

# **Storm Water Public Education Program Resident Population – Tracking Evaluation –**

**Prepared for:**



**Los Angeles County Department of Public Works  
and  
Ogilvy Public Relations Worldwide**

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## Background and Objectives

- As part of its ongoing efforts to combat the problem of storm water pollution in Los Angeles County, the Department of Public Works, in conjunction with Ogilvy Public Relations Worldwide and various contractors, has developed a public education campaign designed to reduce harmful substances in storm water runoff by generating public awareness, concern and behavior change.
- From its initial launch, the outreach campaign has encouraged Los Angeles County residents to take ownership of their communities, help reduce storm water pollution and be part of the “pollution solution” by adopting simple, everyday actions, including:
  - Throwing trash in a trash can or recycling container (as appropriate), not on the ground or into a storm drain.
  - Cleaning up after their dogs.
  - Always putting cigarette butts in an ashtray.
- Separate ongoing campaigns regarding used oil and household hazardous waste disposal, as well as school education and clean up programs, have run in conjunction with the storm water education efforts.
- The campaign’s current communications center on “Don’t Trash California” ads and Project Pollution Prevention, which encourage residents to reduce litter as a way of keeping neighborhoods clean and children and the environment safe.
- The campaign utilizes a strategic mix of multi-media advertising, including English and Spanish television, radio, print and billboards, community outreach, media relations, corporate and non-profit partnerships, special events and community, school and business outreach.

## Background and Objectives

- The specific goals of the 2007 campaign evaluation research are to:
  - Evaluate the effectiveness of the campaign in reaching residents.
  - Determine the level to which the Storm Water Public Education Campaign has penetrated public consciousness and influenced intentions and/or behavior.
  - Provide insights based on key learnings to help future pollution-reduction efforts in Los Angeles County.
- This report provides the findings from the most recent (2007) campaign evaluation survey and also includes data from the 1997 baseline, 2001, 2005 and 2006 tracking studies for comparative purposes.



## Methodology

- In 1997, prior to the launch of a new public education campaign, baseline data regarding residents' attitudes and behavior about storm water pollution was collected to establish a starting point for measurement of the campaign's impact.
- Subsequently, changes in awareness and attitudes related to storm water pollution have been evaluated in a series of tracking studies including telephone interviews with 600 County residents in 2007.
  - Telephone interviews for 2007 were conducted between October 15 and October 31, 2007.
- For each of the tracking waves, participants were drawn from a representative sample of Los Angeles County residents using a random-digit phone number generation technique.
- Participants were screened to be:
  - 16+ years of age.
  - Permanent residents of Los Angeles County.
  - Residents of Los Angeles County for at least six months.
- Interviews were conducted in either English or Spanish, at the preference of the interviewee.
- All data reported are unweighted.
- Statistical significance testing is at a 90% confidence level, with up arrows (↑) signifying a statistically significant increase in 2007 relative to the 1997 (or first year the question was asked) time period and down arrows (↓) signifying a significant decrease from 1997 (or first year the question was asked) to 2007.

## Methodology

- To provide further insight, telephone in-depth interviews were conducted.
- Each interview lasted 10-15 minutes and focused on:
  - Residents' recall of specific elements and messages in the ads.
  - Specific feelings and impressions the ads generated.
  - The manner in which the ads impacted residents' littering or polluting behavior.



## Executive Summary and Conclusions

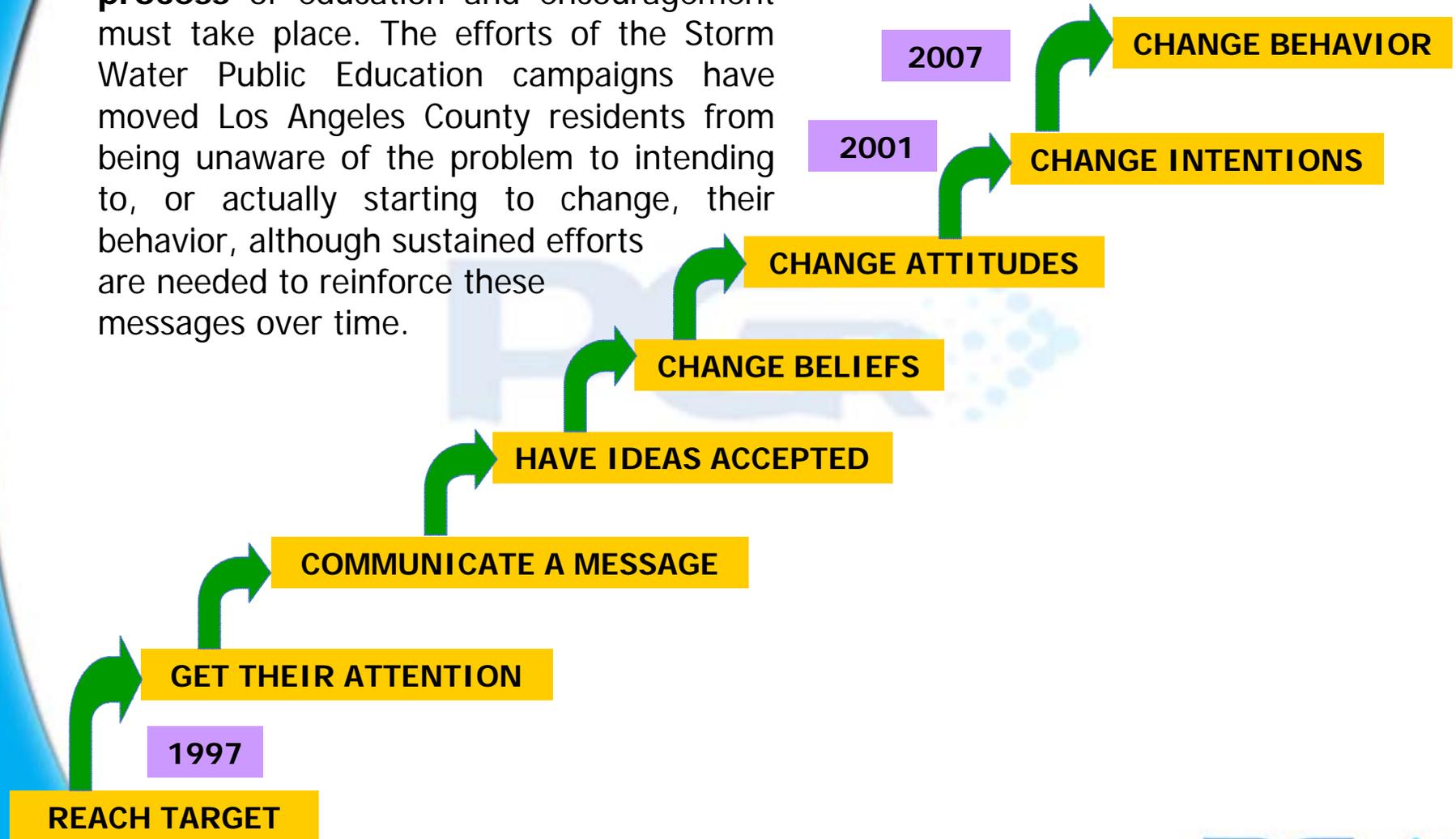
- While public concern about water pollution remains high, it appears to be a reflection of overall increasing concern about environmental issues among Los Angeles area residents rather than concern about litter specifically.
- Residents are open to information about water pollution, increasingly consider themselves very knowledgeable about the causes of water pollution problems and virtually all are willing, in theory, to change their water-polluting behaviors.
- Messages from the current campaign appear to be absorbed within a broad context of environmental proscriptions that residents are hearing and specific anti-littering messages are providing reinforcement of most residents' current non-littering behavior.
  - There is support among residents for both continued educational efforts and punishment of litterers, indicating that the campaign, in conjunction with shifting attitudes about the importance of environmental issues, may be affecting the public's tolerance for other people's polluting behavior.
    - Residents do not, however, want to see littering "criminalized."
  - There is a decreasing association between the campaign's anti-littering messages and the consequences of littering behaviors on the waterways in Los Angeles, which may be decreasing the perceived relevance of the campaign's messages to non-litterers.
- Littering behaviors are down significantly since the inception of the public education campaign, although are fairly flat since 2005.
  - Limited media flighting and/or shifting communication focus may be playing a role in this flattening out.
  - Home improvement-related behaviors that contribute to run-off pollution have not been a focus in the County education campaign and some of these behaviors are increasing.
- Alternative media sources such as freeway signs, beach signs, the Internet, sports events and the County Fair are all showing some effectiveness in message delivery and may represent cost-effective outlets for public education messages moving forward.

# Overview of Social Change Process



## Social Change Process

To create behavior change related to societal, rather than individual needs, a **process** of education and encouragement must take place. The efforts of the Storm Water Public Education campaigns have moved Los Angeles County residents from being unaware of the problem to intending to, or actually starting to change, their behavior, although sustained efforts are needed to reinforce these messages over time.



# DETAILED FINDINGS

## ➡ Attitudes and Awareness

Willingness to Change Pollution-Causing Behavior

Behaviors Related to Storm Water Pollution

Advertising Message Recall/Impact

Lifestyle Characteristics

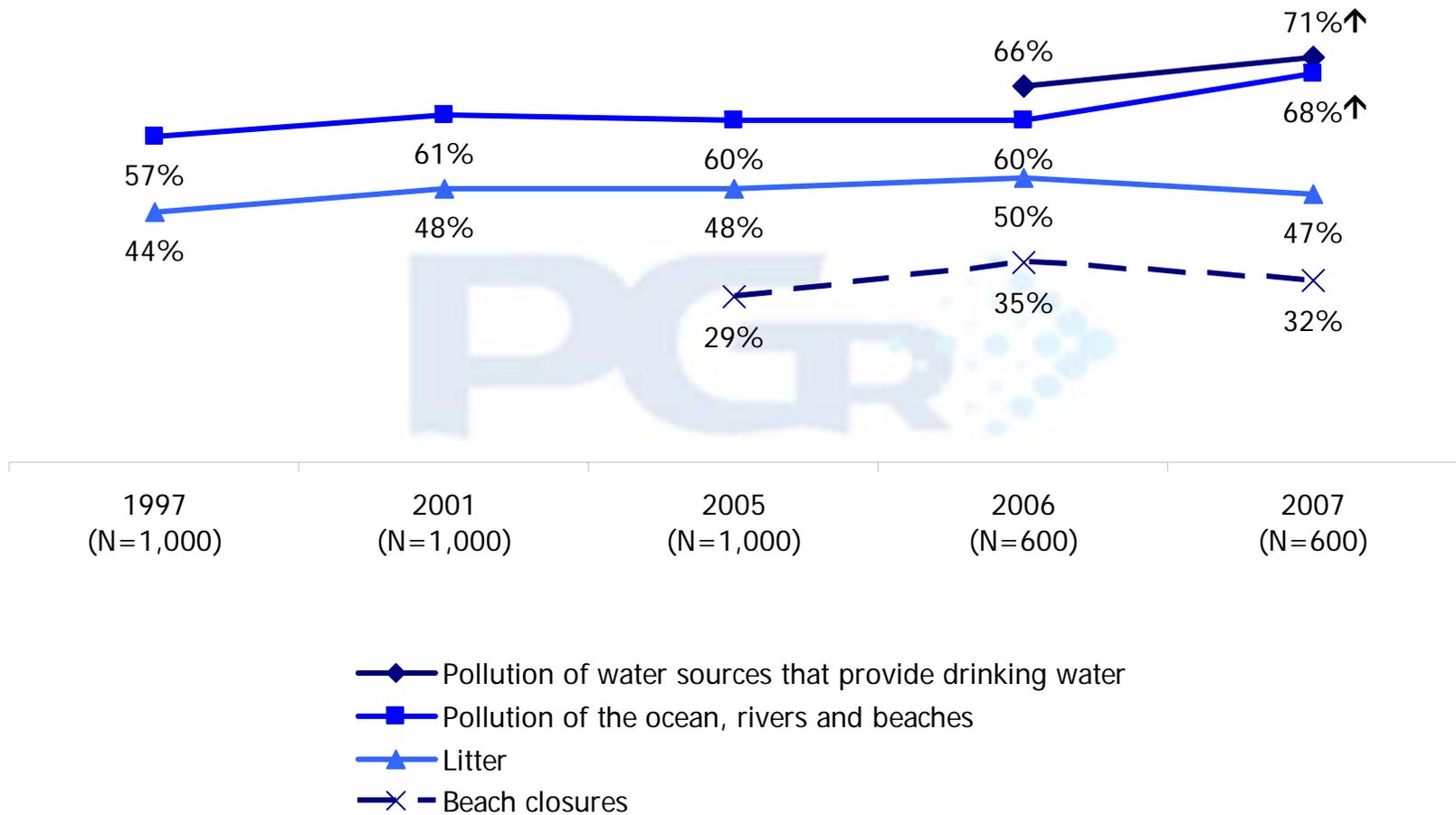
Demographic Characteristics



## Attitudes and Awareness

- Over the past decade, concern about drinking water and storm water pollution among Los Angeles County residents has increased significantly (now 71% and 68% very concerned respectively), while litter remains a key concern to less than half of county residents (47%).
  - Additionally, only about one-third of residents (32%) are very concerned about beach closures.
- A substantial majority of residents (85%) continue to think of themselves as knowledgeable about the *causes* of ocean, river and beach pollution and there has been a significant increase in the number of residents who consider themselves very knowledgeable (28%) about this topic.
- While awareness of water pollution messages has rebounded from a low in 2005 of 56% aware to 69% aware in 2007, specific recall of the campaign's focus on litter appears to be low and declining, with about one-third (33%) of County residents having seen or heard messages on this topic.
- Among those aware, television and newspapers continue to be the primary media sources where residents are encountering anti-littering messages.
  - This year, messages at the beach and freeway LED signs are creating a lasting impression on one in ten County residents who recall seeing the messages and significant increases in impressions from school, sidewalk stenciling, magazines, the Internet and buses have also occurred relative to two years ago.
- Although many do not recall the anti-littering campaign spontaneously, when prompted County residents do recall messages in television, billboard, newspapers and radio to a greater extent than in 2005 and 2006.
  - In addition, messages on buses and in movie theaters are reaching two in ten residents and the Internet, the County Fair and sports marketing efforts are each reaching 7%-11% of residents.
- Awareness of the name "Project Pollution Prevention" remains limited (21% aware), however, usage of the toll-free CLEAN-LA number has increased significantly since 2005 (9% vs. 2%).

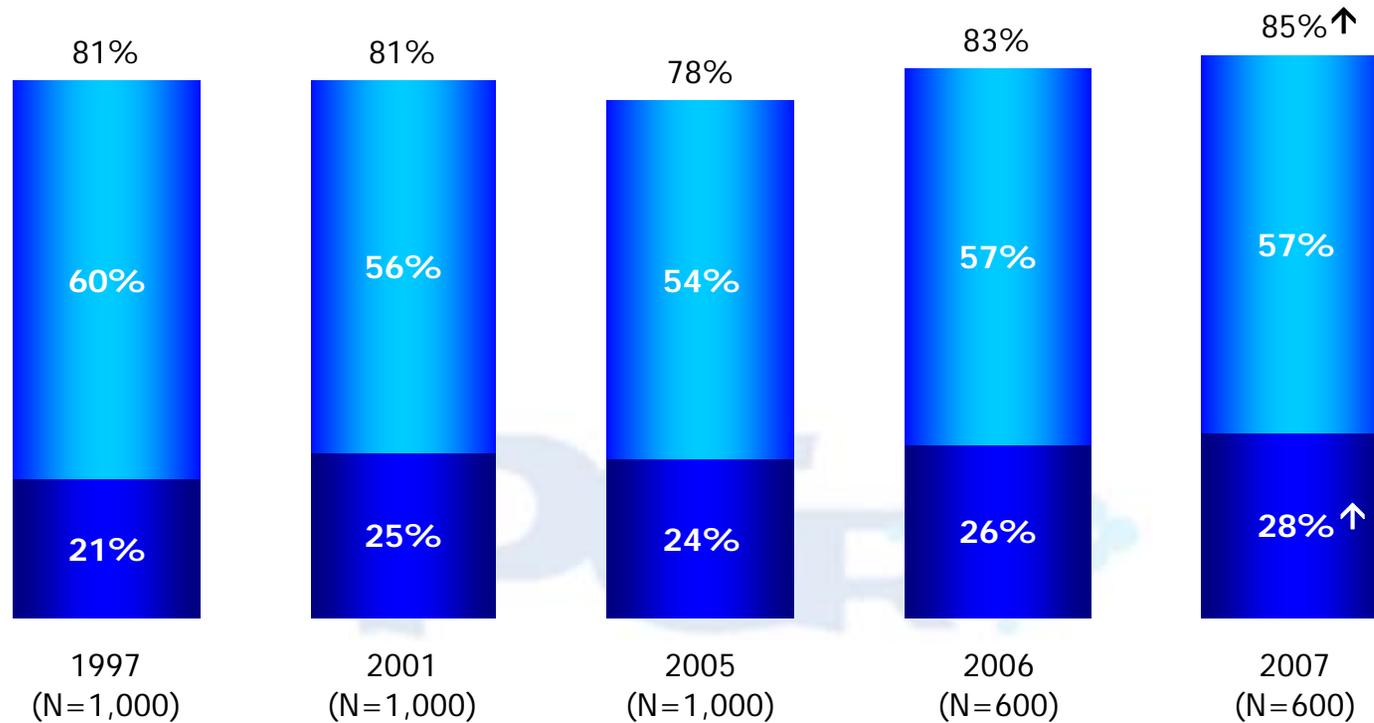
## Concern About Issues Facing Los Angeles County – Very Concerned –



Base: Total Los Angeles County Residents (see base sizes above)  
Question: Q.1: How concerned are you about each of the following issues?

### Storm Water Residential 2007 Report

## Knowledge of Causes of Pollution – Very/Somewhat Knowledgeable –



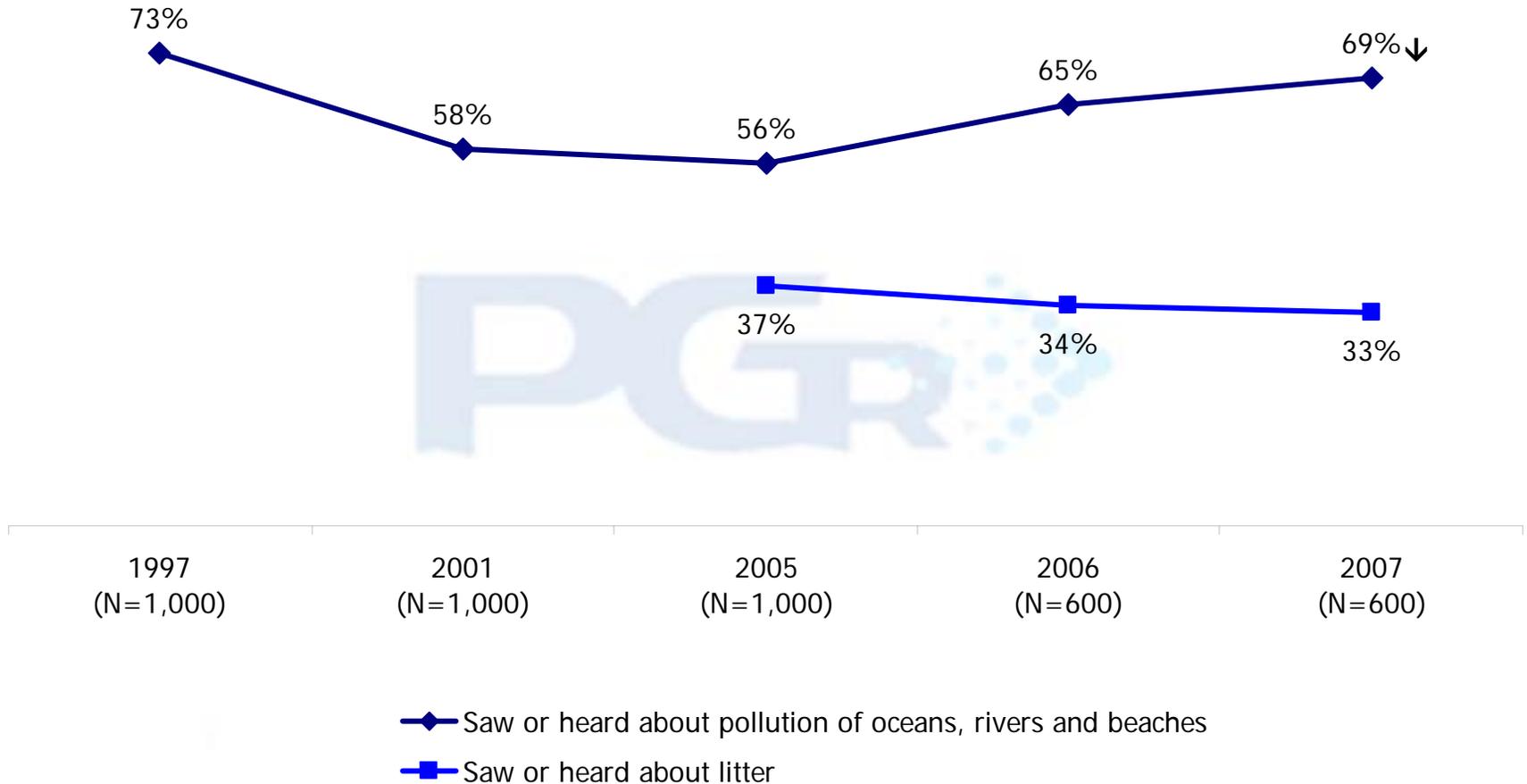
- Somewhat knowledgeable about causes of pollution of ocean, rivers and beaches
- Very knowledgeable about causes of pollution of ocean, rivers and beaches

Base: Total Los Angeles County Residents (see base sizes above)

Questions: *Q.4: Compared to most people, how knowledgeable are you about what causes pollution of the ocean, rivers and beaches?*

**Storm Water Residential 2007 Report**

## Recall Seeing/Hearing Information – Unaided –



Base: Total Los Angeles County Residents (see base sizes above)

Questions: Q.6: In the past few months, do you recall seeing or hearing anything about pollution of the oceans, rivers and beaches? Q.9: In the past few months, do you recall seeing or hearing anything about litter?

Storm Water Residential 2007 Report

## Sources of Litter Information Among Those Aware – Unaided –

	2005	2006	2007
<b>Sources of Litter Information</b>			
Television/Cable TV	48%	56%	51%
Newspaper	17%	23%	28%↑
Billboard	13%	16%	10%
Radio	12%	11%	12%
School	5%	5%	8%↑
Work	5%	1%	3%
Friends/family	4%	3%	3%
Sidewalk/storm drain stenciling	3%	7%	8%↑
Magazine	3%	8%	6%↑
At the beach	2%	8%	11%↑
Brochure/pamphlet	2%	5%	2%
Bus	1%	3%	5%↑
Organization/foundation/charity	1%	0%	2%
Internet	1%	2%	5%↑
Child	1%	1%	1%
Corporate-sponsored event	1%	0%	0%
Word-of-mouth	0%	0%	2%
In a store	0%	3%	1%
Movie theater	0%	2%	1%
Gas station	0%	1%	1%
Meeting	0%	0%	1%
Freeway sign/LED signs	0%	0%	12%↑
Baseball stadium	0%	0%	1%
County fair	0%	0%	0%
<b>Base: Los Angeles County Residents Aware of Litter Messages</b>	<b>(370)</b>	<b>(203)</b>	<b>(198)</b>

Question: Q.11: Where have you seen or heard something about litter?

## Sources of Litter Information Among All Residents – Aided Awareness –

	2005	2006	2007
<b>Sources of Litter Information</b>			
Television/cable TV	38%	40%	49%↑
Newspaper	24%	22%	31%↑
Radio	22%	21%	28%↑
Billboard	N/A	25%	32%↑
Movie theater	N/A	N/A	21%
Bus	N/A	N/A	20%
Internet	N/A	N/A	11%
County fair	N/A	N/A	9%
Baseball stadium	N/A	N/A	7%
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Question: Q.12: Do you recall seeing any advertising [INSERT ITEM FROM LIST BELOW] that talks about litter getting into the street or storm drains and causing problems?

## Awareness of Program and Phone Numbers

	2005	2006	2007
Heard of/Seen "Project Pollution Prevention"	N/A	19%	21%
Heard of/Seen "1-888-CLEAN-LA"	28%	28%	27%
Called 1-888-CLEAN-LA	2%	4%	9%↑
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>



Questions: Q.22: Have you heard or seen the name Project Pollution Prevention? Q.20: Have you seen or heard the phone number 1-888-CLEAN-LA? Q.21: Have you called the phone number 1-888-CLEAN-LA?

# DETAILED FINDINGS

- Attitudes and Awareness
- ➔ Willingness to Change Pollution-Causing Behavior
- Behaviors Related to Storm Water Pollution
- Advertising Message Recall/Impact
- Lifestyle Characteristics
- Demographic Characteristics



## Willingness to Change Pollution-Causing Behaviors

- Virtually all County residents are willing to change their water pollution-causing behaviors if they learned that their activities were contributing to pollution (94%) and their commitment has remained significantly stronger than it was before the start of the new millennium (65% definitely would change versus 53% in 1997).
- Residents are also very willing to change their littering behaviors if they learned that something they were doing was causing problems (96% probably/definitely would change).
  - Residents are much more willing to change their own littering and polluting behaviors than they are to clean up other people's litter at a beach or community event.
  - One notable exception, however, is evident in increased resistance to reducing or eliminating the use of pesticides.
  - Residents also do not want to have to worry about which fast food restaurant is environmentally responsible or pay extra on their water bill to improve water quality.
- While residents are supportive of positive efforts to clean up litter, they feel that "criminalizing" littering or publicly humiliating litterers is going too far.
  - Residents (83%) do, however, feel it is reasonable to require litterers to perform community service.

## Willingness To Change Water Pollution-Causing Behaviors

	1997	2001	2005	2006	2007
<b>Willingness to Change</b>					
Definitely/probably would change (Net)	91%	91%	94%	95%	94%↑
Definitely would change	53%	57%	67%	66%	65%↑
Probably would change	38%	34%	27%	29%	29%↓
Might/might not change	6%	5%	4%	4%	4%↓
Definitely/probably would not change (Net)	2%	3%	2%	1%	2%
Probably would not change	2%	2%	2%	1%	1%
Definitely would not change	1%	1%	0%	0%	1%
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Question: Q.5: If you learned that something you were doing could contribute to pollution of the ocean, rivers and beaches, how willing would you be to change your behavior? Would you say you...?

## Willingness To Change Littering Behaviors

	2006	2007
<b>Willingness to Change</b>		
Definitely/probably would change (Net)	98%	96%
Definitely would change	73%	70%
Probably would change	25%	26%
Might/might not change	2%	3%
Definitely/probably would not change (Net)	1%	1%
Probably would not change	1%	0%
Definitely would not change	0%	1%
<b>Base: Total Los Angeles County Residents</b>	<b>(600)</b>	<b>(600)</b>

Question: *Q.8: If you learned that something you were doing could contribute to problems associated with litter, how willing would you be to change your behavior? Would you say you...?*

## Willingness to Change Pollution-Causing Behaviors

	2005	2006	2007
<b>Would Change Behavior</b>			
Carry all of your trash/papers to a trash can for disposal	97% (985)	98% (578)	97% (582)
Pick up dogs droppings every time	95% (612)	95% (363)	94% (378)
Dispose of cigarette butts in an ashtray/trash can	95% (626)	94% (357)	93% (369)
Prevent water from running off your lawn	92% (873)	88% (500)	91% (512)
Sweep up leaves/dirt/debris from gutters in front of your house/apartment	91% (922)	88% (551)	89% (545)
Cut down on pesticides outdoors	90% (770)	85% (414)	85%↓ (428)
Cut down on fertilizer used	88% (729)	86% (403)	86% (414)
Stop using pesticides outdoors	82% (757)	77% (434)	77%↓ (423)
Stop using fertilizer	70% (747)	67% (415)	67% (433)
Participate in a community clean-up program	68% (971)	68% (585)	67% (580)
Patronize only those fast food restaurants with litter reduction programs	66% (893)	64% (527)	61%↓ (532)
Pay up to \$5 more per month on your water bill to improve water quality	64% (945)	65% (564)	58%↓ (570)
Participate in a beach clean-up	62% (972)	61% (575)	60% (577)
<b>Base: Los Angeles County Residents for Whom the Behavior Applies</b>			

Question: Q.17: Which of the following would you be willing to do if you learned that there was a good reason for doing so? Would you be willing to...?

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## Support for Public Programs – Strongly/Moderately Support –

	2006	2007
<b>Support for Potential Public Programs</b>		
Awareness programs to help people understand that litter and debris can flow directly to the local beaches where children swim	91%	90%
Court-ordered community service for littering	82%	83%
Publicly-sponsored programs to develop neighborhood pride	82%	80%
Having neighborhoods receive financial or other rewards for being the "Cleanest Neighborhood"	74%	71%
A fine of up to \$1,000 per littering occurrence	69%	67%
A program to publicize in newspapers or on a public Web site the name, license plate number, home or business address of individuals or businesses who litter	56%	54%
<b>Base: Total Los Angeles County Residents</b>	<b>(600)</b>	<b>(600)</b>

Question: *Q.19: How do you feel about each of the following potential actions designed to help change people's behaviors or habits that might contribute to pollution or littering? How do you feel about...?*

# DETAILED FINDINGS

Attitudes and Awareness  
Willingness to Change Pollution-Causing Behaviors  
➔ Behaviors Related to Storm Water Pollution  
Advertising Message Recall/Impact  
Lifestyle Characteristics  
Demographic Characteristics

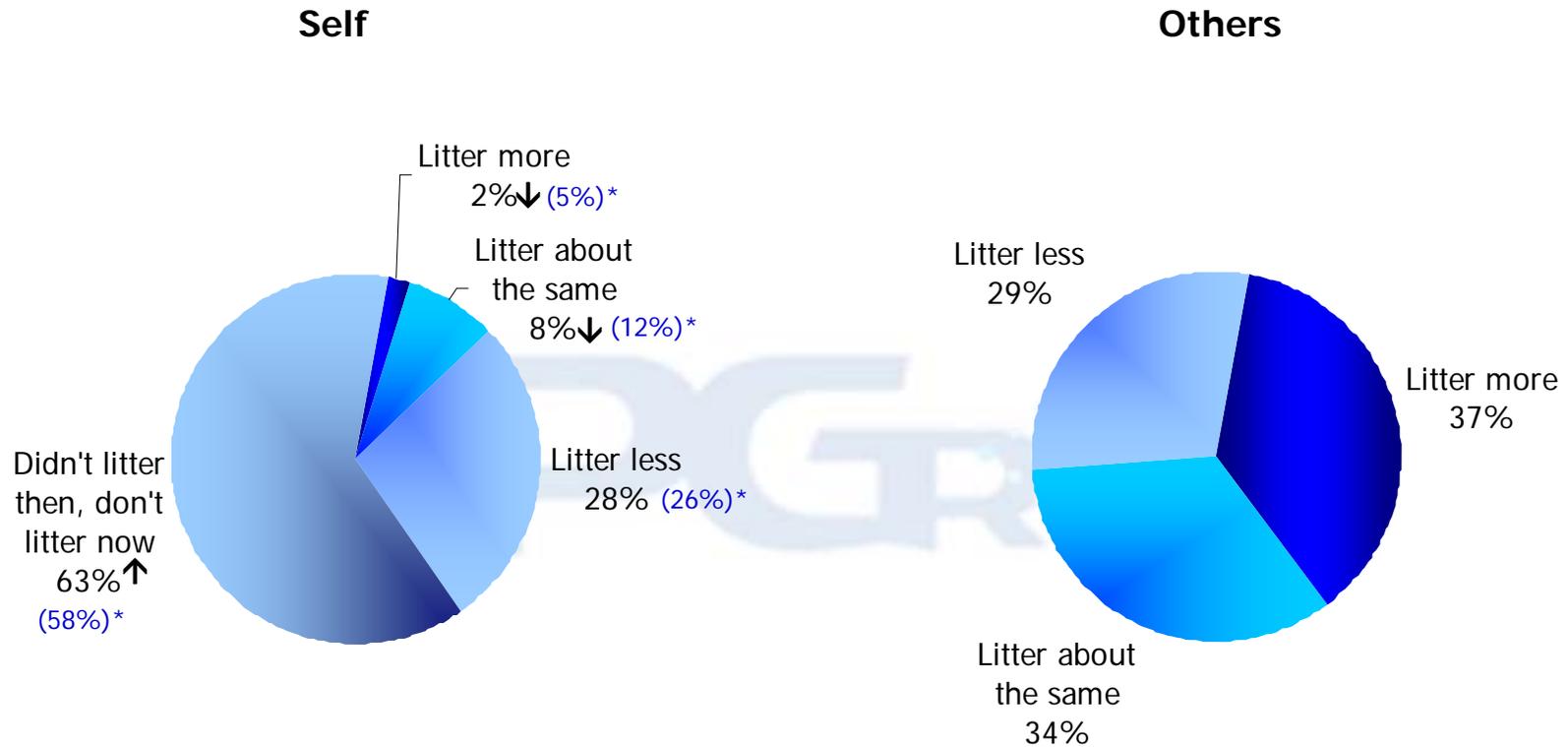


## Behaviors Related to Storm Water Pollution

- Los Angeles County residents are littering less than they did a decade ago, especially dropping fewer cigarette butts on the ground – a behavior that has dropped in half from ten years ago.
- Most residents consider themselves “non-litterers” (63%).
  - And, among those who have littered, most (28%) feel they have reduced their littering behavior in the past five years.
- Unfortunately, home and garden-related behaviors that can have a negative impact on runoff water are on the rise.
  - Letting water run into the street, washing paint brushes under outside spigots and using pesticides are all trending upward and, in combination with population growth, have added substantial pollutant volume to the runoff water.



# Changed Littering Behavior in the Past Five Years



\*2006 (N=600)

Base: Total Los Angeles County Residents (N=600)

Questions: Q.18a: Compared to five years ago, do you litter...? Q.18b: Compared to five years ago, do you see other people littering...?

## Prevalence of Polluting/Potentially Polluting Behaviors

	1997	2001	2005	2006	2007
<b>Individual Pollution-Causing Behaviors in Past Month</b>					
Drop a cigarette butt on the ground	16%	13%	10%	8%	8%↓
Drop litter on the ground or out a car window	13%	12%	8%	7%	8%↓
Allow paper or trash to blow into the street	10%	12%	8%	9%	9%
Throw something in the gutter or down a storm drain	5%	4%	3%	3%	3%
Empty the car ashtray into the street	3%	1%	1%	1%	2%
Park a vehicle that is leaking oil or fluids on a street	N/A	N/A	4%	4%	5%
Throw fast food wrappers in the street or gutters	N/A	N/A	3%	3%	4%
Dump used oil in the gutter or storm drain	N/A	N/A	N/A	1%	1%
<b>Household Pollution-Causing Behaviors in Past Month</b>					
Water the lawn or garden and let the water run into the street	13%	13%	12%	16%	17%↑
Hose leaves or dirt off a driveway or sidewalk into the street	12%	14%	12%	15%	14%
Wash off paint brushes under an outdoor faucet	6%	4%	6%	5%	9%↑
Spray the garden or lawn with pesticides	5%	7%	6%	7%	9%↑
Use too much manure or fertilizer	1%	1%	2%	2%	2%
Walk a dog without picking up the droppings	4%	3%	2%	3%	4%
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>
<b>2007 Average number/past month</b>					
Cigarette butts dropped on ground				32	29
Fast food wrappers thrown in the street or gutters				2	5
Dog droppings left				2	5

Questions: Q.3a: Which of these things have you personally done in the past month? Q.3b: In the past month, how many cigarette butts did you drop on the ground? Q.3c: In the past month, how many times have you left dog droppings when walking a dog? Q.3d: In the past month, how many times did you throw fast food wrappers in the street or gutters?

## Pollution Volumetrics – Occurrences Per Month

	1997	2001	2005	2006	2007
<b>Individual Pollution-Causing Behaviors</b>					
Drop a cigarette butt on the ground	1,053,746	914,824	728,287	594,520	591,433
Drop litter on the ground or out a car window	856,169	838,007	601,952	535,068	621,763
Allow paper or trash to blow into the street	658,591	803,090	616,815	683,698	659,676
Throw something in the gutter or down a storm drain	329,296	279,336	193,219	208,082	204,727
Throw fast food wrappers in the street or gutters	N/A	N/A	185,788	237,808	265,387
Empty a car ashtray into the street	197,577	41,900	81,747	74,315	136,485
Park a vehicle that is leaking oil or fluids on the street	N/A	N/A	326,986	274,966	356,376
Dumped used oil in the gutter or storm drain	N/A	N/A	N/A	52,021	53,077
<b>Base: LA County Population 16+ *</b>					
<b>Household Pollution-Causing Behaviors</b>					
Water the lawn or garden and let the water run into the street	368,100	391,898	385,451	501,399	545,590
Hose leaves or dirt off a driveway or sidewalk into the street	339,785	419,453	360,381	454,393	444,084
Wash off paint brushes under an outdoor faucet	169,893	134,715	197,426	166,088	294,999
Spray the garden or lawn with pesticide	141,577	211,257	188,025	209,961	294,999
Walk a dog without picking up the droppings	113,262	82,666	62,675	103,414	117,365
Use too much manure or fertilizer	42,473	36,740	53,274	47,006	63,441
<b>Base: LA County Households**</b>					

Note: All estimates assume one occurrence per month.

\*1997 based on 6,585,912 individuals, 2001 on 6,983,391 individuals, 2005 and 2006 on 7,431,500 individuals and 2007 on 7,582,478 individuals.

\*\*1997 based on 2,831,542 households, 2001 on 3,061,702 households, 2005 and 2006 on 3,133,744 households and 2007 on 3,172,032 households.

# DETAILED FINDINGS

Attitudes and Awareness  
Willingness to Change Pollution-Causing Behaviors  
Behaviors Related to Storm Water Pollution  
➔ Advertising Message Recall/Impact  
Lifestyle Characteristics  
Demographic Characteristics



## Advertising Message Recall/Impact

- Among those who recall hearing something about pollution of the ocean, rivers and beaches, there has been a shift away from recalling messages about how things that enter the street/storm drains pollute neighborhoods and waterways and toward more generalized messages about the ocean being polluted by various substances, including oil and sewage spills.
- Messages related to litter are associated with their effects on neighborhoods and beaches, however, the topic of litter also evokes a broad range of associations with other environmental issues, from harm being caused to wildlife to greenhouse gases.
- As is consistent with their increasing concern about pollution-related issues, more residents who recall hearing pollution-related messages are finding them meaningful (61%), thought-provoking (57%), informative (46%) and change-inspiring (39%) than did in 2001.
  - This trend has been flat, however, since 2005.
- While residents are more likely this year to recall specific items that are being thrown on the streets such as bottles (14%), cans (12%), recyclable materials (9%) and food wrappers (8%), there is significantly less recall of home improvement-related items such as pesticides and paint, which may be associated with the increase in polluting behaviors related to these items.
  - Additionally, one-quarter (24%) of LA County residents who are aware of litter messages now cannot recall any specific items mentioned in the advertising that are getting into the streets or storm drains and causing problems (up from 15% in 2001) and an even greater and increasing number (29%) cannot recall any *consequences* of litter getting into streets or storm drains.
- Qualitatively, Los Angeles residents who recall the ads appreciate both the importance of the anti-littering message and the humor of some of the campaign's creative executions.
  - Most, however, feel the ads validate their own non-littering behavior and see the ads' call to action as aimed at someone other than themselves, such as litterers, irresponsible smokers and careless dog owners.

## Water Pollution Message Recall – Unaided –

	2005	2006	2007
<b>Specific Information Recalled</b>			
Polluting the storm drain pollutes the water/ocean (Net)	24%	17%	19%
Storm drains go directly to the ocean/whatever goes in drains goes into the ocean	15%	10%	8%
Storm drain/rainwater contaminates beaches/goes to ocean	11%	8%	12%
Pollution in Neighborhoods (Net)	22%	27%	24%
Making neighborhoods unhealthy/unsafe (Subnet)	16%	25%	22%
Pollution is a big problem/issue	6%	10%	6%
Organized clean up	3%	2%	2%
Big companies pollute/dump waste	2%	2%	2%
Proper disposal of animal waste	1%	0%	0%
Making neighborhoods look ugly/dirty (Subnet)	7%	2%	2%
Wouldn't trash your home	2%	1%	0%
Ocean/Beach Pollution (Net)	19%	38%	45%
Unsafe/contaminated beaches	7%	11%	11%
People pollute/litter our beaches	5%	10%	6%
Unhealthy to swim/harmful to people/animals	5%	1%	2%
Beach closures	4%	13%	14%
Ocean/bay is polluted	4%	8%	15%
Oil spills in the ocean	2%	5%	5%
Effects of global warming	0%	0%	2%
Trash/oil clogs storm drains	12%	6%	3%
Don't put anything in storm drains	9%	2%	3%
Fish/wildlife dying	4%	8%	7%
Sewage leaks	0%	7%	7%
Don't know	19%	4%	5%
<b>Base: Total Los Angeles County Residents Who Recall Seeing, Hearing or Reading About Pollution of the Ocean, Rivers, Beaches or About Litter or County's Storm Drain System (2005)</b>	<b>(678)</b>	<b>(390)</b>	<b>(410)</b>

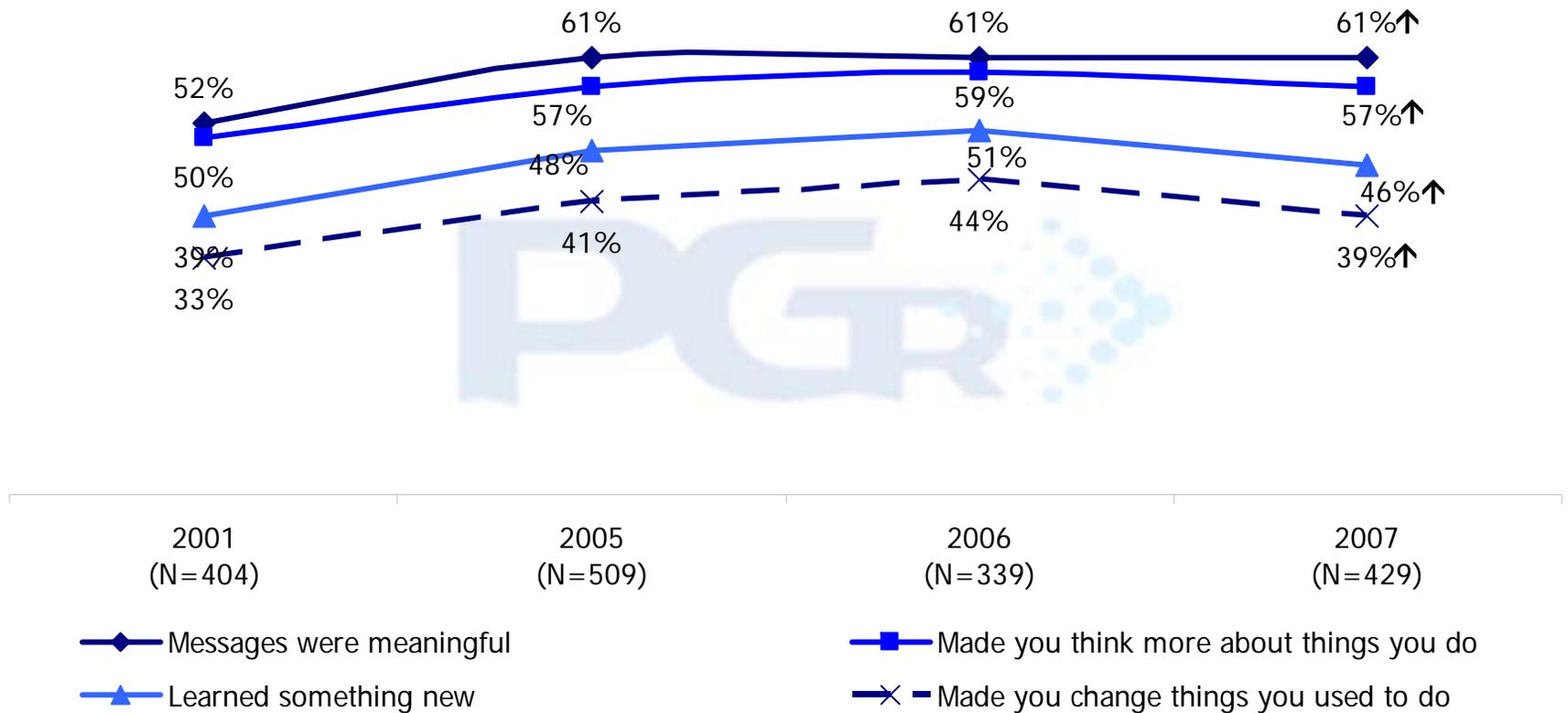
Questions: Q.7/Q10: What information have you seen, heard or read about pollution of the ocean, rivers and beaches?

## Litter Message Recall – Unaided –

	2006	2007
<b>Specific Information Recalled</b>		
Litter in community (Net)	42%	49%↑
Don't litter/trash LA	18%	20%
Litter in street/neighborhood	17%	22%↑
Litter thrown from cars	6%	4%
Litter clogging storm drains	4%	7%↑
Litter on the beach (Net)	11%	16%↑
Litter on beaches/in ocean	5%	12%↑
Organized beach clean-ups	4%	5%
Beach closures	2%	1%
No smoking on beaches	1%	1%
Environment (Net)	4%	14%↑
Environmental problems/greenhouse effect/killing wildlife	4%	10%↑
Recycle	0%	4%↑
Advertising (Net)	5%	3%
People throwing trash in house/living room	5%	3%
<b>Base: Recall Seeing, Hearing or Reading About Litter</b>	<b>(203)</b>	<b>(198)</b>

Question: Q.10: What information have you seen, heard or read about litter?

## Persuasion – Agree Strongly –



Base: Residents Who Recall Advertising About Things Getting into Street/Storm Drains and Causing Problems (see base sizes above)  
 Question: Q.16: How much do you agree with this statement?

## Recall of Specific Types of Litter/Pollution – Unaided –

	2001	2005	2006	2007
<b>Pollution Agents Mentioned in Commercials As Sources of Litter/Pollution in Neighborhoods</b>				
Motor oil	46%	36%	24%	22%↓
Litter/trash	37%	36%	33%	29%↓
Dog waste/droppings	15%	9%	5%	5%↓
Cigarette butts	14%	17%	16%	15%
Paint	13%	5%	4%	2%↓
Chemicals	12%	11%	10%	8%↓
Pesticides	10%	4%	3%	4%↓
Bottles	8%	9%	13%	14%↑
Cans	8%	8%	13%	12%↑
Hazardous waste	7%	6%	8%	4%↓
Harmful liquids	6%	6%	5%	3%↓
Fertilizer	6%	2%	2%	2%↓
Recyclable materials	5%	8%	3%	9%↑
Cups/coffee cups	5%	6%	5%	7%
Six-pack rings/plastics	5%	4%	4%	6%
Leaves	5%	4%	4%	4%
Food wrappers	3%	11%	7%	8%↑
Poison	1%	2%	2%	1%
Gum wrappers	0%	0%	2%	2%
Grass/lawn clippings	0%	0%	0%	1%
Diapers	0%	0%	0%	1%
Furniture/lawn chair/mattress	0%	0%	0%	0%
Jam jar	0%	0%	0%	0%
Mustard bottles	0%	0%	0%	0%
Don't know/don't remember	15%	15%	25%	24%↑
<b>Base: Residents Who Recall Advertising About Things Getting into Streets/Storm Drains and Causing Problems</b>	<b>(404)</b>	<b>(509)</b>	<b>(339)</b>	<b>(429)</b>

Question: Q.13: What things do you recall the commercials or ads mentioning that are getting into the street or storm drains and causing problems?

## Recall of Consequences of Storm Drain Pollution – Unaided –

	2001	2005	2006	2007
<b>Consequences of Litter/Pollution</b>				
Polluting the ocean	45%	39%	34%	33%↓
Killing/threatening marine life	29%	21%	13%	14%↓
Poisoning beaches	13%	15%	11%	9%↓
Clogging gutters/storm drains	11%	13%	16%	13%
Health problems	11%	11%	12%	4%↓
Closing beaches	6%	10%	12%	14%↑
Spoiling/poisoning/contaminating neighborhoods	6%	5%	4%	5%
Flooding	5%	8%	7%	3%
Spreading disease	3%	4%	3%	2%
Kids swim in pollution	2%	1%	2%	3%
Making neighborhoods ugly/dirty	1%	4%	2%	2%
Foul odors/smells	1%	1%	1%	2%
Altering ecosystem	0%	0%	1%	5%↑
Illegal/breaking the law	0%	0%	1%	0%
Dirtying/trashing California	0%	7%	8%	5%
Don't know/don't remember	23%	19%	23%	29%↑
<b>Base: Residents Who Recall Advertising About Things Getting into Streets/Storm Drains and Causing Problems</b>	<b>(404)</b>	<b>(509)</b>	<b>(339)</b>	<b>(429)</b>

Question: *Q.14: What kinds of problems did the ads say are being caused by the things that are getting into the street or storm drains?*

## Recall of Specific Advertising Messages – Aided –

	2005	2006	2007
<b>Recall of Specific Advertising Messages</b>			
Litter or pollution in the street ends up in the ocean/affects the beach	70%	78%	66%↓
Throwing trash in California's streets is like throwing trash in your own home	69%	67%	59%↓
Pick up after your pet	64%	58%	60%
Dispose of cigarettes properly	55%	48%	44%↓
Dispose of fast food wrappers properly	53%	49%	37%↓
Keep our neighborhoods and beaches clean	N/A	60%	70%↑
Throw trash in cans, not in the street	N/A	45%	50%
Two guys going into houses and throwing trash	N/A	44%	30%↓
Billboards showing trash in the street or gutter	N/A	26%	25%
People using street trash to provide directions	N/A	15%	11%↓
<b>Base: Residents Who Recall Advertising About Things Getting into Streets/Storm Drains and Causing Problems</b>	<b>(509)</b>	<b>(339)</b>	<b>(429)</b>

Question: Q.15: Do you recall the ads mentioning any of the following messages?

# DETAILED FINDINGS

Attitudes and Awareness  
Willingness to Change Pollution-Causing Behaviors  
Behaviors Related to Storm Water Pollution  
Advertising Message Recall/Impact  
➔ Lifestyle Characteristics  
Demographic Characteristics



## Lifestyle Characteristics

- In the past six years, access to the Internet has increased significantly and more Los Angeles area residents now have access at home (73%) and at work (49%), up from 55% and 39% respectively since 2001.
  - This suggests that this medium continues to offer increasing opportunity for educating residents.
- In the past decade, the number of flower gardens among Los Angeles area residents has increased significantly, which may be related to increasing use of pesticides outdoors.
  - While oil and trash are clearly thought to be agents that are harmful to the environment, chemicals made to be used outdoors (e.g., fertilizer, pesticides) are not.
- Fewer Los Angelinos are changing fluids in their vehicles themselves, which should be decreasing improperly disposed oil and coolant as those tasks are increasingly being handled by regulated garages and repair shops.
- Although twice as many households now have water sports-related items (i.e., surfboards, boogie boards, water skis), the impact of beach closures is unchanged since 2001.

## Internet Access

	2001	2005	2006	2007
Have Internet Access (Net)	75%	77%	80%	82%↑
At home	55%	60%	66%	73%↑
At work	39%	41%	49%	49%↑
At school	26%	22%	26%	23%
Somewhere else	31%	31%	33%	35%
Do not have Internet access	25%	23%	20%	18%↓
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Question: Q.25: Do you have access to the Internet?

# Attitudes About Litter

	2007
<b><u>Strongly Agree</u></b>	
Everyone who changes the oil in a vehicle should take the used oil to a recycling center	93%
It is always wrong to litter	91%
It is wrong for dog owners to walk their dogs and not pick up after them	91%
Throwing or dumping anything into storm drains is always harmful to the waterways	89%
Crushing a cigarette out on the street or sidewalk and leaving the butt there is littering	88%
Even a small amount of litter is harmful to the environment	76%
Everyone should sweep up leaves and debris from the street and sidewalk in front of their property	73%
Not repairing a car that is leaking any type of fluid makes the owner of that vehicle a polluter	71%
People should not use chemicals outdoors, including fertilizer, pesticides and detergent	44%
<b>Base: Total Los Angeles County Residents</b>	<b>(600)</b>

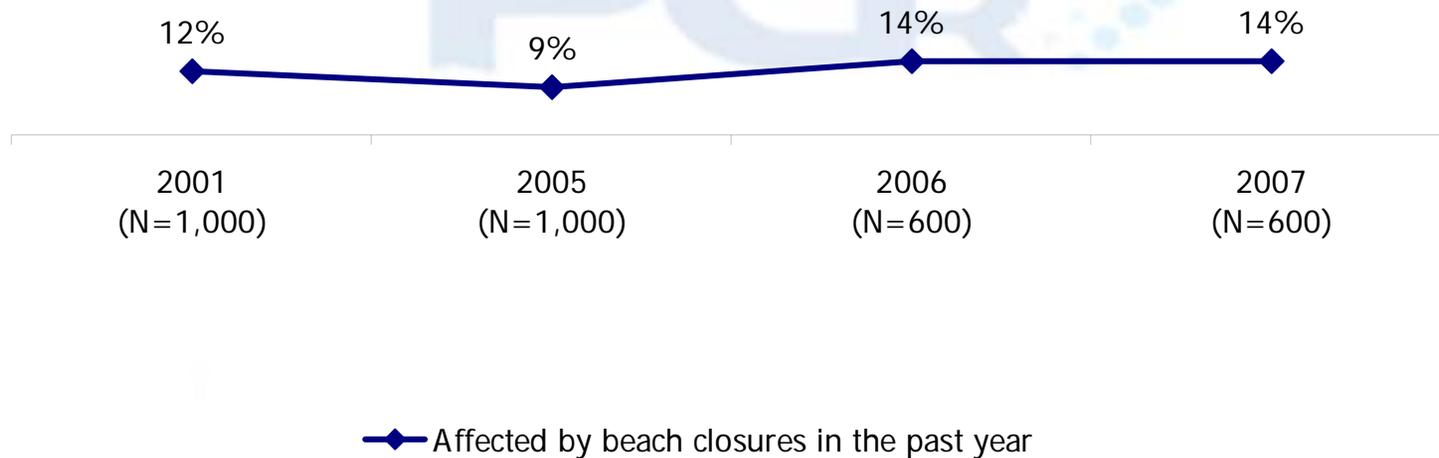
Question: Q.24: How much do you agree or disagree with each of the following statements?

## Incidence of Potential Pollutant Ownership

	1997	2001	2005	2006	2007
<b>Items in Household</b>					
Car, truck or motorcycle	92%	89%	90%	91%	91%
Flower garden	49%	51%	51%	54%	55%↑
Dog	34%	30%	31%	33%	36%
Fishing equipment	28%	26%	20%	23%	24%↓
Vegetable garden	20%	19%	17%	18%	20%
Water skis or surfboard/boogieboard	9%	9%	13%	14%	18%↑
Boat or personal watercraft	7%	6%	5%	7%	6%
Power tools	N/A	57%	53%	63%	60%
Lawn	N/A	56%	51%	60%	60%
Automatic watering or sprinkler system	N/A	N/A	41%	43%	45%
Swimming pool, spa or above ground pool	N/A	N/A	N/A	23%	21%
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>
<b>Maintenance and Repairs Done Personally</b>					
Wash a vehicle	73%	73%	63%	60%	58%↓
Change the oil	37%	35%	24%	25%	24%↓
Drain the radiator	23%	20%	13%	5%	7%↓
Change or replace the oil filter	N/A	N/A	N/A	16%	17%
None	N/A	26%	34%	35%	38%↑
<b>Base: Total Los Angeles County Residents Who Own a Car, Truck or Motorcycle</b>	<b>(919)</b>	<b>(894)</b>	<b>(902)</b>	<b>(546)</b>	<b>(548)</b>

Questions: Q.2a: Which of the following do you, or does someone in your household, have? Q.2b: Which of the following maintenance and repairs do you personally do on the cars, trucks and motorcycles in your household as opposed to having someone else do it for you?

## Impact of Beach Closures



Question: Q.23: *Would you say that in the past year you have or have not been personally impacted by a beach closure?*

# DETAILED FINDINGS

Overview of Social Change Process  
Attitudes and Awareness  
Attitudes Toward Pollution Clean-up  
Behaviors Related to Water Pollution  
Advertising Message Recall/Impact  
Lifestyle Characteristics  
➔ Demographic Characteristics



## Demographic Characteristics

- Because of Baby Boomers, the Los Angeles County adult population is skewing older.
  - Consequently, significantly more residents (one in five) are now retired.
  - Additionally, 85% of residents have lived in the LA area for more than 15 years.
- There are more married residents, but there are also more single person households now than 10 years ago.
- Median household income has risen significantly, in part because of decreased unemployment and a significant increase in the number of residents with a college degree.



## Demographic Characteristics

	1997	2001	2005	2006	2007
<b>Gender</b>					
Male	49%	52%	46%	48%	48%
Female	51%	48%	54%	52%	52%
<b>Age</b>					
16-18	5%	8%	6%	6%	7%
19-24	14%	14%	9%	7%	7%↓
25-34	22%	21%	15%	15%	14%↓
35-44	21%	22%	22%	22%	16%↓
45-54	14%	14%	17%	17%	21%↑
55-64	11%	9%	15%	17%	15%↑
65+	13%	12%	16%	17%	20%↑
Median (years)	38.8	38.4	44.3	45.7	47.9↑
<b>Education</b>					
Grade school or less	7%	5%	9%	5%	5%
Some high school	9%	15%	12%	13%	10%
High school graduate	25%	24%	20%	21%	24%
Trade or technical school	3%	2%	3%	3%	2%
Some college	28%	23%	23%	21%	22%↓
College graduate	19%	19%	22%	24%	24%↑
Some post graduate work	3%	3%	3%	4%	4%
Post graduate degree	7%	8%	8%	10%	9%
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Questions: Q.A: What is your gender? Q.B: Which of the following categories includes your age? Q.31: What is the last grade of formal education you completed?

## Demographic Characteristics

	1997	2001	2005	2006	2007
<b>Marital Status</b>					
Married	46%	39%	51%	50%	52%↑
Single	34%	41%	32%	33%	31%
Divorced	10%	10%	8%	8%	7%↓
Widowed	7%	6%	6%	6%	7%
Separated	3%	3%	3%	3%	3%
<b>Number of Children Under 18 in Household</b>					
None	53%	56%	43%	49%	50%
One	17%	17%	22%	20%	18%
Two	19%	16%	21%	19%	20%↑
Three	6%	8%	8%	9%	10%↑
Four or more	4%	4%	6%	3%	3%
<b>Number of Household Members</b>					
One	15%	18%	16%	18%	19%↑
Two	27%	26%	23%	28%	29%
Three	18%	18%	20%	18%	16%
Four	20%	18%	20%	18%	21%
Five	11%	11%	11%	12%	8%↓
Six or more	8%	9%	10%	6%	7%
Mean	3.0	3.0	3.2	3.0	2.9
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Questions: Q.27: Are you...? Q.29: And how many of those people are under the age of 18? Q.28: Including yourself, how many people are currently living in your household?

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## Demographic Characteristics

	1997	2001	2005	2006	2007
<b>Residence Type</b>					
Private home/house	64%	57%	61%	64%	65%
Apartment	26%	33%	31%	24%	20%↓
Condo/townhouse	8%	7%	4%	8%	10%
Other	2%	3%	4%	4%	5%↑
<b>Annual Household Income*</b>					
Less than \$40,000	50%	52%	50%	42%	38%↓
\$40,000 to under \$60,000	24%	21%	16%	17%	17%↓
\$60,000 to under \$80,000	14%	13%	11%	12%	12%
\$80,000 or more	12%	14%	23%	29%	33%↑
Median (\$'000)	\$38.6	\$38.7	\$39.8	\$49.7	\$59.4↑
<b>Employment Status</b>					
Employed full-time	50%	51%	51%	49%	52%
Employed part-time	15%	15%	14%	17%	13%
Retired	15%	13%	17%	18%	20%↑
Not employed	19%	21%	18%	16%	10%↓
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

\*Base: Those 19 years of age or older (N=767/801/743/450/419)

Questions: Q.26: Is your residence a...? Q.32: Is your total annual household income before taxes...?

Q.30: Are you currently...?

## Demographic Characteristics

	1997	2001	2005	2006	2007
<b>Ethnicity</b>					
White/Anglo/Caucasian	45%	36%	38%	45%	46%
Hispanic/Latino/Spanish origin	30%	37%	44%	34%	34%↑
Black/African American	10%	13%	9%	10%	10%
Asian/Oriental/Pacific Islander	11%	9%	5%	8%	7%↓
Native American/Indian	1%	1%	1%	0%	1%
Other/mixed race	2%	1%	3%	3%	2%
Refused	2%	3%	0%	0%	0%
<b>Length of Time Lived in Los Angeles County</b>					
6 months to less than 5 years	6%	10%	7%	8%	3%↓
5 years to less than 15 years	21%	19%	18%	16%	12%↓
15 years or longer	73%	71%	75%	75%	85%↑
<b>Base: Total Los Angeles County Residents</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(1,000)</b>	<b>(600)</b>	<b>(600)</b>

Questions: Q.C: How would you describe your race or ethnicity? Q.F: How long have you lived in Los Angeles County?