) than those in the Mission Bay watershed (23% did and 72% did not).



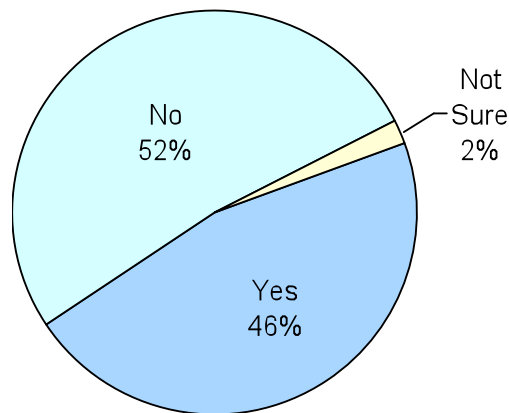
## 2. "Dog Waste" Commercial

We also asked respondents if they recalled seeing or hearing any television commercials asking dog owners to help prevent pollution by cleaning up after their dog.

As may be seen in Figure 15, a greater proportion of respondents remembered this commercial than recalled the previous one. Forty-six percent said they did, 52% said they did not, and 2% weren't sure.

**Figure 15: Saw "Dog Waste" Television Commercial Last Year**

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Once again, residents who had heard the slogan, knew of city anti-pollution programs, or had made changes in their lives specifically to reduce pollution were more likely to also recall this commercial.

- Sixty-two percent of those who had heard the Think Blue slogan remembered this commercial. Sixty-five percent of those who had never encountered the Think Blue slogan said they did not recall the commercial.
- Sixty-one percent of residents who believe that storm water is treated recalled the commercial, compared to only 45% of those who think it is not treated and 41% of those who weren't sure if storm water is treated or not.
- Fifty-nine percent of those who have heard about city programs to fight pollution in storm drains said they remembered the commercial, compared to only 39% of those who had not heard of such programs.

The pattern of demographic variation in resident recall of this commercial are the same as those found for the “Trash Man” commercial, with the following exceptions:

- Residents younger than 50 (49%) were more likely than those older (38%) to recall seeing this commercial. For the Trash Man commercial, only those younger than 35 were more likely to remember.
- There was no significant difference between white, black, and Asian respondents.
- There was no significant difference in the recall of Latinos who live in apartments and Latino residents who live in single family homes.
- Recall of this commercial was different than for the “trash man” commercial by educational attainment: 49% of residents who do not have a college degree recalled this one, compared to 40% of those with college degrees. Only 31% of those with graduate degrees recalled seeing it.
- Residents in the San Diego Bay watershed area were more likely to recall seeing this commercial (50% did and 48% did not) than residents in the two watershed areas of Los Penasquitos and Mission Bay (37% did and 60% did not in those areas).

#### **D. HEARD THE SLOGAN “THINK BLUE SAN DIEGO” BEFORE? (2<sup>ND</sup> QUERY)**

In order to assess whether respondent recall of the Think Blue slogan would increase after residents had thought about the program’s commercials, we described the Think Blue program and then asked residents a second time if they had seen or heard of the slogan before this call.

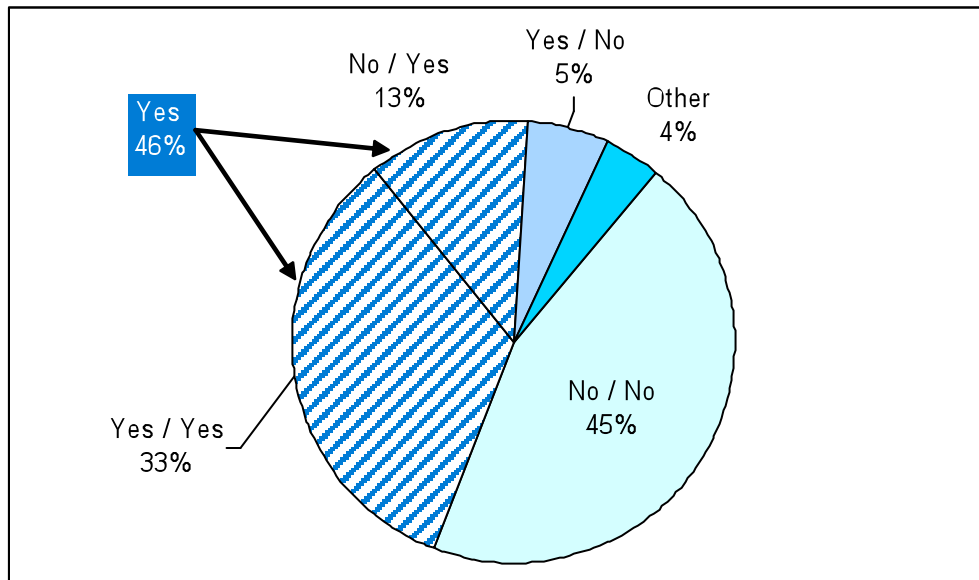
The proportion who recalled the slogan this time rose to just under half (46%) from 39% who said they remembered it the first time. Just about half (51%) still did not remember it, and 3% weren’t sure. In 2008’s survey, 55% recalled hearing about it when asked a second time.

Figure 16 is a chart showing how residents answered the question the first and second time they were asked.

- Just over one third (34%) recalled having heard the slogan both times they were asked.

- Forty-five percent did not recall encountering the slogan before both times they were asked.
- Nineteen percent changed their minds after being asked about the commercials and hearing the program described.
  - Thirteen percent said “no” the first time and but remembered after hearing more, and said “yes” the second.
  - Six percent said “yes” the first time and “no” the second.

**Figure 16: Percentage Who Recalled The Slogan The First And Second Times Asked**



The pattern of variations in the responses to the question, when asked the second time, mirrored that found for the question the first time it was asked. (Refer to the section beginning on page 47).

Next in this section were a series of questions asked of those who answered, this second time, that they had encountered the Think Blue slogan before.

## E. FAMILIARITY WITH THINK BLUE MESSAGES AND ELEMENTS

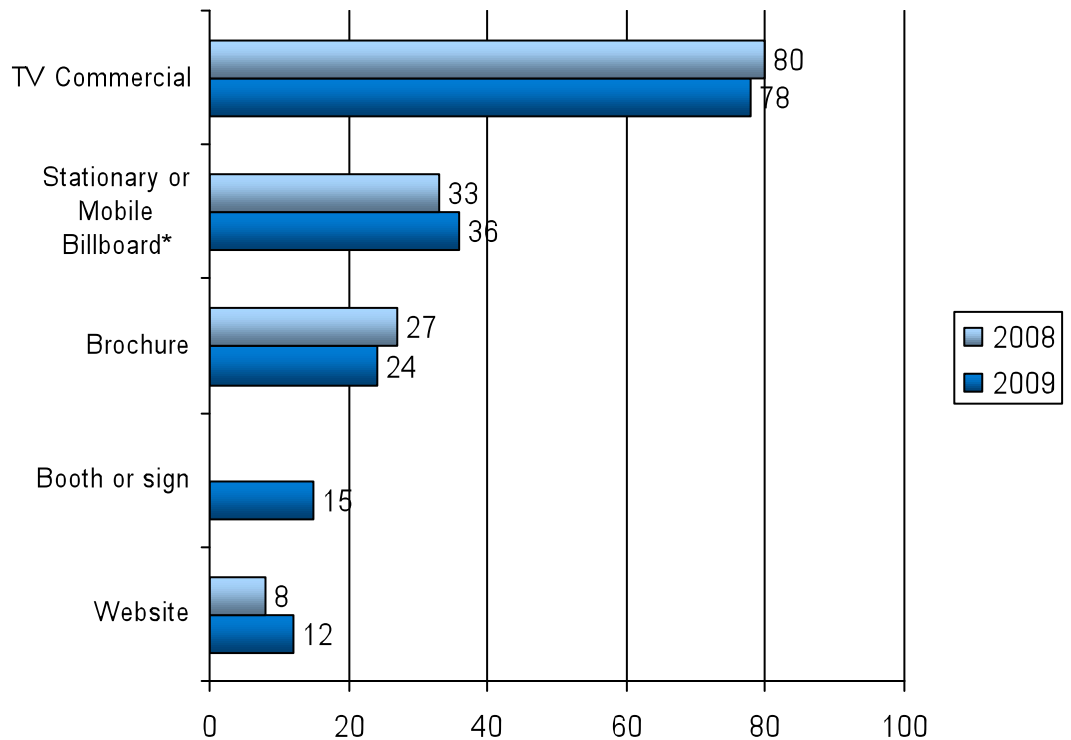
We asked residents who recalled encountering the Think Blue San Diego slogan in the past year to answer a series of six questions to find out which elements of the Think Blue program they might have encountered in the past year.

Most of this group (N=369) recalled seeing one of the program's *TV commercials* (78%). Just over a third (36%) said they saw a *stationary or mobile billboard*, 24% said they had been given a *brochure from Think Blue*.

Other elements were less familiar to the group: 15% said they saw a *booth or sign at a local event*, and 12% had visited *the Think Blue website*.

It can be seen in Figure 17 that these patterns of familiarity are similar to those found in the survey last year.

**Figure 17: Familiarity With Think Blue Program Elements Among Residents Who Had Previously Heard of the Program. 2008 (N=411) and 2009 (N=369)**



\* in 2008 this was two separate questions: *A billboard from Think Blue* and *Signs on the sides of trucks from Think Blue*. The two questions received the virtually the same response (33% and 34% "Yes").

We will now take a closer look at this series, paying attention to the demographic subgroups in the city who were significantly more or less likely to have encountered each element. Note: Many subgroups had sample sizes too small to include in the analysis. When subgroups with smaller sample sizes are included, they will be indicated, and should be viewed with caution.

## **1. Television Commercials**

Most of the residents who recalled the slogan the second time asked said they had seen a Think Blue television commercial (78%). Nineteen percent had not seen one, and 3% weren't sure. In the open-ended question asked at the beginning of the survey, 61% of those who recalled the slogan when asked the first time volunteered that they had encountered it in a television advertisement. (Refer to section beginning on page 52.)

Groups most likely to have seen a television commercial included:

- Residents who completed some college or graduated with a four-year degree (83%)
- Women with college degrees (82%, N=72) and men who don't have college degrees (83%).
- Residents who had heard of city anti-pollution programs (85%).
- Residents who recalled seeing either or both of the Think Blue television commercials (84%).

Groups most likely to *not* have seen a commercial:

- Women with no college degree (27%).
- Residents who have a high school diploma or less (28%).
- Residents who have not heard of city anti-pollution programs (25%).
- Residents who did not see either of the Think Blue commercials last year (37%). The finding that 55% of this group said they encountered the slogan in a television ad could be the result of some residents still recalling the "yellow ducks" commercial of the year before.

## **2. Stationary or Mobile Billboard**

Just over a third (36%) of respondents who were familiar with the Think Blue slogan had seen a stationary or mobile billboard, 55% had not, and 9% weren't sure. In the open ended question at the beginning of the survey, 13% volunteered that they'd encountered the slogan on a billboard. This question is an amalgam of two questions asked in previous surveys, so comparisons to the past are not available.

Groups most likely to have seen a stationary or mobile billboard:

- Eighteen to thirty-four year olds (45%), and 50 to 64 year olds (38%, N=76), compared to those 65 and older (20%).
- College educated whites (40%), compared with whites with no degree (25%).
- Roughly half of residents who think storm water is treated (N=58).
- Fifty-two percent of residents who made a change in order to reduce water pollution last year, compared to 25% of other residents.
- Forty percent of residents who saw either or both of the Think Blue television ads, compared to 21% of those who saw neither one.

Groups most likely *not* to have seen a stationary or mobile billboard:

- Women 50 or older (65%, N=73), and women who didn't graduate from college (65%).
- Dog owners (61%).
- Residents who aren't sure if storm water is treated or not (62%).
- Those who did not make any changes in their polluting behavior last year (67%).

## **3. Brochures from Think Blue**

About two out of three of residents who were familiar with the Think Blue slogan had not seen a brochure from the program. Twenty-four percent said they had seen one and 8% weren't sure. Fewer than one percent of this group volunteered seeing the slogan on a brochure in the open ended question.

Groups most likely to have seen a brochure:

- Men and women 50 or older (roughly a third in each case, both have small sample sizes) compared to younger men (17%).
- One third of residents who heard of city anti-pollution programs, compared to 19% of those who hadn't.
- Just over a third (35%) of those who made changes in order to reduce pollution in their own lives, compared to 19% of those who did not.

In 2008, single family home dwellers were more likely to have seen a brochure than those living in apartments; residents 50 or older were more likely than younger ones. Those findings are replicated in the negative this year as may be seen in the following listing of groups most likely not to have seen a brochure in this survey:

- Eighteen to 49 year olds (72%) and especially those under age 35 (74%).
- Non-Latinos (71%) and whites (70%).
- Men under age 50 (74%).
- Apartment dwellers (72%) and particularly, white apartment dwellers (77%).
- Dog owners (69%)
- Those who washed their cars at home (69%).
- Residents who had not heard of steps the city has taken to reduce pollution (73%)
- Those who have not made any attempt to reduce pollution in their own lives (74%).

#### **4. Booth or Sign At a Local Event**

Fifteen percent had seen a Think Blue sign or booth at a local event, 77% had not, and 9% weren't sure.

This question was not asked last year. There were only a few significant variations in responses among subgroups when it came to encounters with Think Blue at local events. Groups most likely to have seen a booth or sign:

- Residents in single family homes (19%), compared to 10% of apartment dwellers.

- Residents who had heard of city anti-pollution programs (24%), compared to residents who had not (8%).
- Those who made changes in their own lives last year (24%), compared to others (10%).
- Seventeen percent of those familiar with one or both of the “Trash Man” or “Dog Waste” commercials, compared to 6% of those who saw neither.

Groups most likely *not* to have seen a booth or sign:

- Residents who aren’t sure if storm water is treated or not (80%).
- Eighty-three percent of residents who had not heard of steps the city has taken to reduce pollution and a similar proportion (82%) of those who have not made any attempt to reduce pollution in their own lives.

## **5. The Think Blue Website**

Roughly one out of eight (12%) residents who had previously heard or seen the Think Blue slogan said they had visited the website, 81% said they had not and 7% weren’t sure.

The 2008 survey found Latinos, and particularly Latino men, were most likely to have used the website. That finding is replicated in the current survey in that 20% of Latinos (including roughly one in four Latino men) visited the site, compared to 9% of non-Latinos. (Note: very small sample size for Latino men (N=52), results included for comparison purposes only and should be viewed with caution.)

Other groups we found that were significantly more likely to have visited the website included:

- Men (16%) were twice as likely as women (8%).
- Residents under age 50 (15%) more than twice as likely as older residents (7%). This is mostly because of men under age 50 (23%), who were much more likely than women of their age group (8%).
- Non-white residents (17%), compared to whites (8%).
- Eighteen percent of residents who had heard of the city’s anti-pollution efforts, along with 18% of those who made changes in their lives last year.
- Fourteen percent of residents familiar with one or both television ads.



Most likely *not* to have seen the website included between 85% and 88% of the following groups: women, men 50 or older, non-Latinos, whites, residents who have not heard of city anti-pollution programs, and residents who did not make a change in their polluting behavior last year.

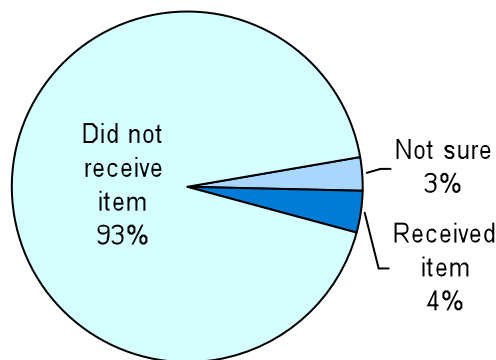
## F. THINK BLUE GIVEAWAY ITEMS

The same group of residents who had seen or heard the Think Blue slogan before this survey were then asked if they had *ever received any giveaway items from the Think Blue Program such as a calendar, pet waste bag, a Frisbee, or a dustpan?*

As illustrated in Figure 18, only 4% said they had received such an item, 93% had not and 3% weren't sure.

**Figure 18: Received A Think Blue Giveaway Item?\***

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\*Among residents who encountered the Think Blue Slogan before this survey (N=369)

The proportion of residents who have heard the Think Blue slogan and who have received a giveaway item was small. Slightly higher proportions were found only among those who have heard of city anti-pollution programs (7%), and those who have made changes in their own polluting behavior (8%).

## **POLLUTANTS AND POLLUTING BEHAVIORS**

We now turn to a set of questions intended find out what residents know about polluting behaviors, and whether they have made any changes in their own lives to reduce pollution as a direct result of hearing more about it. We then asked how likely they would be to take certain actions in order to reduce pollution in storm drains, and we conclude with a set of ratings on how seriously residents view certain contributors to storm drain pollution.

### **A. POLLUTION CAUSING ACTIVITIES ENGAGED IN LAST YEAR**

Early in the survey, before having encountered any questions about water pollution, residents were asked a battery of six questions to assess which possibly polluting activities they may have engaged in last year (in 2008).

We found that sizeable proportions of residents continue to engage in potentially polluting activities such as washing their vehicle at home (42%), or keeping a pet dog (30%).

A few of the questions were asked only of residents in single family homes (N=425) and will be indicated as such (SFH). Roughly one in four of these residents had a landscaping or construction project at their home last year (27%), used pesticides or weed killer in their yards (25%), and/or hosed down their driveway or sidewalks (25%).

Only 5% of all residents admitted to throwing trash on the ground, a question that was asked for the first time this year.

Figure 19 is a chart of this year's findings compared to those from surveys taken in 2007 and 2008. It shows that some of these behaviors have been decreasing over time:

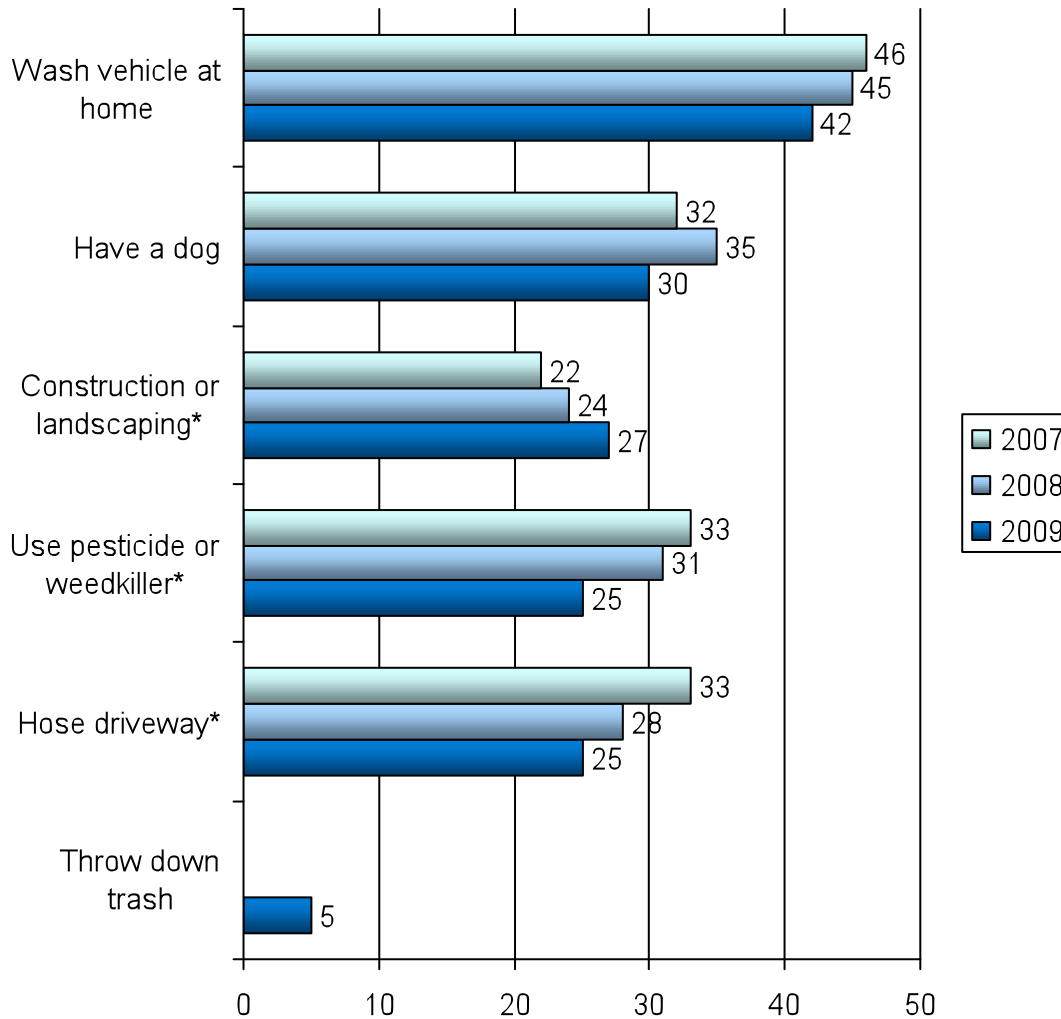
- The proportion of residents in single family homes who reported hosing down their driveways during the previous year declined from 33% in 2006 to 25% in 2007's survey, a level at which it remains this year.
- Similarly, the proportion of residents of single family homes who used pesticides or weed killers in their yards last year dropped to 25%, down from 33% two years ago and 31% in 2008.

However, some behaviors were more intractable:

- Among all residents, 42% said they wash their car at home, a figure similar to previous findings of 46% in 2007 and 45% in 2008.
- Home construction or landscaping projects increased, but to an insignificant degree: the proportion was 22% in 2007's survey, 24% in 2008's, and 27% today.

The proportion of residents who say they own a dog has hovered around a third of the population. This is another group who can easily modify their behavior in order to help reduce pollution in storm drains, and the survey found some signs of progress: two out of 10 dog owners who made a change in their behavior last year in order to reduce pollution (see section beginning on page 77) said the change they made was to begin picking up after their dogs.

**Figure 19: Possibly Polluting Behaviors That Took Place 2006 to 2008 (Survey Years 2007-2009)**



\* These questions asked of residents in single family homes. In 2009's survey N=425; in 2008 N=477; and N=451 in 2007. Note scale from 0% to 50%.

We will now look at any significant variations in these behaviors among groups in the city, and note where there may have been changes over time when possible, beginning with:

### **1. Washing Your Vehicle At Home**

Overall, 42% of San Diego city residents wash their vehicle at home, and 54% do not. Three percent said this didn't apply to them, and 1% weren't sure. This is very little

changed from previous survey findings of 45% who responded in the positive in 2008 and 46% in 2007.

Eight percent of those who made a change in order to reduce pollution last year (see section beginning on page 77) volunteered that the change they made was to wash their vehicle carefully so that water did not go into the storm drain, and 26% said they were now taking their car to a carwash instead.

Significant variations in home vehicle washing were found among the following groups:

- Men (48%) washed their cars at home more often than women (36%). Also, residents under the age of 50 (46%) did so more often than those who are 50 or older (36%).
- More than half (53%) of men under the age of 50 washed their cars at home, compared to 38% of women of that age group, and 39% of older men. Another way to look at this is that nearly three out of every five residents who wash their car at home are men, and two of the three are under the age of 50.
- Last year's finding that more than half of Latino women washed their vehicles at home did not hold up this year. However, we did see higher rates among Latino men (54%) who, along with white men (45%), were more likely than either white women (33%) or Latino women (32%).
- A pattern from last year that we saw again this year was that more than half (54%) of residents of single family homes washed their vehicles at home, compared to 28% of apartment/condo dwellers.
- Among residents who live in single family homes, high rates of car washing at home was found among those who hosed their driveways (68%), did home improvement projects (58%), or used pesticides and weed-killers (63%).
- More than half (51%) of those who reported making a change last year in order to reduce pollution washed their vehicle at home, compared to 37% of residents who did not make a change.
- Residents in the Los Penasquitos (49%, N=) and San Diego River watersheds were more likely than those living in Mission Bay (31%).

Significantly more likely not to wash their vehicle at home were:

- Women (60%), particularly college-educated women (66%), and Latino women (68%).
- Residents living in apartments (68%), particularly whites (73%).
- Those who made a change in their polluting behaviors (58%).

## **2. Dog Ownership**

Three out of 10 San Diego residents own or keep a dog, 67% do not, 2% said it didn't apply to them and 1% weren't sure.

Dog ownership patterns were similar to the findings from last year. Most likely to own a dog were:

- Residents in single family homes (39%), compared to apartment dwellers (20%). Especially whites in single family homes (43%).
- Residents in single family homes who hosed down their driveway (51%), or did a landscaping/home improvement project (41%).
- Residents who were not sure if storm water is treated (35%), compared to those who know it is not (25%).

Significantly more likely *not* to own a dog were:

- Residents over age 65 (77%).
- Men 50 and older (74%).
- Apartment dwellers (77%), particularly white apartment dwellers (81%).
- Those with landlines (70%), compared to 57% of cell phone users.

## **3. Throw Trash On The Ground**

Overall, only 5% of residents said they knowingly threw trash on the ground last year. This finding largely represents how many residents would admit to knowingly dropping trash on the ground, given the negative social weight that such behavior may carry among some groups.

Slight (but significantly) higher levels were found among:

- Those under age 35 (7%), compared to 1% of older residents.
- Those who have a high school diploma or less (8%).
- Non-whites (8%), compared to whites (3%).
- Latinos without college degrees (8%).
- Men without degrees (7%) and women without degrees (6%), compared to men with degrees (1%).

The next three questions were asked only of residents who lived in single family homes (N=425):

#### **4. Use of Pesticides or Weed-Killers (SFH)**

Twenty-five percent of single family home dwellers said they or their gardener used chemicals in their yard last year, 69% did not, 3% said it didn't apply to them, and 3% weren't sure. The proportion who use such chemicals is down from 33% of those in single family homes in 2007's survey, and 31% in the survey last year.

In a previous open-ended question (see section beginning on page 77), 11% of residents in single family homes who made a change in order to reduce pollution said they had reduced or eliminated the use of chemicals in their yards last year.

Among residents living in single family homes, a few subgroups with higher proportions of yard and home chemical use were found:

- Those who had heard the Think Blue slogan (31%), compared to those who had not (21%).
- Those who had landscaping or home construction projects last year (42%). This pattern was also found last year, but in much higher proportion.
- Those who think storm water is treated (37%), compared to those who aren't sure (18%). Twenty-eight percent of those who know it is not treated used such chemicals last year.
- Landline users (28%), compared to cell phone users (13%).

Residents in single family homes who were significantly more likely to not use home or garden chemicals were:

- Dog owners (74%).
- Those who weren't sure if storm water is treated (74%).
- Thirty-five to forty-nine year olds (74%).
- Latinos (78%) and non-whites (74%).
- Cell phone users (82%).

## **5. Construction or Landscaping Projects at Home (SFH)**

Twenty-seven percent of single family home dwellers said they did a construction or landscaping project last year, and 70% said they did not. The survey shows an insignificant (within margin) hint of a shallow upward trend in this type of project. In 2007 22% reported a home or yard improvement project the previous year, a similar 24% did so in 2008's survey.

As was seen in the survey findings last year, there were only a few significant variations between groups of home dwellers on this question.

- College-educated whites (34%), compared to whites with no degrees (24%).
- There was a correlation with use of pesticides or weed-killers (45%).
- Those who know that storm water is not treated (32%) more than those who weren't sure (21%).

## **6. Hose Down Driveway Or Sidewalk (SFH)**

Overall, 25% of single family home dwellers said they hosed down the driveway or sidewalk in front of their home last year, 73% did not, and 2% said it didn't apply or they weren't sure. This represents a drop from 33% of those in single family homes who reported hosing their driveways in 2007's survey but remains unchanged from the findings from last year's survey.

Among residents in single family homes, the highest proportion of those who hosed down their driveways or sidewalks were found among:

- Those who think storm water is treated (34%), compared to 19% of those who know it is not.



- Those younger than 35 (31%), compared to those older than 64 (17%). Residents of ages in between those two extremes were at the overall level of 25%.
- Those without college degrees (29%), compared to those who had earned at least a four year degree (20%). Particularly men without college degrees (34%).
- Men under age 50 (32%) more than other groups. Women fifty or older and white women were least likely at 17% in each case.

Among residents in single family homes, the following groups were the most likely to say that they didn't hose down their driveway or sidewalks:

- Women (77%) and particularly women 50 or older (82%) and college educated women (85%).
- Those with college degrees (80%), and particularly those with graduate degrees or higher (82%).
- Whites with college degrees (82%).
- Those who know storm water is not treated (79%)

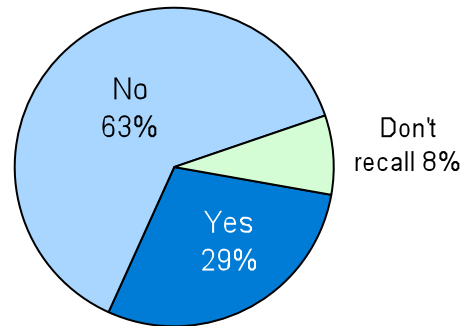
## **B. CHANGES IN BEHAVIOR TO REDUCE POLLUTION**

After hearing about the types of pollution that can enter storm drains, residents were asked if they had made any changes in their behavior *that were a direct result of seeing any information about what polluted water in storm drains does to local rivers, the beaches and the ocean?* This question is new to the survey this year.

In an encouraging finding, as shown in Figure 20, just under three out of 10 citywide (29%) said they had made a change as a direct result of understanding more about pollution. Sixty-three percent said that they had not made a change and 8% didn't recall.

**Figure 20: Percentage Who Made A Change As A Direct Result of Knowledge About Pollution**

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Also encouraging was our finding that residents who had encountered Think Blue San Diego, or who were aware of steps the city is taking to reduce pollution, were much more likely to have made a change.

- Those who recalled hearing the Think Blue slogan before were almost twice as likely to have made a change (40%) than those who did not (21%). Conversely, those who had not heard of Think Blue were more likely to not have made a change (69%), compared those who had heard of the program (54% did not change).
- Thirty-six percent of residents who saw one of the TV ads for Think Blue made a change, compared of 19% of those who did not see either ad.
- Residents who had heard of the steps the city has been taking to prevent storm drain pollution were twice as likely to have made a change (42%) than those who were unaware of such steps (21%).

Other significant variations in the likelihood that certain groups of residents made a change in their polluting behavior last year:

- One third of women made a change, compared to 25% of men.
- Thirty-four percent of 50 to 64 year olds made a change, compared to 25% of 35 to 49 year olds. Roughly three in 10 of those older and younger made a change.
- Among those 50 and older, men were more likely not to have made a change (23% did and 70% did not), compared to women (37% did and 56% did not).

- White men were more likely to *not* have made a change (70%) than either white women (60%) or Latino men (55%).
- Those who undertook a landscaping or construction project in their single family home last year were more likely not to have made a change (71%).
- Residents in the San Diego Bay watershed area were more likely to have made a change (33%) than those in the San Diego River area (19%).

### **Changes That Were Made**

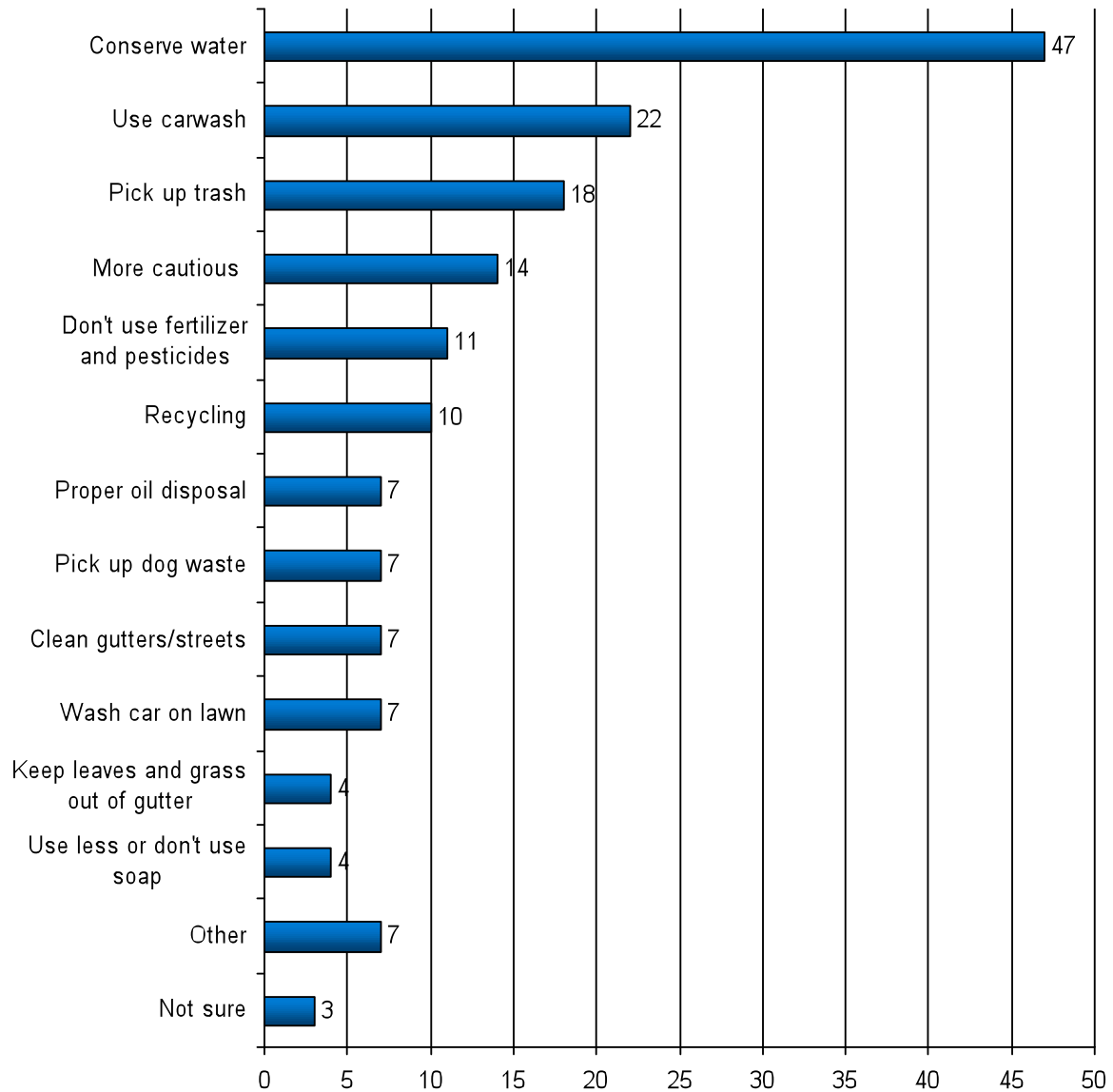
Residents who made one or more changes over the past year to reduce pollution were asked, in an open-ended question, to describe briefly what changes they had made. The question was asked of 229 respondents and up to two responses were accepted.

By far the largest percentage (47%) volunteered that they are using less water. This finding is another indication that some residents are conflating the issue of water conservation with the problem of pollution of storm drains.

However, as Figure 21 shows, other residents are getting the message:

- Twenty-two percent of those who made a change said they took their car to a carwash rather than washing it at home, and another 7% said they washed their car on their lawn to keep the runoff out of storm drains.
- Eighteen percent reported picking up trash and litter. Another seven percent reported cleaning trash out of the gutters and streets to keep it out of drains.
- Seven percent of residents said they are picking up dog waste (including 20% of dog owners.)
- Fourteen percent said they are being more cautious in general.
- Ten percent said they have reduced or eliminated fertilizers and pesticides. There was no difference between single family home dwellers and apartment dwellers on this question.
- Seven percent reported properly disposing of used oil rather than pouring it into drains or the street.
- Other responses included 4% in each case who said they are using less soap and 4% who are keeping leaves and grass out of the gutter.

**Figure 21: Changes Made by Residents Last Year In Response to Pollution Knowledge (N=229)**



Open ended question. May exceed 100% as two responses permitted. All responses shown. Note scale from 0% to 50%.

We found that while residents who had encountered the Think Blue slogan were more likely to have made some sort of change, they were not any more likely to have made one type of change than another.

## **Changes Made By Single Family Home Dwellers**

Some responses were more relevant to residents living in single family homes, but among that group only small or insignificant differences were found:

- Thirty-six percent said they either are now taking their car to a carwash or washing it on their lawn, compared to 22% of apartment dwellers.
- Fourteen percent said they were keeping grass and leaves out of their gutters, or cleaning up the street in front of their house, compared to 8% of those in apartments.
- Eleven percent reported eliminating or reducing their use of fertilizer and chemicals, no different than among apartment dwellers.

Given the small size of this subsample, only a few other significant variations were seen. There were a significant differences among those who had heard of San Diego's anti-pollution efforts, and those who had seen one of the TV ads, which are detailed in the sections below, along with a few other variations as follows:

### **Change: Conserving Water (47%)**

Groups more likely to mention reducing their use of water were:

- Those under age 50 (52%), compared to 38% of older residents.
- Latinos (58%), compared to 43% of non-Latinos.
- Non-whites (52%), compared to whites (42%).
- Those who saw one of the two television ads were more likely to mention water conservation (52%) than those who did not (34%).
- Residents who had heard of steps the city has taken to reduce pollution were more likely (56%) than those who had not (39%).

### **Change: Car Washing (22% and 7%)**

Twenty-two percent said that they are taking their car to a car wash rather than washing it at home. Another 7% said they were washing the vehicle on their lawn or otherwise keeping the runoff from going down storm gutters.

- Those who said they washed their vehicle at home last year were not significantly more or less likely to volunteer that they washed their car on their lawn (7%) than the proportion overall (8%).
- This group was also not significantly more likely to say they are taking their car to a carwash now (26% compared to 22% overall)

However, a few groups were more likely to make a change in this way:

- Thirty-five percent of women under the age 50 said they took their car to a carwash or washed it carefully at home.
- Twenty-seven percent of those who saw a TV ad took their car to a carwash, compared to 11% of those who had not seen an ad.
- Twenty-seven percent of residents under age 50 took their car to a carwash, compared to 13% of older residents. Older residents were more likely to wash their car on their lawns (13%) than younger ones (3%).

#### **Change: Other Findings**

- Apartment dwellers (24%) were significantly more likely to *pick up trash and litter*, compared to those in single family homes (13%).
- Non-Latinos (18%) and whites (17%) were more likely than other groups to say that they were just being *more cautious in general* than Latinos and non-whites.

### **C. SERIOUSNESS RATINGS FOR STORM DRAIN POLLUTANTS**

We asked San Diego City residents to rate a series of nine items on a scale from “1” if they believed the item was not a serious source of pollution 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 “high” or “serious” if it is eight or higher, and “low” or “not serious” if it is three or lower.

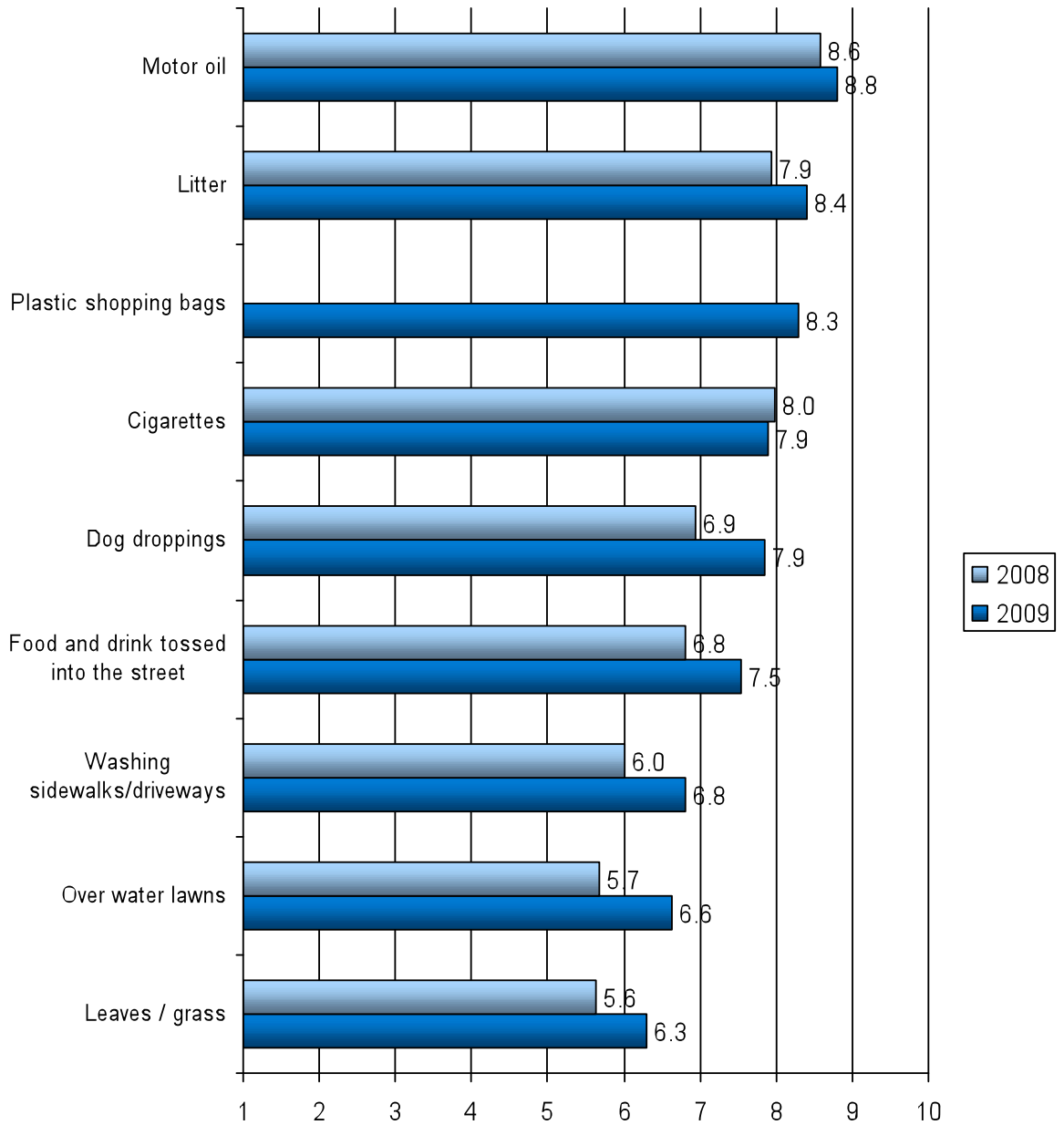
Residents readily recognized motor oil, litter, and plastic shopping bags as serious pollutants, assigning each of them ratings that averaged more than 8 on the 10 point scale. Cigarette butts, dog droppings, and food and drink thrown into the street were also given a large proportion of high ratings, averaging 7.5 or higher. The good news in these findings is that even among the pollutants with lower averages,

resident awareness has increased in almost every instance over the findings from the survey last year.

Figure 22 is a chart showing the average seriousness rating for each item in this year's survey compared to how the items were rated by respondents to last year's survey. It illustrates the following results:

- Eighty-three percent of city residents rated *motor oil* as a serious pollutant. The average rating for motor oil was 8.8, similar to the 8.6 rating it received last year.
- More than seven out of 10 residents assigned a high rating to *litter* (74%) and *plastic shopping bags that have blown into the street* (71%). These two pollutants were virtually tied for 2<sup>nd</sup> highest average seriousness rating at 8.4 and 8.3 respectively. Residents in this year's survey were more likely to view litter as a serious pollutant than those in last year's when the rating was 7.9. Shopping bags are new to the survey this year.
- *Cigarette butts* received high ratings from 64% and averaged 7.9, a very similar finding to an average of 8.0 in the survey last year.
- Resident awareness of *dog droppings* as a serious pollutant rose this year, as evidenced by the 7.9 average rating, up one whole point from last year's average of 6.9. Sixty-three percent of residents rated it as serious pollutant.
- Sixty-one percent of residents gave *food and drink that gets tossed into the street* a high rating. Its average rating was 7.5, higher than the 6.8 found last year.
- Fewer than half (47%) gave a high rating to *washing down sidewalks or driveways* but its average rating of 6.8 was higher than last year's 6.0.
- Forty-four percent gave a high rating to *over-watering lawns*. This pollutant's average rating of 6.6 is higher than the 5.7 average in last year's survey.
- Finally, *leaves or grass clippings* were rated as serious pollutants by 39% and not serious by 19%. This category received an average rating of 6.3, up from 5.6 last year.

**Figure 22: Seriousness Ratings For Ten Storm Drain Pollutants. 2008 and 2009**





## **Variation in Pollutant Ratings Among Resident Groups**

This rating series showed some 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 as follows:

### **Patterns By Familiarity With Think Blue or City Anti-Pollution Efforts**

- Those who had heard of the Think Blue slogan were more likely to give higher average ratings for five of the pollutants: *food and drink, washing down driveways and sidewalks, over-watering of lawns, and leaves or grass clippings* than those who had not heard of the slogan before.
- We observed earlier in this report (see section beginning on page 56) that of the two Think Blue program television advertisements, residents tended to remember the “Dog Waste” commercial more than the “Trash Man” one. Even so, those who had seen the commercials were no more likely to rate *dog droppings* as a serious pollutant than those who had not seen the ad, while they did rate *food and drink* more highly on average than those who had not.
- Residents who had heard of steps the city has taken to fight pollution of storm drains gave a higher seriousness rating, on average, to *washing down sidewalks and driveways* than did other residents.

### **Patterns By Concern About Water Pollution and Behavior Change**

- Residents who said that pollution of the ocean, bays, and beaches was an important problem gave higher average ratings to each one of the pollutants than did other residents.
- 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.
- Those who believe storm water is treated rated both *litter* and *dog droppings* higher than those who know it is not treated.

## Patterns By Demographic Groups

- As was found last year, women gave average ratings that were significantly higher for each pollutant (with the exception of *litter*) than did men. This is especially true for women under age 50.
- Residents under age 50 on average, rated litter and food and drink tossed into the street higher than did those over age 50.
- Latinos rated each of the pollutants, on average, higher than non-Latinos, with the exception of motor oil, dog droppings, and over-watering of lawns. The same pattern holds for non-whites, compared to whites.
- White men tended to rate the seriousness of each pollutant lower on average than other groups, and Latino men tended to rate them the same or higher.
- Latinos living in apartments gave higher seriousness ratings to the polluting potential of washing down sidewalks and driveways, over-watering lawns, and plastic shopping bags than did any other group, on average.
- In addition, Latino apartment dwellers assigned higher seriousness ratings on average than did whites living in apartments to litter, cigarette butts, food and drink, and leaves and grass clippings.
- Residents without college degrees were more likely to rate litter, plastic shopping bags, food and drink, and leaves or grass clippings as more serious on average than did residents who have at least a four year degree.
- Apartment dwellers gave higher average ratings to litter and plastic shopping bags than did residents living in single family homes.
- Cell phone users rated litter and cigarette butts as more serious pollutants on average than did landline users.
- Residents in the San Diego Bay watershed area rated food and drink more highly on average than those in the San Diego River and Los Penasquitos watershed areas.

## E. WILLINGNESS TO TAKE SPECIFIC ACTIONS TO REDUCE POLLUTION

After asking San Diego residents to rate the seriousness of various pollutants, we then presented a battery of ten questions designed to assess their willingness to take specific actions that would reduce storm water pollution. We found residents were quite willing to take most of the actions, particularly the ones that pertained to individual responsibility. Six out of the actions received average likelihood ratings greater than eight on a ten point scale.

Some of the questions were the same as had been asked in previous surveys, but this year the preamble included more information than was given in previous surveys, so results are not directly comparable. Before they were asked to rate the questions, residents were read the following:

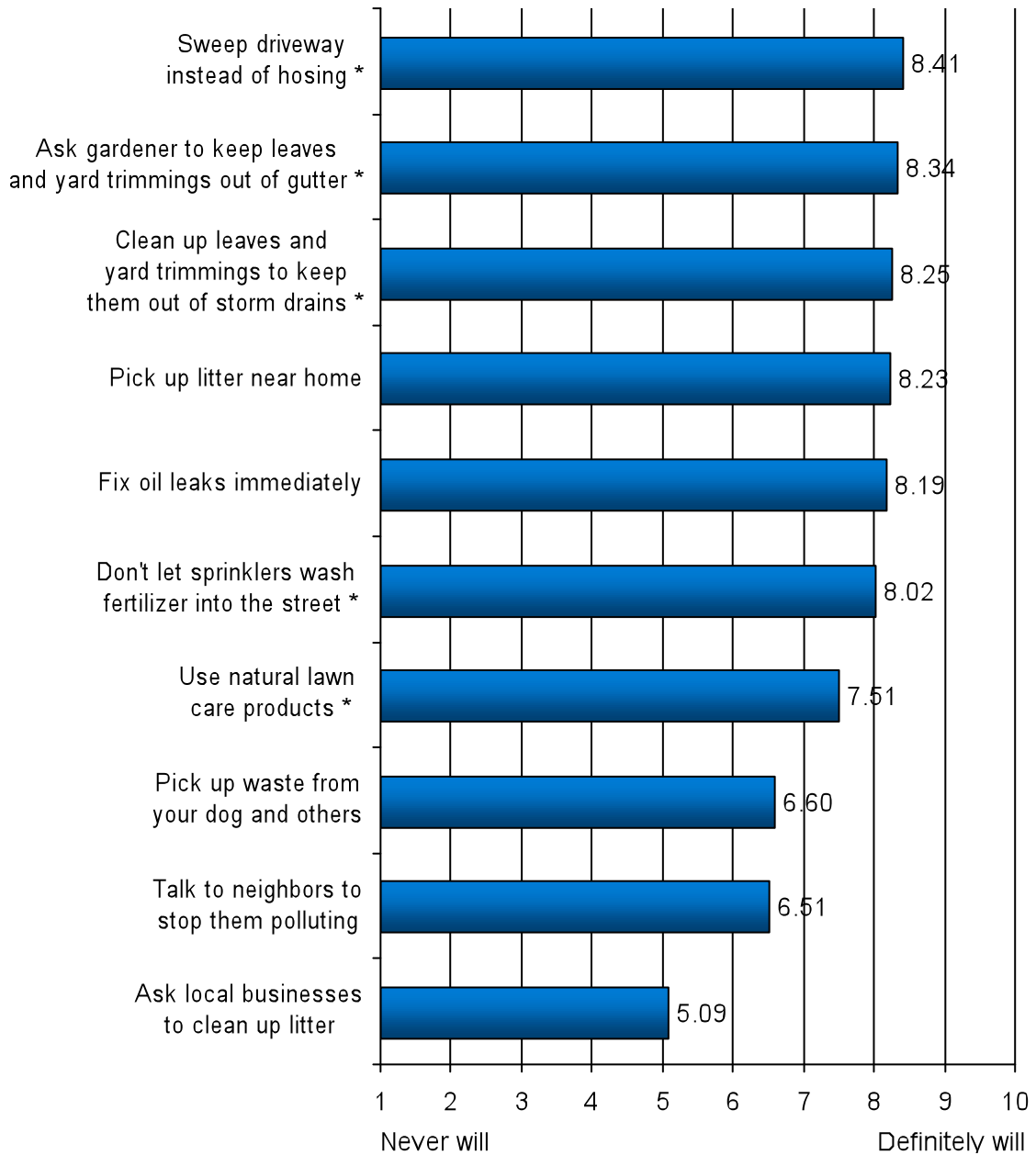
“Lots of things that pollute San Diego’s beaches come from local neighborhoods. For example, litter, dog waste, pesticides and dirt on driveways or cars often get washed into the street. From there they go to storm drains into the ocean where they are a big source of pollution.”

They were then asked to assess, for each of the ten specific actions, how likely they were to take that action to prevent pollution on a scale from “1” if they would “probably never do it” to “10” if it is “something they would definitely do.”

Note that some questions having to do with home and garden maintenance were asked only of the 425 residents living in single family homes (SFH) and will be indicated as such.

Figure 23 presents in chart form the mean score assigned to each item for how likely residents of San Diego felt they were to take that particular action.

**Figure 23: Likelihood of Taking Action To Reduce Pollution**



\* These questions were asked only of single family home dwellers (N=425)

## **1. Sweep Driveway (Average 8.4, SFH)**

Among single family home dwellers, 51% said they definitely would *sweep their driveway to clean it instead of hosing it down*, and 73% rated this action as an eight or higher on the likelihood scale. Only 4% gave it one of the three lowest ratings, and 2% weren't sure or said it didn't apply.

There were some significant variations in average likelihood rating between subgroups on this measure:

- Those who said that they hosed down their driveway last year had a lower average cooperation rate (7.5) on sweeping their driveway instead of hosing it than single family dwellers overall (8.4). Fifty-eight percent of this group rated their likelihood at eight or higher, compared to 73% overall, and only 33% said they would definitely do it, compared to 50% overall.
- Women were likelier on average (8.7) than men (8.1), particularly white women (8.9).
- Residents 50 years or older were likelier on average (8.7) than younger residents (8.2), particularly older women (8.9). Sixty percent of residents 50 or older said they definitely do it, including fully 66% of those 65 and older.
- Higher average ratings were found among those who characterized pollution of San Diego's ocean, bays, and beaches as a very important issue (8.6). Seventy-five percent of that group gave a rating of eight or higher and 55% rated it at 10 out of 10.
- Residents who made a change last year to reduce pollution had an average rating of 8.9, compared to 8.2 among those who did not. Eighty-four percent those who made a change gave a rating of eight or higher, including 61% who rated it at 10.
- Fifty-seven percent of residents who know storm water is not treated said they would definitely sweep their driveway instead of hosing it, compared to 44% of residents who aren't sure if storm water is treated or not.

## **2. Ask Gardener To Keep Yard Waste Out Of Gutter (Average 8.3, SFH)**

Single family home dwellers were also very likely to *ask your gardener to keep leaves and yard trimmings out of the gutter*. Nearly half (49%) said they were definitely

willing to do that, and 72% gave it a rating of eight or higher. Six percent gave a rating of three or lower. Five percent weren't sure, or said it didn't apply to them.

Those in single family homes again varied little in their likelihood to ask their gardener to reduce yard waste in their gutters. We found significantly higher averages among:

- Women, with an average rating of 8.6. In particular:
  - Women over age 50 averaged 8.8. Eight out of 10 of this group gave a rating of eight or higher, including 60% who ranked it at 10 out of 10.
  - Two other groups of women showed no significant differences in proportion of high ratings, but calculated out to significantly higher averages: White women (8.8) and college educated women (8.9) (Small sample size, N=76).
- Those with four year degrees. Eighty percent gave a rating of eight or higher for an average of 8.7.
- Those who had heard of the Think Blue program. Their average was 8.8, and 80% gave a high rating, compared to 66% of those who hadn't heard of the program, and averaged 8.1.
- Those who know storm water is not treated in sewage plants had a significantly higher average of 8.7, with 77% who gave a rating of eight or more, and significantly higher proportions (58%) who rated it at 10.

### **3. Clean Up Leaves And Yard Trimmings (Average 8.3, SFH)**

Single family home dwellers were very willing to take this action as well. With an average rating of 8.25, nearly half (47%) said they would definitely *clean up leaves and yard trimmings so they do not go into the storm drains and raise bacteria levels in the ocean*. Sixty-nine percent gave it a rating of 8 to 10, 4% gave it a rating between 1 and 3, and 3% weren't sure.

We found significant variation among only a few subgroups when it came to how likely they were to keep yard waste out of gutters. Higher ratings were found among:

- Nearly three out of four women (74%) ranked their likelihood at eight or higher, compared to 65% of men. This includes:
  - Note the small sample size (N=76) but 80% of college educated women gave a high rating for an average of 8.8.

- White women similarly were more likely to give a high rating (78%) including 55% who rated it at 10, for an average of 8.8.
- This is another small group (N=75) so view the results with caution, but those over age 65 were more likely to give a high rating than any other age group (80% greater than “7” and 66% “10”s) and also more likely to give a low one: 10% said they would never do this. Their average, however, was not significantly different than that of other age groups.
- More than three-fourths (77%) of those who had encountered the Think Blue slogan gave this action a high rating, including 56% who gave it a 10, for an average of 8.7. Other residents’ ratings averaged to 7.9.
- Seventy-six percent of those who had heard about steps the city has taken to reduce pollution gave this a high rating. By comparison, 67% of other residents gave a rating of eight or higher. There was no significant difference between average ratings for the two groups.
- More than eight out of 10 (81%) residents who made pollution reduction changes last year gave this a rating of eight or higher, including 59% who gave it a 10, for an average of 8.9. Those who did not make such a change averaged 7.9.

#### **4. Clear Litter And Trash From The Gutter At Home (Average 8.2)**

This is another action with great potential for cooperation among all San Diego residents. It earned an average rating of 8.23, and more than half (52%) said they would definitely *pick up litter and trash that is in the gutter in front of their home*. Almost three out of four (73%) gave a rating of 8 or higher. Only 8% gave one of the lowest three ratings, and 1% weren’t sure.

A few significant variations among subgroups were found as follows:

- Seventy-eight percent of residents age 50 or older gave a rating of eight or higher, including 60% who said they would definitely do it. Younger residents rated it at eight or greater 72% of the time, and 49% gave it the highest score of “definitely.” There was no significant difference in average scores, however.
- Residents between the ages of 35 and 64 averaged 8.5, compared to 8.0 for 18 to 34 year olds, and 8.2 for those 65 and older.
- Latino scores averaged at 8.5, compared to 8.1 among non-Latinos. Seventy-nine percent of Latinos gave a high rating, including 58% who rated it at “10.”

- Those with college degrees scored higher on average (8.6) than those without (8.1). Seventy-eight percent of college grads gave a high rating and 59% gave the highest. This compares to a high rating of 71%, and 49% of “10”s among those with no degree.
- Those who had previously encountered the Think Blue slogan averaged higher scores (8.5) than those who had not (8.0). Seventy-nine percent of those who had heard the slogan before gave a high rating, compared to 69% of those who had not.
- Seventy-nine percent of dog owners gave a high rating, for an average of 8.5.
- Those who had a landscaping or home improvement project last year averaged 8.8, and fully 83% gave a rating of eight or higher, including 62% who rated it at “10.”
- Eighty-one percent of residents who know storm drain water is not treated in sewage plants gave a high rating for cleaning up the gutters, and 61% gave the highest, for an average of 8.7. Averages were lower among those who think storm water is treated (7.8), and those who aren’t sure if it is treated or not (7.9).
- Those who made a change to reduce pollution last year averaged 8.8, with 81% high ratings, and 60% “10”s. Those who had not made a change averaged 8.1.
- Those living in single family homes averaged 8.5, compared to 7.9 for multi-family dwellers.
- Residents in the Los Penasquitos (8.6) and Mission Bay (8.5) watershed areas were more likely on average than those in the San Diego River area (7.8).

### **5. Fix Oil Leaks (Average 8.2)**

This is another question asked of all San Diego residents that earned a very high rating. When asked how likely they were to *fix oil leaks immediately if you notice oil stains on your driveway or parking area*, city residents said, on average, that they were quite willing to do so (8.19). Almost half (49%) said they would definitely do so, and 73% gave the action a rating of 8 or higher. Only 8% gave a rating of three or lower, and 2% weren’t sure.



There were a few significant variations in how likely various groups of residents were to fix oil leaks, with highest average ratings found among the following groups:

- Eighty-one percent of 50 to 64 year olds gave this a high rating, for an average of 8.6, compared to 67% high ratings and an average of 7.8 among the oldest residents. Fifteen percent of those 65 or older said they were unlikely to get their oil leaks fixed, including 11% who said they never would.
- Eighty percent of residents with at least a four year college degree gave this a high rating, for an average of 8.6. Those with less education averaged 8.0.
- Those who had heard of the Think Blue program gave a high rating 79% of the time, including 55% who rated it a “10,” for an average of 8.5. Those who had not heard of it averaged 7.9.
- Residents who know that storm water is not treated were more likely on average to fix oil leaks (8.4) than those who think it is treated. That group gave a “low” likelihood of 13% and averaged 7.8.
- Eighty percent of those who made a change to reduce pollution last year gave a high rating, including 58% who said they definitely would, for an average of 8.6. Those who did not make a change averaged 8.1.
- Latino women were more likely on average (8.9) than Latino men (7.9) or white women (8.2). Eighty-two percent of Latino women gave this a high rating, compared to 71% of Latino men and white women.
- Residents in single family homes averaged 8.5, compared to 7.9 among those living in apartments.

## **6. Keep Fertilizer From Washing Into The Street (Average 8.0, SFH)**

Single family home dwellers were asked how likely they were to *make sure your sprinklers do not wash fertilizers into the gutter*, and on average they said they were very likely to do this (8.02). Thirty-nine percent said they definitely would, and almost two-thirds (65%) rated their likelihood at eight or better. Only six percent gave one of the three lowest ratings, and 8% said it didn’t apply to them or they weren’t sure.

A few significant differences in likelihood ratings were found as follows:

- Those who recalled the Think Blue slogan averaged 8.4, compared to 7.8 among others.
- Those who made a change last year to reduce pollution averaged 8.5, compared to those who didn't (7.9).
- Forty-five percent of those who know storm water is not treated said they'd definitely do it (10 out of 10), compared to 31% of those who weren't sure if storm water is treated or not.
- Older residents were more likely to say they'd definitely do it (45%) than younger ones (31%).

## **7. Use Natural Lawn Care Products (Average 7.5, SFH)**

*Using natural lawn care products instead of chemicals even if they cost more* was not as much of a sure thing among single family home dwellers as other actions, but still garnered a respectable average rating of 7.51 in that group. More than a third (35%) said they would definitely do it. Fifty-eight percent gave it an eight or better, 11% rated it at three or lower, and 5% weren't sure or said it didn't apply to them.

There were a few interesting variations by subgroup for this action. Significantly higher average likelihoods for using natural lawn care products were found among:

- Those who did not use yard chemicals last year were more likely (7.8 average) to say they'd use natural products, compared to those who did use such chemicals last year (6.5). Fully 21% of those who used the chemicals gave a *low* likelihood rating for this action, and 10% said they would never use natural lawn care products.
- Single family dwellers who think that pollution of San Diego's ocean, bay and beaches is a *very* important problem had higher ratings on average (7.9) than others. Forty-percent of this group said they would definitely do so and 63% gave a rating of eight or higher.
- Those who know storm water is not treated averaged higher (7.8) than those who think it is treated (6.7). Sixty-two percent of the former gave a high rating, including 44% who said they would definitely use natural products.
- Those who made a change last year to reduce pollution were higher on average (8.1) than those who did not (7.4). Seventy percent gave a high rating, compared to 54% of others.
- Women (7.9), compared to men (7.1). Particularly:

- Women under age 50 (8.0), compared to men of that age group (6.8).
- Men under the age of 50 were least likely to give a high rating (44%), compared to other residents (64%).
- College educated women (8.7), compared to college educated men (7.4) (Note small sample size for college educated women, N=76)
- White women (8.0), compared to white men (7.2)
- Fifty to sixty-four year olds (8.0). Those under age 50 averaged 7.3, and those over age 64 averaged 7.4.
  - Seventy-one percent of the 50 to 64 year olds gave a high likelihood rating, compared to 47% of 18 to 34 year olds, 60% of 35 to 49 year olds, and 57% of those 65 and older.
- Residents with college degrees averaged 8.0, compared to 7.2 among others.

### **8. Pick Up Dog Waste (Average 6.6)**

Another question asked of all respondents in the survey willingness to *pick up dog waste in front of your home and put it in the trash, even if it is not from your own dog*. This averaged a much lower 6.60. Only 36% said they would definitely do this. More half gave a rating of eight or higher. However, 25% rated their likelihood as low, including 17% who said they would never do it.

Dog owners were quite a bit more likely to say they'd pick up all dog waste near their home, averaging a likelihood rating of 7.6, compared to 6.2 among those who do not have a dog. Nearly seven out of 10 dog owners gave a rating of eight or higher to their likelihood of picking up dog waste, and nearly half (49%) said they would definitely do so.

The fairly low overall average rating masks other significant variations as follows:

- Single family home dwellers (65%) were much more likely to give a high rating than apartment dwellers (39%). Forty-two percent of those in homes said they would definitely do it, and their average was 7.4. Apartment dwellers were twice as likely to give a low rating (36% compared to 17%) and 25% said they would “never” do it. Their average was 5.7. Whites living in apartments were less likely (5.5 average, 28% said “never”) than Latinos living in apartments (6.6 average, 12% said “never”).

- Residents who know storm water is not treated averaged 7.0, compared to 6.3 among all others. In particular, 31% of those who weren't sure if it storm water is treated or not said they weren't very likely to do it. This compares to 41% of those who know storm water is not treated who said they would definitely do it.
- Those who made a change last year to reduce pollution had a higher likelihood on average (7.1) of picking up dog waste than those who didn't (6.5).
- Ages 50 and older averaged higher scores (7.1), compared to younger residents (6.3). Fifty to 64 year olds were particularly likely (7.3). Twenty-one percent of residents between the ages of 35 and 49 said they would never do it.
- Women over age 50 were more likely on average (7.5) than any other age and gender group. Sixty-four percent said they were likely to clean up dog waste, and 44% definitely would.
- Latinos (7.1) and whites (6.7) were more likely on average than Asians (5.6). Fully 30% of Asians said they would never do it and 43% gave a rating of eight or higher.
- Those with college degrees were more likely (7.3) on average than those without (6.3). Sixty-four percent of the college educated gave a high rating, compared to 48% of less educated, who were more likely to give a low rating (28% compared to 19%). Among those without degrees, least likely were men (5.8) and whites (6.0)

### **9. Ask Neighbors To Stop Polluting (Average 6.5)**

When asked how likely they were to *talk to a neighbor if you see them doing something that causes pollution to go into the street*, San Diego city residents' likelihood ratings averaged 6.51. Only 23% said they would definitely do it, but close to half (45%) were open to the idea, rating the likelihood of their talking to a neighbor at eight or higher. Fewer than one out of five (19%) assessed their likelihood at three or lower. Two percent weren't sure.

We found some variations in likelihood among groups of respondents as follows:

- As we have noted about nearly all of the other actions, residents who made a change last year were significantly more likely to say they'd talk to their neighbor on average (7.4) than those who did not (6.3). Sixty-two percent gave a high likelihood rating, compared to 40% of others, and

those who did not make a change were twice as likely to say they would not talk to a neighbor (22%) as those who did make a change (11%).

- Dog owners are more likely on average (7.0) to talk to a neighbor than non-dog owners (6.3), with 52% of dog owners rating their likelihood at eight or higher, including 28% who said they would definitely do so.
- Latinos were more likely on average (7.3) to say they'd try to influence their neighbors than non-Latinos (6.3). Fifty-seven percent of Latinos rated their likelihood as high, compared to 41% of others, and they were more than half as likely to give a low rating (10% compared to 22%).

### **10. Ask Local Businesses To Clean Up Litter (Average 5.09)**

We found this to be the action that fewest residents said they would definitely do, with an average rating right at the midpoint. When residents were asked if they would *ask local businesses to clean up litter in front of or behind their business*, nearly one in four (23%) said they would never do that, and 38% rated their likelihood of doing so at a three or less. Thirty-one percent rated their likelihood at eight or higher, including only 14% who said they would definitely talk to local businesses about litter. Two percent weren't sure.

There were only a few variations among subgroups. Most likely, on average to say they'd take this action were:

- Those who had heard of the Think Blue program (5.5), compared to 4.8 among those who had not. Those who had heard the slogan split 31% high to 35% low likelihood, while those who had not gave low ratings over high by 44% to 28%.
- Residents who had heard of the steps San Diego has taken to reduce storm drain pollution averaged 5.8, compared to 4.7 among those who had not. Those who had heard of the programs were eight points more likely to give a high rating than a low one (38% vs. 30%) while others were sixteen points more likely to give a low one (27% high vs. 43% low).
- Residents who made changes last year to reduce pollution (5.9), compared to 4.8 among those who did not. This group's pattern of low and high was similar to the previous one.
- Latinos (average 5.6) were more likely than Asians (4.2) while other groups hovered close to the overall average likelihood of 5. Fully half of Asians rated their likelihood at three or lower and 35% said they would never do it.

The final section of this report examines the way residents would most prefer to get information about pollution prevention.

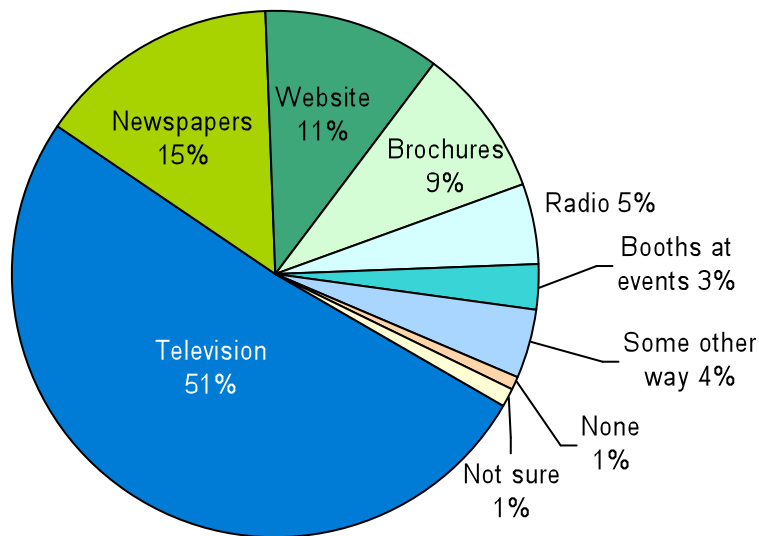
## POLLUTION PREVENTION INFORMATION PREFERENCES

The final question in the survey presented six alternatives for disseminating information about pollution prevention methods and asked residents to choose which of the methods they most preferred. We added two new information categories this year so will not be able to compare it to findings in previous surveys.

As illustrated in the pie chart in Figure 24, by far the most popular of the six information sources among San Diego city residents was *television* (51%). A distant second was *newspapers* (15%), followed by *a website* (11%). Fewer than 10% of residents said they preferred: *brochures* (9%), *radio* (5%), or *booths at community events* (3%). Four percent volunteered that they'd prefer to get information some other way and one percent would prefer none. Another one percent weren't sure.

**Figure 24: Information Sources, San Diego Resident Preferences**

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## **Television (51%)**

Television was the choice of majorities or pluralities of respondents across all subgroups. It was particularly popular among residents who are more aware of pollution issues, reaching about six in 10 among:

- Those who had heard of Think Blue (60%).
- Residents who made changes in order to reduce pollution last year (60%)
- Those who saw either or both of the two Think Blue commercials on TV (58%).

Preferences for television as the best source for pollution information were also significantly variable among the following groups:

- Residents in the San Diego Bay watershed area (61%), compared to those living in the Los Penasquitos (37%), Mission Bay (38%), and San Diego River (47%) watershed areas.
- Residents with high school diplomas or less (60%), compared to between 45% and 50% of other residents.
- It was higher among women (55%) than men (47%), and in particular among white women (57%), compared to white men (44%).
- Least likely than any other group were college educated men (39%), compared to 54% of other residents.
- Eighteen to thirty-five year olds were more likely (56%), compared to 50-64 year olds (46%). Other age groups were clustered around the average of 51%.
- Landline users (55%) picked television, compared to 35% of cell phone users.

## **Newspaper (15%)**

There were only a very few differences among subgroups when it came to choosing newspapers for the favorite way to receive anti-pollution information. We found significantly higher levels of the following groups chose a newspaper:

- Cell phone users (24%), compared to landline users (11%).

- Residents who think storm water is treated (22%), compared to roughly 13% of others.
- Those who did not see either of the Think Blue television commercials (19%), compared to 11% of those who did.

### Website (11%)

While enthusiasm for getting pollution information from a website averaged barely more than one in 10 among residents citywide, there was a great deal of variation, centering around age, gender, educational attainment, and race. The groups who had a significant variation in preference for going online were as follows:

- Men (14%) were more likely than women (8%) to pick the web.
  - Men under age 50 were more likely at 16% than women of that age group (9%). Women older than 50 were the least likely at 5%.
- Overall, those with college degrees were more likely (15%) than those without (9%). In particular:
  - Residents with graduate degrees picked the web (20%) nearly twice as often as those with less education.
  - Men with college degrees (19%) were more likely than women (11%) of that educational attainment.
- Residents under the age of 50 were more likely (13%) to want to go online for information than older residents (8%). In particular, only 4% of residents over the age of 65 chose the web as their favorite method.
- In a finding that correlates with age, cell phone users (20%) were more than twice as likely as landline users (9%) to pick the web.
- Residents living in apartment buildings (14%) were more likely than those in single family homes (9%).
- Latinos were less likely (7%) than non-Latinos (12%). Whites were twice as likely (14%) as non-whites (7%).
  - Latinos without college degrees were less likely (6%) than whites of the same educational attainment (12%).
  - Similarly, among apartment dwellers, whites (16%) were more likely than Latinos (8%).



- Residents in the Los Penasquitos (20%) and Mission Bay (18%) watershed areas were twice as likely to use the website than those in the San Diego River and San Diego Bay watershed areas (9%).

**Other Notable Variations**

City residents favored other sources of information in small numbers, but there were a few more variations worth noting:

- Thirteen percent of residents age 50 or older chose *brochures* as their favorite source, compared to 8% of younger residents. This is the exact opposite to the finding for *a website*.
  - Only 4% of those under age 35 picked a brochure as the best way.

We also found that Latino residents chose *community events* more often than other residents, although the proportions are small in all cases:

- Latinos were twice as likely as non-Latinos to choose “a community event” as their preferred method of obtaining information (6% compared to 3%).
- Among Latinos, community events were picked in higher proportion by those in single family homes (11%), men (8%), and those without college educations (7%).

**SAMPLE DEMOGRAPHICS**

**LATINO AND RACE**

Table 6 shows the self-described racial make up of the respondents in this survey.

**Table 6: Racial Categories (including Latinos)**

	%
White or Caucasian	62
Asian or Asian-American	14
Black or African-American	5
Native American	-
Mixed Ethnicity	3
Refused	6

Table 7 has the proportion of San Diego residents who said they consider themselves Latino or not, and breaks down the non-Latino category into non-Hispanic racial categories, as used in the analysis of this report.

**Table 7: Percentage and Frequency of Latino/Non Latino and Non-Hispanic Race Categories Referenced in the Report**

	N	%
Latino	178	22
Non-Latino including:	622	76
White	459	57
Asian	100	12
Black	36	5
Other/Mixed	9	1
Refused	24	3

## EDUCATIONAL ATTAINMENT

Table 8 provides the frequency and percentages of the educational categories and the “netted” categories used for analysis in this report.

**Table 8: Frequency and Percentage for Categories of Educational Attainment Referenced in the Report**

	N	%
<b>No College Degree (net) includes:</b>	<b>499</b>	<b>62</b>
No High School Diploma	97	12
High School Graduate	160	20
Some College	170	21
Associate Degree	72	9
<b>College Degree (net) includes:</b>	<b>279</b>	<b>35</b>
Four Year Degree	177	22
Graduate Degree or more	103	13
<b>High School or Less (net) includes:</b>	<b>257</b>	<b>32</b>
No High School Diploma	97	12
High School Graduate	160	20
<b>Some College (net) includes:</b>	<b>242</b>	<b>30</b>
Some College	170	21
Associate Degree	72	9

## AGE

Table 9 gives the proportion of each age group, in decade cohorts, for San Diego residents overall. Table 10 provides the frequency and percentage for each of the age categories used in the analysis of this report.

**Table 9: Decade Age Category Percentages**

---

	%
18 to 29	27
30 to 39	19
40 to 49	18
50 to 59	14
60 to 69	9
70 or older	10
Refused	3

**Table 10: Frequency and Percentage for Age Categories Referenced in the Report**

---

	N	%
18 to 49	514	64
50 to 99	263	33
18 to 34	289	36
35 to 49	222	28
50 to 64	144	18
65 or older	120	15

## TYPE OF RESIDENCE

More than half of respondents lived in single family homes (53%), while 31% lived in a condo or apartment building. Residents living in duplex, triplex, or townhouse structures accounted for 13% of the sample. The rest said “other” or refused.

In the analysis of this report we referred to residents living in “apartments”, a category that made up 45% of respondents and included all residents who did not specifically say they lived in a single family home, as illustrated in Table 11.

**Table 11: Frequency and Percentage of Type of Residence as Referenced in the Report**

---

	N	%
Single Family Homes	425	53
<b>“Apartments” (net)</b>	<b>357</b>	<b>45</b>
Condo or Apartment	251	31
Duplex, Triplex	47	6
Townhouse	59	7
Other	14	2
Don’t know/NA	4	1

## CELL PHONE OR LANDLINE

Twenty-percent of interviews were done on cell phones (N=162), and 80% on landlines (N=638).

## LANGUAGE OF INTERVIEW

Three percent (N=24) of the 800 interviews in this survey were conducted in Spanish, the rest (N=776) in English.

## GENDER

Fifty percent of respondents were male (N=397) and fifty percent female (N=403).

## WATERSHED BY ZIP CODE

Some zip codes correspond to multiple watershed areas. In those cases, an intersection nearest the resident’s home was used to assign the specific watershed. In 47 cases, no watershed area was assigned, due to incorrect zip codes or mismatches between intersections and zip codes.

**Table 12: Frequency and Percentage of Watershed (by Zip Code)**

Watershed	Zip Codes	N	%
San Diego Bay	91902, 91911, 91913, 91915, 91945, 91950, 91977, 92101, 92102, 92103, 92104, , 92105, 92106, 92107, 92113, 92114, 92115, 92116, 92118, 92133, 92134, 92135, 92136, 92139, 92140, 92152, 92154	352	44
Tijuana River	91932, 92154, 92173	3	-
Mission Bay	92037, 92109, 92110, 92117, 92122, 92145	109	14
San Diego River	91942, 92020, 92103, 92108, 92111, 92115, 92119, 92120, 92123, 92124, 92145	143	18
Los Penasquitos River	92014, 92064, 92121, 92126, 92128, 92129, 92130, 92131	102	13
San Dieguito River	92014, 92025, 92027, 92029, 92065, 92067, 92075, 92127, 92128	44	5
No Watershed coded		47	6

- The San Dieguito and Los Penasquitos watersheds have the highest concentrations of single family homes (65%). The rest of the areas split roughly 50/50 between single family homes and apartments.
- Seventy-one percent of the San Diego and San Dieguito River watershed area residents are non-Hispanic white, compared to 46% in San Diego Bay. Other areas are roughly 64% white.
- One third of the population of the San Diego Bay watershed is Latino, compared to 24% in the Mission Bay watershed and 12% in the San Diego River watershed. Other areas have proportions less than 10%.
- Asian Americans make up 22% of the population in the San Dieguito River watershed area and 28% of the Los Penasquitos area, compared to roughly 10% elsewhere.

## DEMOGRAPHIC SUBGROUPS REFERENCED IN THIS REPORT

Here we provide frequencies and percentages for subgroups often referenced in the report, including gender, education, and racial subcategories.

**Table 13: Gender by Educational Attainment**

	N	%
Men Without College Degrees	246	31
Men With Degrees	140	18
Women Without College Degrees	253	32
Women With Degrees	139	17

**Table 14: Gender by Latino and non-Hispanic White**

	N	%
White Men	229	29
White Women	230	29
Latino Men	90	11
Latino Women	89	11

**Table 15: Education by Latino and non-Hispanic White**

	N	%
Whites Without Degrees	240	30
Whites With Degrees	210	26
Latinos Without Degrees	160	20
Latinos With Degrees (category not referenced)	13	2

**Table 16: Type of Residence by Latino and non-Hispanic White**

	N	%
Whites in Single Family Homes	253	32
Whites in Apartments	192	24
Latinos in Single Family Homes	84	10
Latinos in Apartments	91	11

**Table 17: Gender by Age Group**

---

	N	%
Men 18-49	252	32
Men 50+	122	15
Women 18-49	246	31
Women 50+	130	16

Gender of Respondent

1 (Male)-----50%  
2 (Female)-----50

Hello, I'm \_\_\_\_\_ from G-S-V Research, a public opinion research firm. We've been asked by the city of San Diego to conduct a brief 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.

**LAND LINES 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.C**

**IF 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 QC)----- 98%  
No not safe ----- TERMINATE  
No not cell phone (ASK Q.B) ----- 2  
**(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**

**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. To start, do you live in the City of San Diego, or in some other city?

Yes San Diego (SKIP TO Q.1)----- 94%  
No, other city (ASK Q.D)----- 6  
**(DON'T READ) DK/NA ----- TERMINATE**



**ASK Q.D IF OTHER CITY ON Q.C (N=46)**

D. What city do you live in?

**(DON'T READ)**

San Diego -----	1%
Carmel Mountain Ranch -----	1
Carmel Valley -----	0
Del Cerro -----	0
Del Mar Heights -----	2
Del Mar Mesa -----	0
Encanto -----	4
Hillcrest -----	5
Jamacha -----	0
La Jolla [la HOY- ah] -----	12
Mira Mesa -----	19
Mission Beach -----	2
Ocean Beach -----	13
Otay/Otay Mesa -----	4
Pacific Beach -----	2
Point Loma -----	0
Rancho Bernardo -----	22
Rancho Peñasquitos -----	0
Sabre Springs -----	3
San Carlos -----	2
San Pasqual -----	0
San Ysidro -----	5
Scripps Ranch -----	0
Tierrasanta -----	0
Tijuana River Valley -----	2
Torrey Highlands/Hills/Pines -----	0*
University City -----	2
UTC -----	0*
Any other response -----	TERMINATE
Not Sure/Refused -----	TERMINATE

\* Less than 0.5%

**ASKED OF EVERYONE**

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 -----	39%	59%	2%

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

2. Where did you see or hear this? (RECORD VERBATIM, THEN SUPERVISOR CODE) (N=315)

TV ad	58%
Radio	8
Billboard	13
Brochure	0*
Community meeting	0*
Event/at a booth at an event	0*
TV news	0*
Newspaper	3
Internet/web site	2
Side of truck	0*
Friends/family/word of mouth	1
At work	0*
On the street / Curb	5
Flyers	1
Bus Stop/Buses	2
Mail	1
Water Bill	0*
Downtown	1
School	2
Everywhere / Around the city	0*
Other	2
Not Sure	12

\* Less than 0.5%

May exceed 100% as multiple responses permitted

**ASKED OF EVERYONE**

3. In a few words of your own, what do you think that the slogan "Think Blue San Diego" is asking you to do? (RECORD VERBATIM, THEN SUPERVISOR CODE) (DO NOT READ)

Mention of storm drains or storm water	8%
Mention of water pollution	17
Mention of clean beaches or ocean	11
Mention of creeks	0*
Mention of LA Dodgers/baseball	0*
Mention of Blue Man Group	0*
Mention of watershed	0
Other mention of protecting the environment	7
Water Conservation	13
Air pollution	3
Recycle	1
Water	6
Pollution	3
Blue Sky	1
Keep San Diego Clean	5
Think Green	1
Good Slogan/Positive mentions	1
Other	3
Nothing	1
Not sure	27

\*Less than 0.5%

May exceed 1001% as multiple responses permitted

4. Now I'd like to read you a list of some issues the city of San Diego is dealing with. After I read each one, please tell me whether you feel it is very important, somewhat important, not very important, or not at all important. (ROTATE)

	VERY IMP	SW IMP	NOT VERY	NOT AT ALL	DK/ NA
[ ] a. Broken or deteriorating city water and sewer pipes -----	76%	20%	2%	1%	1%
[ ] b. The quality of public schools -----	80	13	4	1	2
[ ] c. Pollution of San Diego's ocean, bays, and beaches -----	76	19	3	0	2
[ ] d. Unemployment and the recession -----	84	13	1	0	1
[ ] e. Polluted water entering storm drains in San Diego -----	73	21	3	1	2

5. On a scale of 1 to 10, how would you rate the job the city of San Diego is doing in (READ)? Use a 1 if you think it is doing a poor job, a 10 if you think it is doing an excellent job, or any number in between. (ROTATE)

	POOR										EXC			DK	MEAN
[ ] a. Keeping polluted water out of storm drains -----	4%	3%	4%	6%	20%	12%	18%	11%	3%	5%	13%	5.91			
[ ] b. Spending tax dollars efficiently -----	15	10	6	11	17	11	8	4	1	3	13	4.38			
[ ] c. Preventing pollution of San Diego's ocean, bays, and beaches -----	6	5	6	8	16	16	14	12	4	6	8	5.74			

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

Single family -----	53%
Duplex/triplex -----	6
Townhouse -----	7
Apartment/Condo -----	31
(DON'T READ) Other -----	2
(DON'T READ) DK/NA -----	1

7. Last year, that is in 2008, did (READ):

	YES	NO	NOT APPL	DK/NA
a. You ever wash your vehicle at home? -----	42%	54%	3%	1%
b. You own or have a dog? -----	30	67	2	1
c. You knowingly throw trash on the ground? -----	5	93	1	2

**IF SINGLE FAMILY ON Q.6 ASK D-F: (N=425)**

d. You or your gardener use pesticides or weed-killers in your yard or garden? -----	25	69	3	3
e. You do any construction or landscaping projects at your home? -----	27	70	2	1
f. You hose down the driveway or sidewalk in front of your home -----	25	73	1	1

8. As far as you know, do you live in a watershed, or not?

	YES	NO	DK/NA
Watershed -----	8%	56%	36%

9. Now, I want to ask you what happens to water when it runs down in the gutter on your street. Does that water end up flowing into a storm drain? Or not? If you are not sure, just say so.

Yes ----- 68%  
 No ----- 13  
 Not sure ----- 18  
 (DON'T READ) NA ----- 2

10. Storm drains are the gutters, pipes, and concrete channels that collect water from streets. 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 ----- 17%  
 Is not treated ----- 44  
 Not sure ----- 37  
 (DON'T READ) NA ----- 2

11. 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 often goes into storm drains in San Diego, and ends up untreated in our creeks, rivers, and the ocean.

Last year, in 2008, did you see or hear anything about steps the city of San Diego is taking to prevent pollution of storm water?

Yes ----- 34%  
 No ----- 62  
 (DON'T READ) DK/NA ----- 4

12. 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 rivers, the beaches, and the ocean? If you don't recall, just say so.

Yes (ASK Q.13) ----- 29%  
 No (SKIP TO Q.14) ----- 63  
 Don't recall (SKIP TO Q.14) ----- 8  
 (DON'T READ) DK/NA (SKIP TO Q.14) --- 0

**IF YES ON Q.12 ASK: (N=229)**

13. Can you very briefly describe that change you made? (ACCEPT UP TO 2 RESPONSES)

Conserve/use less water ----- 47%  
 Take car to carwash/don't wash at home ----- 22  
 Pick up trash and litter ----- 18  
 More cautious (in general) ----- 14  
 Recycling more ----- 10  
 Don't use or use less fertilizers/pesticides/chemicals ----- 11  
 Wash car on the lawn or so water does not go in street ----- 7  
 Clean gutters/streets/remove trash from street ----- 7  
 Pick up after dog ----- 7  
 Don't pour oil into street/take used oil for proper disposal ----- 7  
 Use less/don't use soap ----- 4  
 Keep leaves and grass from going in street or gutter ----- 4  
 Other ----- 7  
 Not sure ----- 3

*May exceed 100% as multiple responses permitted*

**ASK EVERYONE**

14. In the past year, do you recall seeing any television commercials on this topic that featured a man walking down the street and having trash, leaves, and spaghetti dumped on him? Or do you not recall seeing this?

Yes ----- 36%  
 No ----- 63  
 (DON'T READ) DK/NA ----- 1

15. In the past year, do you recall seeing or hearing any television commercials asking dog owners to help prevent pollution by cleaning up their dog's waste? Or do you not recall seeing this?

Yes ----- 46%  
 No ----- 52  
 (DON'T READ) DK/NA ----- 2

16. 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, and our beaches and oceans. Now that I mention this, had you heard about the Think Blue San Diego program before this call?

Yes (ASK Q.17) ----- 46%  
 No (SKIP TO Q.19) ----- 51  
 (DON'T READ) DK/NA (SKIP TO Q.19) ----- 3

**ASK Q.17 – Q.18 IF YES ON Q.16 (N=369)**

17. Have you seen any of the following from the Think Blue program? (ROTATE)

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
<input type="checkbox"/> a. A TV commercial -----	78%	19%	3%
<input type="checkbox"/> b. The Think Blue website -----	12	81	7
<input type="checkbox"/> c. A stationary or mobile billboard from Think Blue -----	36	55	9
<input type="checkbox"/> d. A brochure from Think Blue -----	24	67	8
<input type="checkbox"/> e. A booth or a sign at a local event -----	15	77	9

18. Have you ever received any giveaway items from the Think Blue Program, such as a calendar, pet waste bags, a Frisbee, or a dustpan? Or not?

	<u>YES</u>	<u>NO</u>	<u>DK/NA</u>
Giveaway items -----	4%	93%	3%

**ASK EVERYONE**

19. 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)

	<u>NOT SER</u>										<u>DK</u>	<u>MEAN</u>
	1	2	3	4	5	6	7	8	9	10		
<input type="checkbox"/> a. Cigarette butts -----	2%	2%	4%	3%	7%	6%	10%	13%	11%	40%	2%	7.90
<input type="checkbox"/> b. Dog droppings -----	2	2	3	4	8	6	11	14	11	38	1	7.86
<input type="checkbox"/> c. Litter -----	0	1	1	2	7	5	9	16	12	46	1	8.40
<input type="checkbox"/> d. Plastic shopping bags that have blown into the street -----	1	1	2	3	7	5	9	13	12	46	1	8.30
<input type="checkbox"/> e. Leaves or grass clippings -----	6	7	7	7	14	7	11	14	8	18	2	6.30
<input type="checkbox"/> f. Over-watering of lawns -----	8	4	5	5	13	8	11	12	10	22	3	6.62

Q19 continued...

	NOT SER										VERY SER		DK	MEAN
	1	2	3	4	5	6	7	8	9	10	99			
<input type="checkbox"/> g. Washing down sidewalks or driveways	4	6	4	5	11	7	13	16	10	22	2	6.81		
<input type="checkbox"/> h. Motor oil	2	1	0	1	4	4	6	10	11	60	1	8.80		
<input type="checkbox"/> i. Food and drink that gets tossed in the street	3	4	4	4	11	5	8	16	12	33	1	7.53		

20. It turns out that a lot of things that pollute San Diego's beaches come from local neighborhoods. For example, litter, dog waste, pesticides, and dirt on driveways or cars often get washed into the street. From there they go through storm drains into the ocean, where they are a big source of pollution.

I want to read you a brief list of things that people like you can do to prevent this kind of pollution of San Diego's beaches. After you hear each one, please tell me how likely you are do it to help prevent pollution.

Use a 1 if it is something you will probably NEVER do. Use a 10 if it is something you will DEFINITELY do to prevent pollution. Or use any number in between. (ROTATE) (IF NOT APPLY, RECORD AS 99)

	NEVER										DEFINITELY		DK	MEAN
	1	2	3	4	5	6	7	8	9	10	99			
<input type="checkbox"/> a. Pick up litter and trash that is in the gutter in front of your home	4%	2%	1%	2%	5%	5%	7%	13%	9%	52%	1%	8.23		
<input type="checkbox"/> b. Ask local businesses to clean up litter in front of or behind their business	23	8	8	5	14	4	6	10	7	14	2	5.09		
<input type="checkbox"/> c. Pick up dog waste in front of your home and put it in the trash, even if it is not from your own dog	17	5	3	4	7	5	5	10	7	36	2	6.60		
<input type="checkbox"/> d. Fix oil leaks immediately if you notice oil stains on your driveway or parking area	5	2	1	2	5	3	7	13	11	49	2	8.19		
<input type="checkbox"/> e. Talk to a neighbor if you see them doing something that causes pollution to go into the street	9	5	5	5	12	8	9	14	8	23	2	6.51		

ASK OF SINGLE FAMILY HOME DWELLERS ONLY FROM Q6 (N=425)

<input type="checkbox"/> f. Clean up leaves and yard trimmings so they do not go into the storm drains and raise bacteria levels in the ocean	3	1	0	3	8	4	9	13	9	47	3	8.25
<input type="checkbox"/> g. Ask your gardener to keep leaves and yard trimmings out of the gutter	4	1	1	2	8	1	7	12	11	49	5	8.34
<input type="checkbox"/> h. Make sure your sprinklers do not wash fertilizers into the gutter	5	1	0	3	6	7	6	15	11	39	8	8.02
<input type="checkbox"/> i. Use natural lawn care products instead of chemicals, even if they cost more	6	3	2	2	9	5	9	11	11	35	5	7.51
<input type="checkbox"/> j. Sweep your driveway to clean it instead of hosing it down	3	0	1	4	4	6	8	10	12	51	2	8.41

**ASK OF EVERYONE**

21. I'd like to read you a brief list of potential concerns about what happens when people pollute the water that goes into storm drains and ends up in our rivers and ocean. After you hear each one, please rate it on scale of 1 to 10. Use a 1 if that item does not concern you at all, a 10 if it concerns you a great deal, or any number in between. (ROTATE) (IF DK/NA, RECORD AS 99)

	NOT										GREAT DEAL			DK	MEAN
	1	2	3	4	5	6	7	8	9	10					
<input type="checkbox"/> a. When people do things that pollute our beaches and waterways, it costs the city millions of tax dollars to clean it up	2%	1%	1%	2%	6%	4%	6%	16%	12%	49%	1%			8.44	
<input type="checkbox"/> b. It can make children sick if they play in polluted water	2	1	1	1	3	2	6	11	11	63	0			8.90	
<input type="checkbox"/> c. The pollution sickens or kills marine life, including birds, seals, and dolphins	2	1	2	1	3	2	7	11	14	55	1			8.74	
<input type="checkbox"/> d. It makes the beaches polluted and unsafe for people	2	0	2	2	2	4	6	14	10	58	1			8.80	
<input type="checkbox"/> e. The city has to pay expensive fines when San Diego residents do things that pollute our beaches and waterways	2	1	1	1	6	3	7	16	15	45	3			8.47	
<input type="checkbox"/> f. It spoils our beaches when litter and trash wash up there	1	2	0	1	4	4	6	14	12	55	2			8.74	

22. How would you most prefer to get information about ways to prevent pollution? (ROTATE-READ):

<input type="checkbox"/> From television	51%
<input type="checkbox"/> From newspapers	15
<input type="checkbox"/> From a website	11
<input type="checkbox"/> From brochures	9
<input type="checkbox"/> From radio	5
<input type="checkbox"/> From booths at community events	3
(DON'T READ) Other	4
(DON'T READ) None	1
(DON'T READ) DK/NA	1

**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	22%
No	76
Refused	2

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?

African-American	5%
Asian-American	14
Caucasian	62
Native American	0*
Mixed ethnicity	3
Other	9
Refused	6

\*Less than 0.5%

25. 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 ----- 20 SOME COLLEGE, NO DEGREE ----- 21 ASSOCIATE DEGREE ----- 9 BACHELOR'S DEGREE/COLLEGE GRAD ---- 22 POST GRADUATE DEGREE ----- PROFESSIONAL DEGREE ----- 13 REFUSED ----- 3
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26. 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-----	18
50-59-----	14
60-64-----	4
65-69-----	5
70 or older-----	10
(DON'T READ) REFUSED-----	3

27. What is the zip code where you live?

91902 (San Diego Bay)-----	0%	92111 (San Diego River) -----	3
91911 (San Diego Bay)-----	0	92113 (San Diego Bay) -----	3
91913 (San Diego Bay)-----	0*	92114 (San Diego Bay) -----	5
91915 (San Diego Bay)-----	0	92115 (San Diego Bay and San Diego River)---	5
91932 (Tijuana River) -----	0*	92116 (San Diego Bay) -----	2
91942 (San Diego River)-----	0*	92117 (Mission Bay) -----	3
91945 (San Diego Bay)-----	0*	92118 (San Diego Bay) -----	0
91950 (San Diego Bay)-----	1	92119 (San Diego River) -----	1
91977 (San Diego Bay)-----	1	92120 (San Diego River) -----	4
92014 (the Penasquitos [pen-ahs-KEY-toe] and San Dieguito [dee-A-GEE-toe Rivers) ---	0*	92121 (Penasquitos)-----	0
92020 (San Diego River)-----	0*	92122 (Mission Bay) -----	2
92025 (San Dieguito River)-----	0*	92123 (San Diego River) -----	2
92027 (San Dieguito River)-----	0*	92124 (San Diego River) -----	1
92029 (San Dieguito River)-----	0	92126 (Penasquitos)-----	3
92037 (Mission Bay)-----	3	92127 (San Dieguito River) -----	3
92064 (Penasquitos River) -----	2	92128 (the Penasquitos and San Dieguito Rivers)-----	3
92065 (San Dieguito River)-----	0	92129 (Penasquitos River)-----	3
92067 (San Dieguito River)-----	0	92130 (Penasquitos River)-----	2
92075 (San Dieguito River)-----	0*	92131 (Penasquitos River)-----	2
92101 (San Diego Bay)-----	2	92133 (San Diego Bay) -----	0*
92102 (San Diego Bay)-----	4	92134 (San Diego Bay) -----	0
92103 (San Diego Bay/River)-----	2	92135 (San Diego Bay) -----	0
92104 (San Diego Bay)-----	3	92136 (San Diego Bay) -----	0*
92105 (San Diego Bay)-----	6	92139 (San Diego Bay) -----	2
92106 (San Diego Bay) -----	2	92140 (San Diego Bay) -----	0
92107 (San Diego Bay) -----	4	92145 (Mission Bay and San Diego River) -----	0
92108 (San Diego River)-----	2	92152 (San Diego Bay and Tijuana River)-----	0
92109 (Mission Bay)-----	6	92154 (Tijuana River and San Diego Bay)-----	1
92110 (Mission Bay)-----	2	92173 (Tijuana River) -----	0*



Other -----6  
Not sure-----6

\* Less than 0.5%

28. Finally, so we can identify results by watershed, what are the two nearest cross street to your home?

First street: \_\_\_\_\_  
Second street: \_\_\_\_\_

(CONFIRM SPELLING AND STREET/AVENUE IF POSSIBLE. IF RESPONDENT CANNOT OR WILL NOT PROVIDE CROSS STREETS SAY):

Well, can you give me the name of the school or park closest to your home?

Name of school or park: \_\_\_\_\_

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★  
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 ----- 20%  
Land line sample----- 80