

Stormwater Pollution Poll Public Attitude Survey

Presentation For:

*City of Toronto
Works & Emergency Services*

March 24, 2000



Research Objectives

The overall objective is to assess public knowledge of key water quality issues (including, but not limited to, stormwater pollution, lake water quality). The research results will serve two purposes:

to provide guidance for a public awareness campaign to be developed in the Spring of 2000; and

to assist the City in understanding broader public policy issues around these topics.

Key areas of investigation include:

How concerned are residents about stormwater pollution?

Are residents aware of pollution sources?

What do residents know about the sewer system?

Who should take responsibility?

Is there public support for solutions initiated by the City of Toronto?

Methodology

Sample Size

A total of 1,000 telephone interviews were conducted among residents of the City of Toronto.

Sample Distribution

The sample was weighted to reflect the distribution of the population within community. The distribution is as follows (weighted):

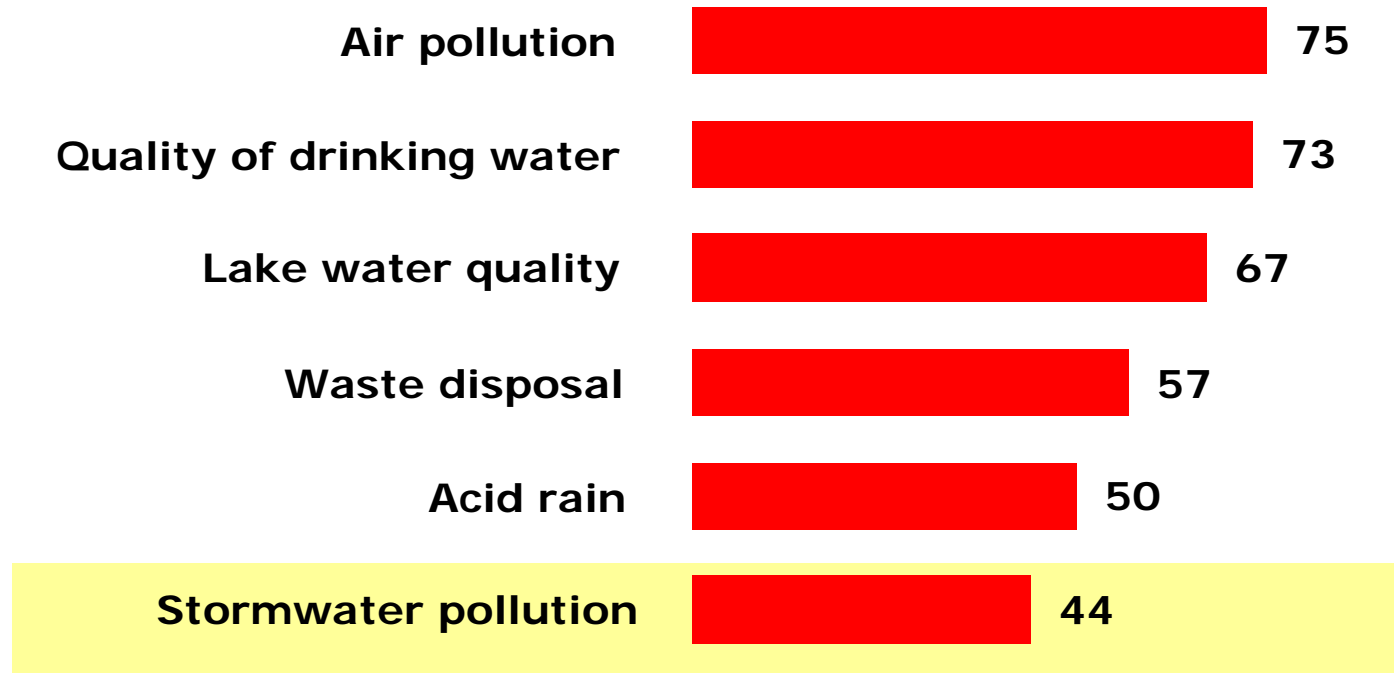
■ Toronto	332
■ Scarborough	230
■ North York	198
■ Etobicoke	134
■ York	61
■ East York	45

Field Dates:

February 25th to March 10, 2000.

Level Of Concern About Specific Environmental Issues

Percent Saying "Very Concerned"

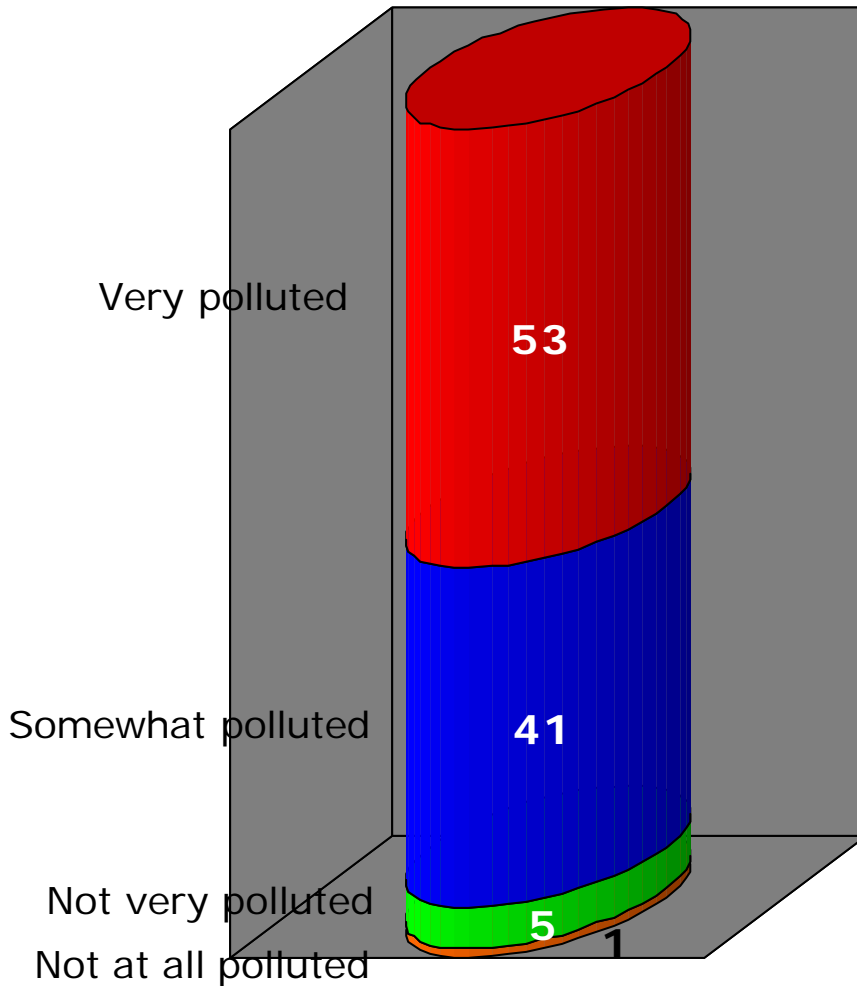


Stormwater pollution is the only environmental issue among those asked about for which there is a statistically significant difference between home owners and renters. Owners are more likely concerned than renters (85% vs. 78%) respectively.

Perception Of Change In Specific Environmental Issues

	Changing for the better %	Changing for the worse %	Net difference %
Air pollution	17	54	-37
Quality of drinking water	17	33	-16
Lake water quality	18	43	-25
Waste disposal	26	27	-1
Acid rain	15	32	-17
Stormwater pollution	12	23	-11

Overall Perception Of Lake Pollution Levels



^{3/4} By Subgroups ^{3/4} Percent Saying "Very Polluted" (1000) %

Age

Under 45	58
45+	45

Sex

Male	48
Female	58

Top Indicators Of Lake Ontario Pollution

Top 10 Indicators of Lake Ontario Pollution	Perceive Lake Polluted (1994) %
Media reports (TV, radio, newspaper, etc.)	22
Beach postings/ beach closing	20
Appearance of water	19
Unable to swim	16
Appearance of shoreline	14
Odor of water, smelly water/ foul smell	12
Fish sightings/ dead fish	12
Lake is used for waste disposal	10
Can see garbage in the water/ things floating	5
Chemical spills/ chemical waste	5
Tap water is smelly/don't taste good	4
Read/heard something (unspecified)	4
Friends/colleagues/family members told me	4
Water quality	3
Acid rain falling in lake	3

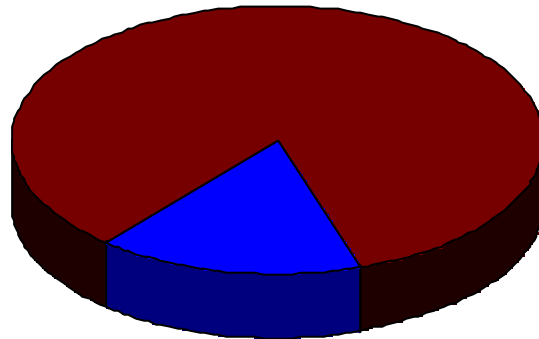
Perceived Main Causes Of Water Pollution In Lake Ontario

	Total Toronto (1000) %
Pollution from business/manufacturing plants/industries	56
Garbage	27
Sewage	19
Toxic waste	12
Acid rain	9
Litter/dumping	8
Boats in water	8
Pollution (unspecific)	7
Stormwater pollution	7
Air pollution	6
Wastewater	4
Stream/land run off	2
Salt on streets in winter	2
Neglect/poor enforcement of environmental laws	2

Older residents, higher income households, those with more formal education and owners of dwellings are more likely to cite stormwater pollution as a cause relative to others.

Perceived Main Causes Of Beach Closings During The Summer Months

Aware of
Beach Closings
84%



Unaware
16%

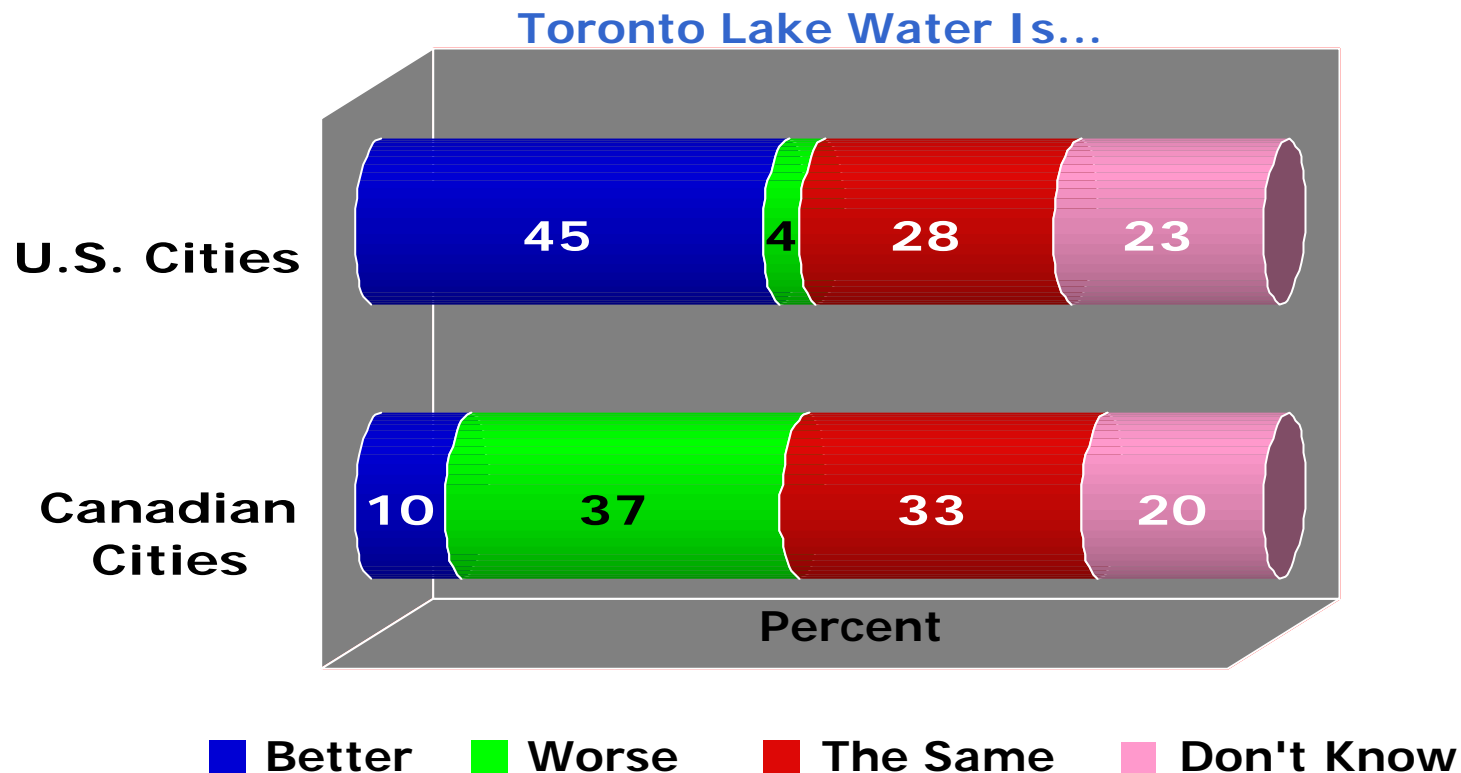


Among Those Aware Of
Beaching Closings

	(845) %
Polluted water	53
Bacteria levels	36
Garbage	13
Toxic contaminants	10
Unsafe/dirty water	4
Animal wastes	3
Combined sewers	1

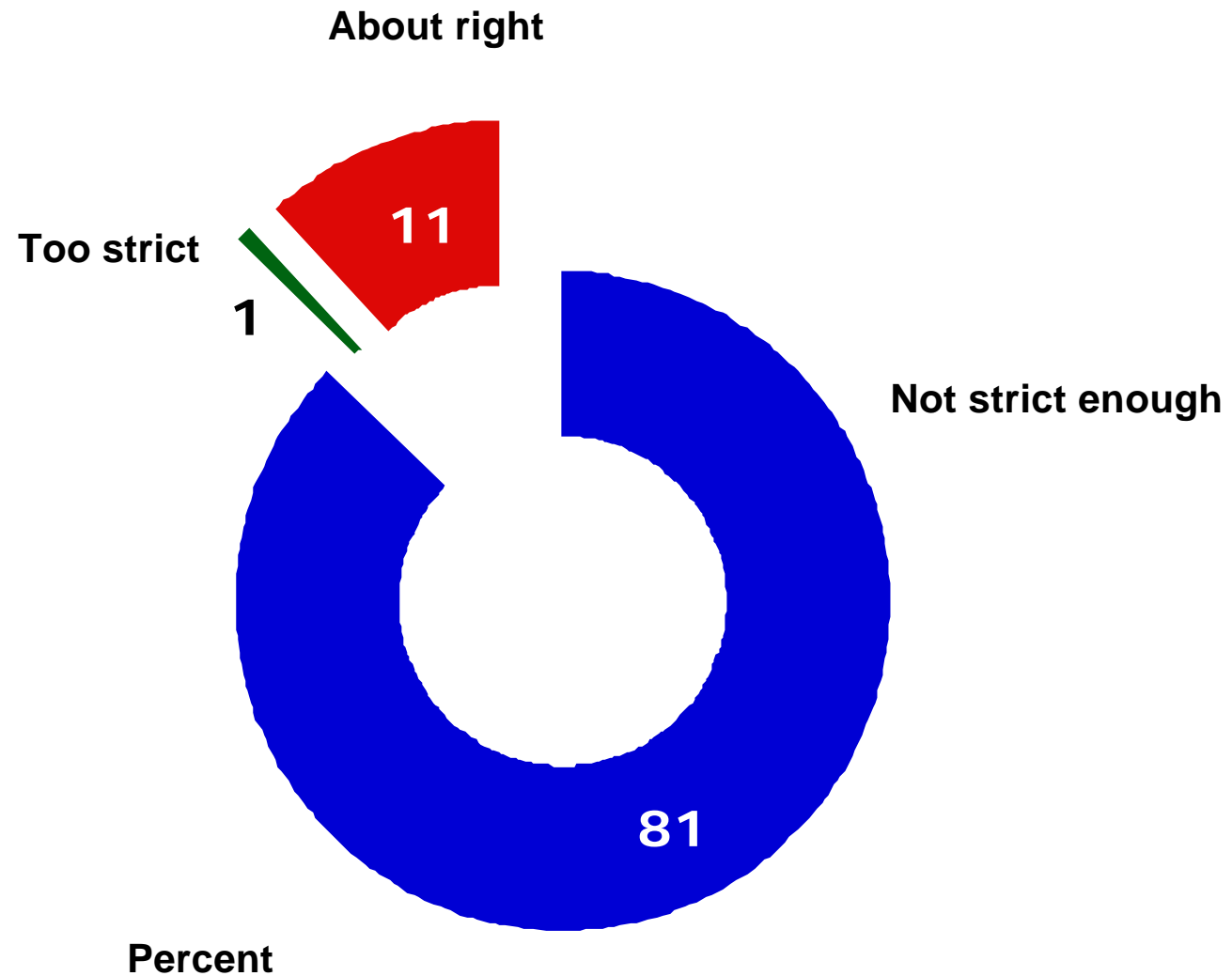
Older residents, higher income households, those with more formal education and owners of dwellings are more likely to be aware of beach closings during the summer months relative to others.

Comparative Evaluations Of Toronto Lake Water Quality



Toronto residents are more likely to perceive the lake water quality around the Toronto area to be better than other major U.S. cities but, worse than other major Canadian cities.

Perception Of Current Water Pollution Legislation In Ontario



Knowledge Of Toronto Water System

	Source of Toronto tap water %	Sewage destination %	Stormwater destination %
Lake Ontario	60 ✓	28	37 ✓
Lakes/ Rivers	25	16	27
Waste treatment plant (then Lake Ontario)	—	40 ✓	19

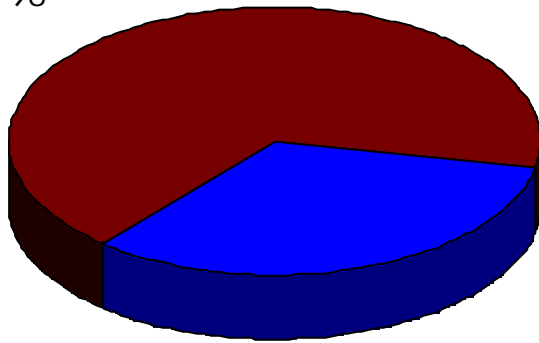
Older residents, males, those with more formal education, those with higher household income, and owners of dwellings are more likely to have correctly stated that Lake Ontario is the source of Toronto's tap water.

Males and owners of dwellings are more likely to have correctly stated that a waste treatment plant (then Lake Ontario) is the destination of sewage.

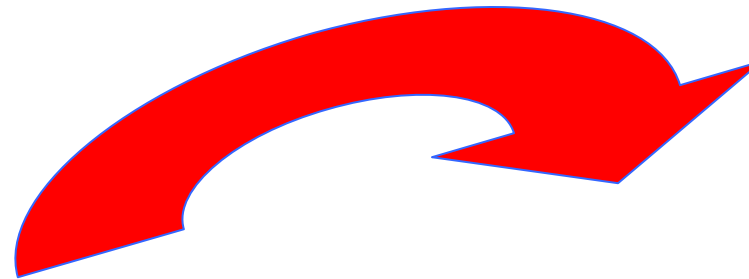
Males and owners of dwellings are more likely to have correctly stated that Lake Ontario is the destination of stormwater.

Top Methods Of Motor Oil Disposal

Own/Lease
Vehicle
67%



Do not own
33%



Among Vehicle Owners

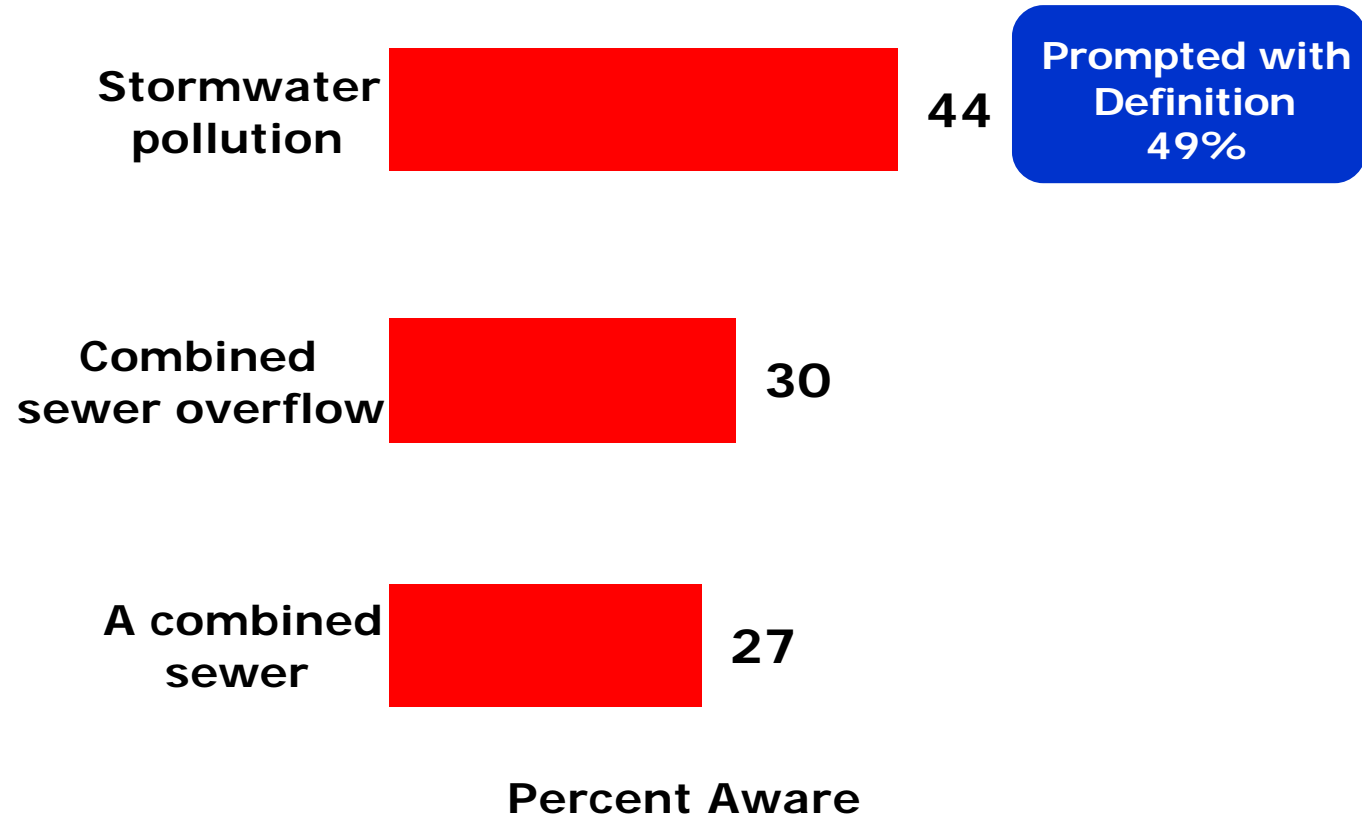
	(671) %
Do not personally dispose/ mechanic does for me	80
Recycle at collection centres	7
Throw in garbage	3

Top Methods Of Disposal Of Household Hazardous Wastes

	Total Toronto (1000) %
Recycle	38
Don't use these products/hazardous wastes/live in apartment	24
Throw In Garbage	19
Pour down the sink	3
Toxic Taxi/City picks it up	3

In this context, the answer "Recycle" may be interpreted as either disposing at collection centres or recycling the empty cans/bottles in the recycling bin.

Aided Awareness Of Sewer Elements



Older residents, males and owners of dwellings are more likely to be aware of all above listed sewer elements relative to others.

Forty-four percent of Toronto residents are aware of stormwater pollution. Once prompted with the definition awareness increases to 49%.

Detailed Knowledge Of Stormwater Pollution

	Total Toronto (1000) %
Sewer overflow	18
Waste water collected in storm sewers	10
Water flowing off driveways, sidewalks, etc.	9
Acid rain	7
Waste water	4
Pesticides/ toxins in water	3
Polluted water	3
Water from street curbs	2
Unaware of stormwater pollution	56

Younger residents, females, people with less formal education, lower income households and renters are less likely aware of stormwater pollution. Conversely, older residents, men, higher income households, and owners of dwellings are more likely to cite sewer overflow and waste water among the causes of stormwater pollution.

Detailed Knowledge Of A Combined Sewer

	Total Toronto (1000) %
Combination of stormwater and sanitary systems/pipes	16 ✓
Carries waste and sewage	3
Sometimes overflows into the lake	2
Old piping/sewage system	1
Not aware of combined sewer	73

Younger residents, females and renters are significantly less likely aware of combined sewers.

Sixteen percent of respondents, however, correctly describe the components of a combined sewer as a combination of stormwater and sanitary systems/pipes. Amongst these respondents, older residents, males and owners of dwellings are more likely to give this correct answer than other subgroups.

Actions Taken To Reduce Stormwater Pollution — Top Mentions

	Among those aware of stormwater pollution (439) %
Don't dump things down the stormsewer	15
Disconnect home's eavestrough downspouts	6
Avoid using pesticides/herbicides	5
Reduce use of fertilizers and pesticides, leave grass clippings on lawn	4
Use alternative to household hazardous waste	4
Stop/reduce littering/waste/keep clean	4
Don't use salt on driveways/sidewalk	4
Use less water	2
Lobby/pressure on politicians	2
None/haven't done anything	51

While half of respondents indicate they have not taken any actions to reduce stormwater pollution, renters are significantly less likely to have taken action (61%) than owners of dwellings (46%).

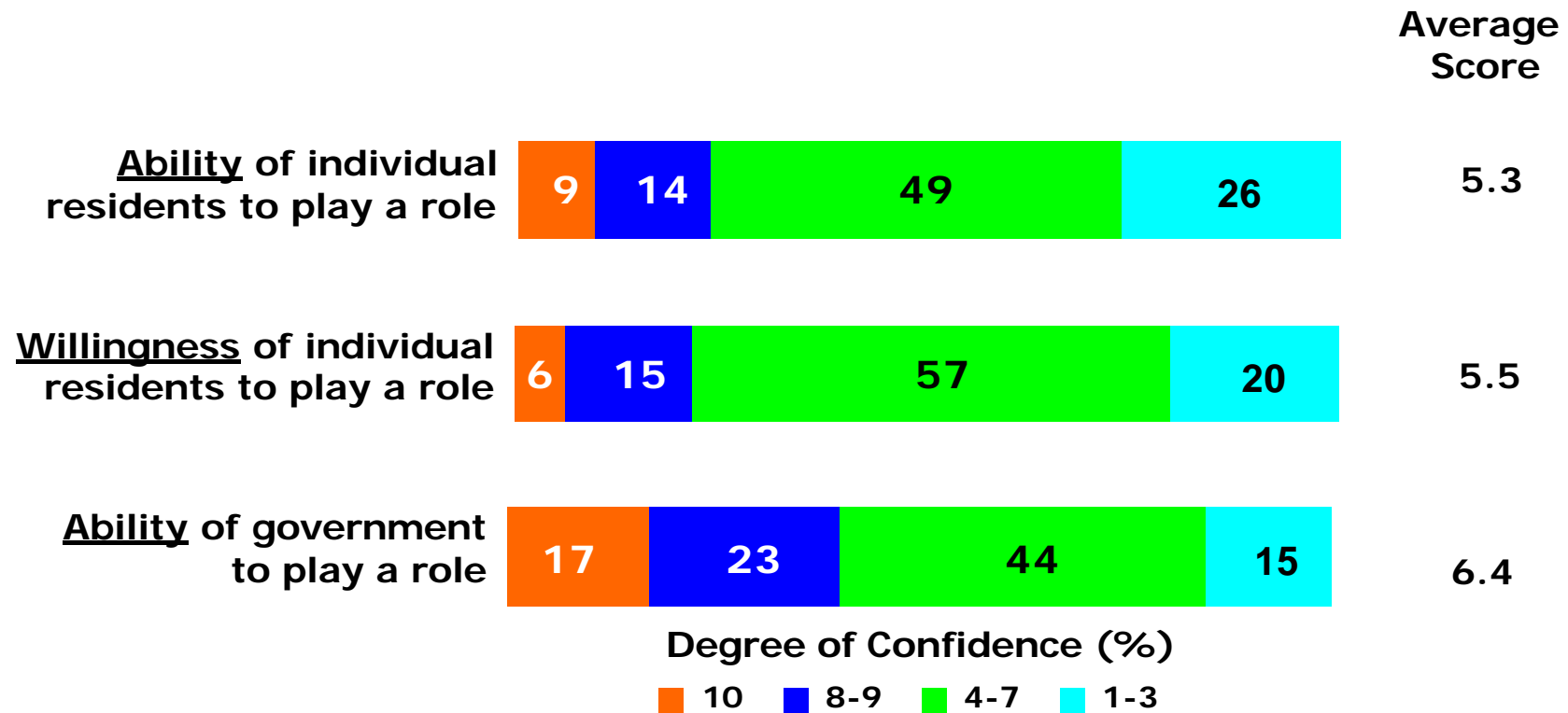
Awareness Of Specific Actions Individuals Can Take To Reduce Stormwater Pollution

	Total Toronto (1,000) %
Use alternatives to household hazardous waste	15
Don't dump garbage on streets/clean up	14
Don't dump things down the storm sewer	12
Create awareness/educate others/provide more information	9
Avoid using pesticides/herbicides	7
Check your car for leaks of fuel, oil and other hazards	6
Pick up after pets	4
Lobby/pressure on politicians	4
Drive cars less often/don't leave running	4
Disconnect home's eavestrough downspouts	4
Take care of our environment	3
Don't put anything hazardous down the drain	3
Use biodegradable products when you wash your car	3
Use rainbarrels	2
Car emissions testing/car maintenance	2
Recycling (general mention)	2
Reduce use of fertilizers and pesticides, leave grass clippings	2
No salt on sidewalks/driveways	2
Use environmentally friendly/biodegradable products	2
Solicit companies for funding/cooperations to reduce pollution	1
Don't know/not aware of anything	31

Likelihood To Consider Specific Actions To Reduce Stormwater Pollution

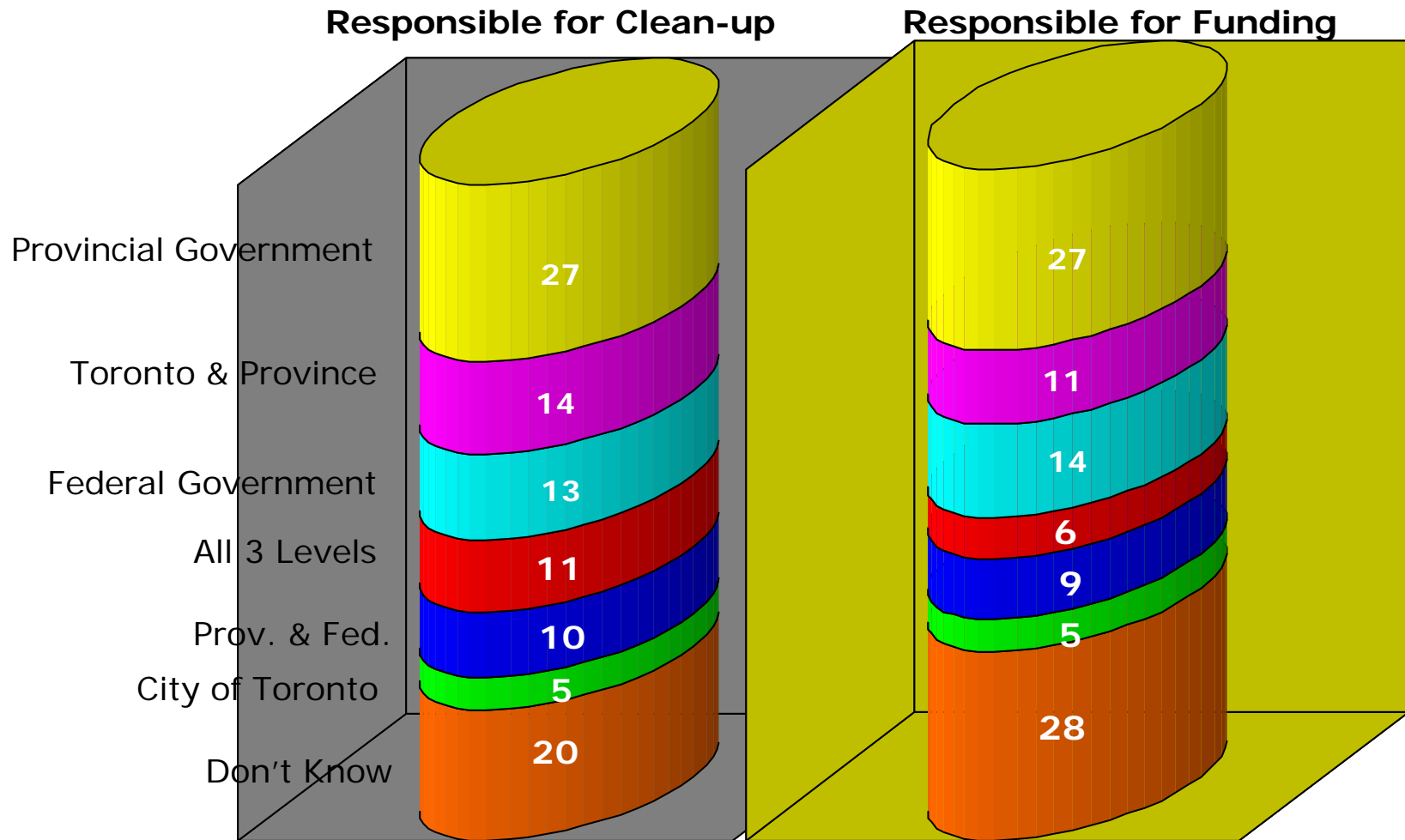
	% Saying 8-10 on 10 pt. scale of likelihood	Average score
Check you car for leaks of fuel, oil and other harmful fluids	84	9.0
Do not dump used motor oil, antifreeze and batteries in catch basins. Recycle these at collection centres.	83	9.1
Stoop and scoop animal waste	72	8.5
Leave grass clippings on the lawn so it absorbs more rain and needs less watering	68	8.3
Use biodegradable products when you personally hand-wash your car	65	8.1
Reduce use of fertilizers and pesticides	62	7.8
Check home for illegal sewer connections	43	6.6
When you personally hand wash your car, wash it over gravel or grassy areas	41	6.3
Disconnect home's eavestrough downspouts from sewer	37	6.3
Use pavements for driveways and patios that absorb water such as gravel and interlocking bricks	36	6.2
Help keep water where it falls and out of the sewers by regrading your lawn or lawn or landscape	34	6.0
Use rain barrels to collect rainwater	33	5.8

Who Can Help Reduce The Causes Of Stormwater Pollution?



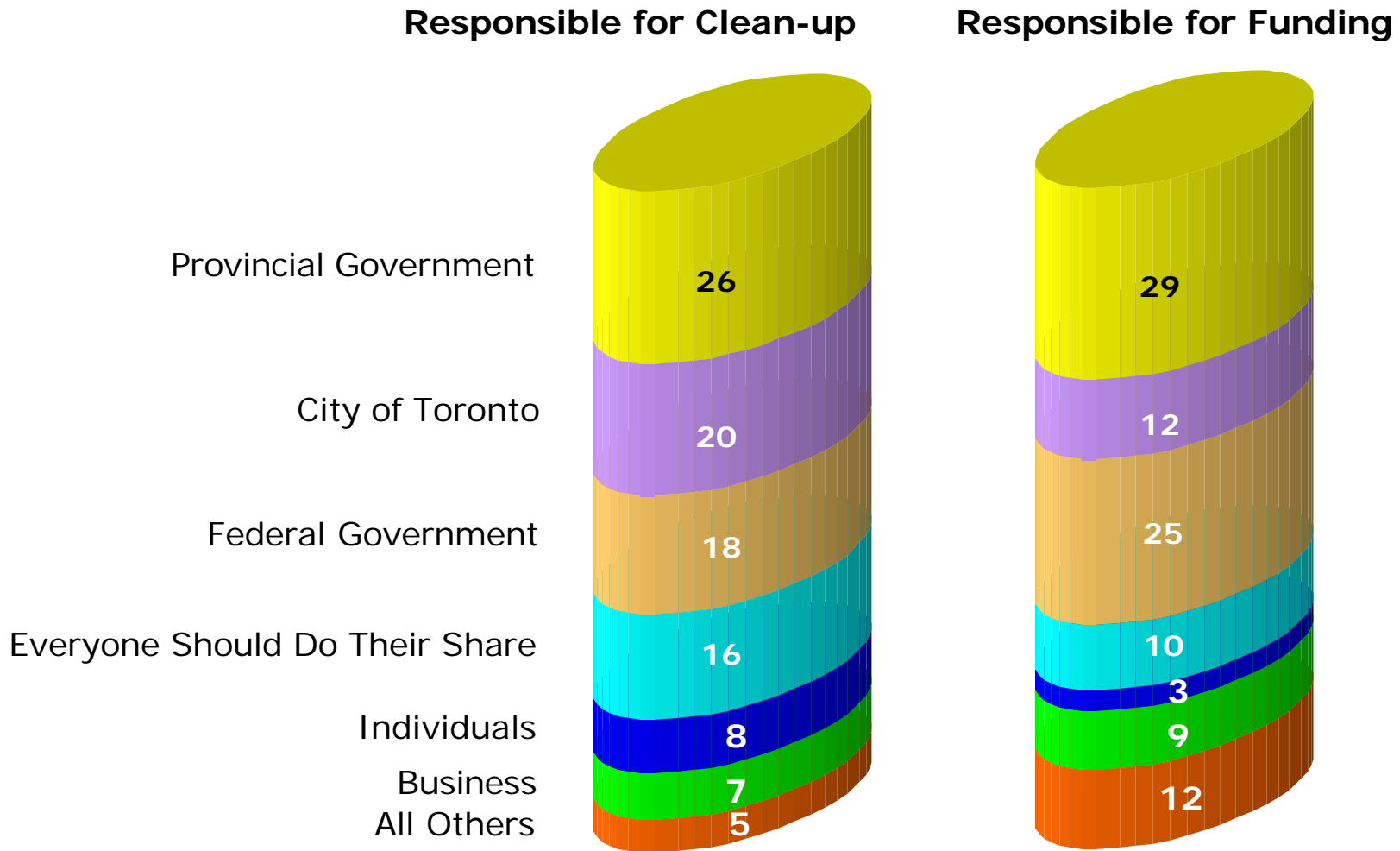
Residents aware of stormwater pollution are less likely to be confident in the ability of individuals to play a role. Rather, they are more likely to ascribe this role to government.

Which Level Of Government Is Responsible For Clean-Up & Funding Of Lake Water?



Women, lower income household and residents with less formal education are less likely to know the level of government responsible for clean-up and funding of lake water.

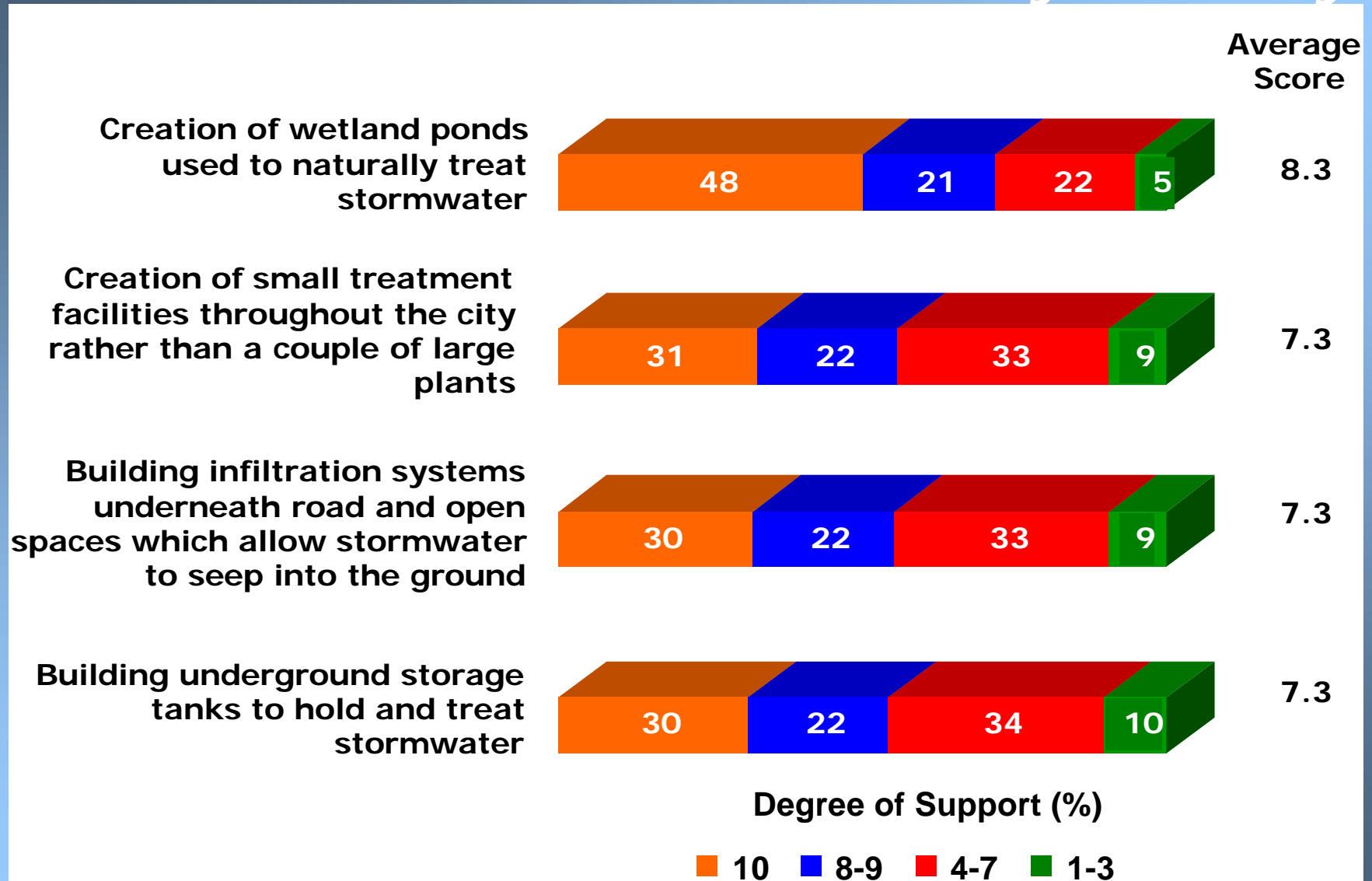
Who Should Take A Leadership Role In The Clean-up And Funding Of Lake Water?



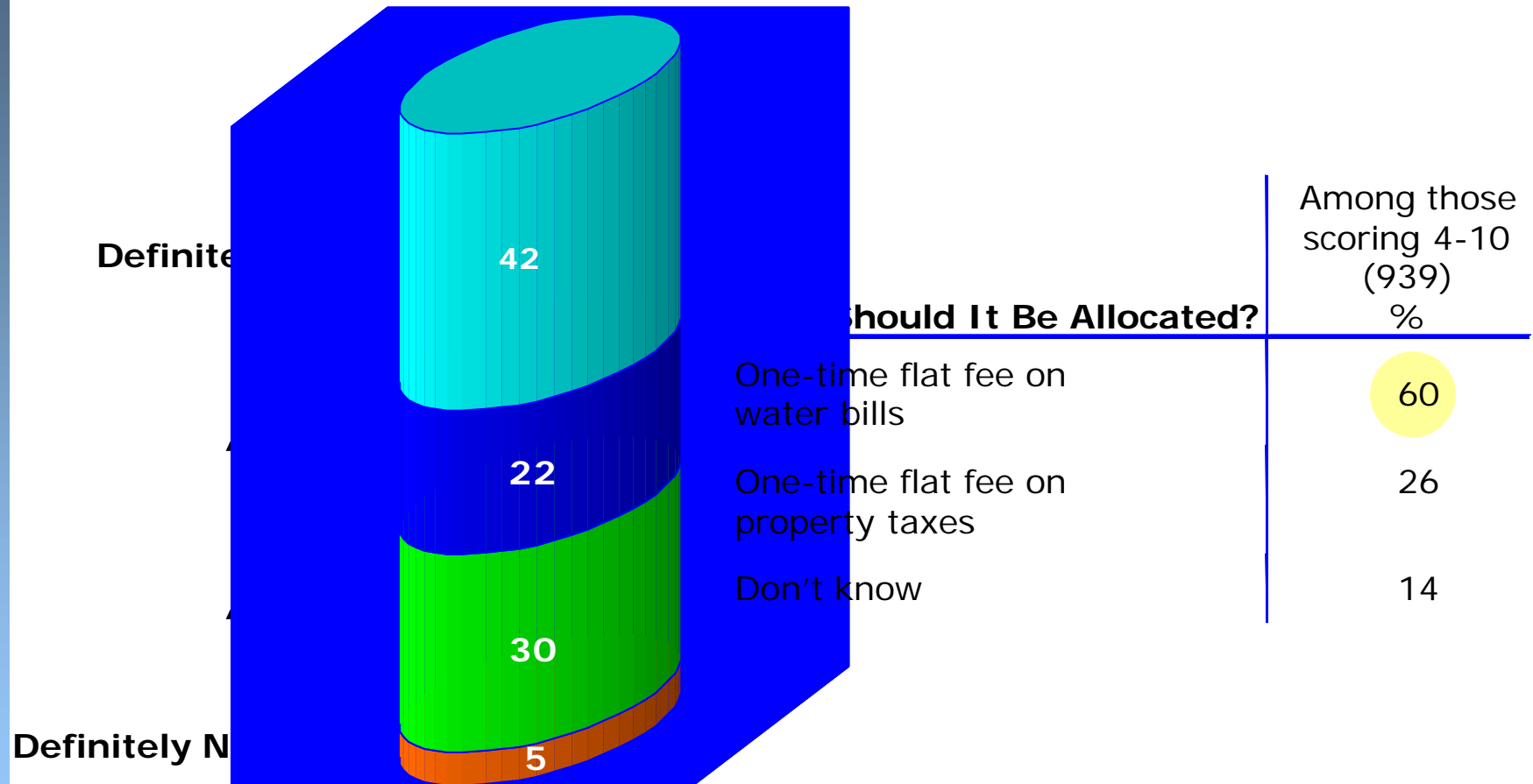
Unaided Awareness Of Actions Taken By The City Of Toronto To Reduce Stormwater Pollution

	Total Toronto (1,000) %
Program to educate/increase awareness	6
Implemented rain barrels/catch basins	3
Pamphlets/brochures from City of Toronto	2
Create/implement new by-laws/laws/rules/regulation	2
Upgrade waste water/sewage treatment plants	2
Re-route the sewer system/drain disconnection	2
Don't know/not aware of anything	78

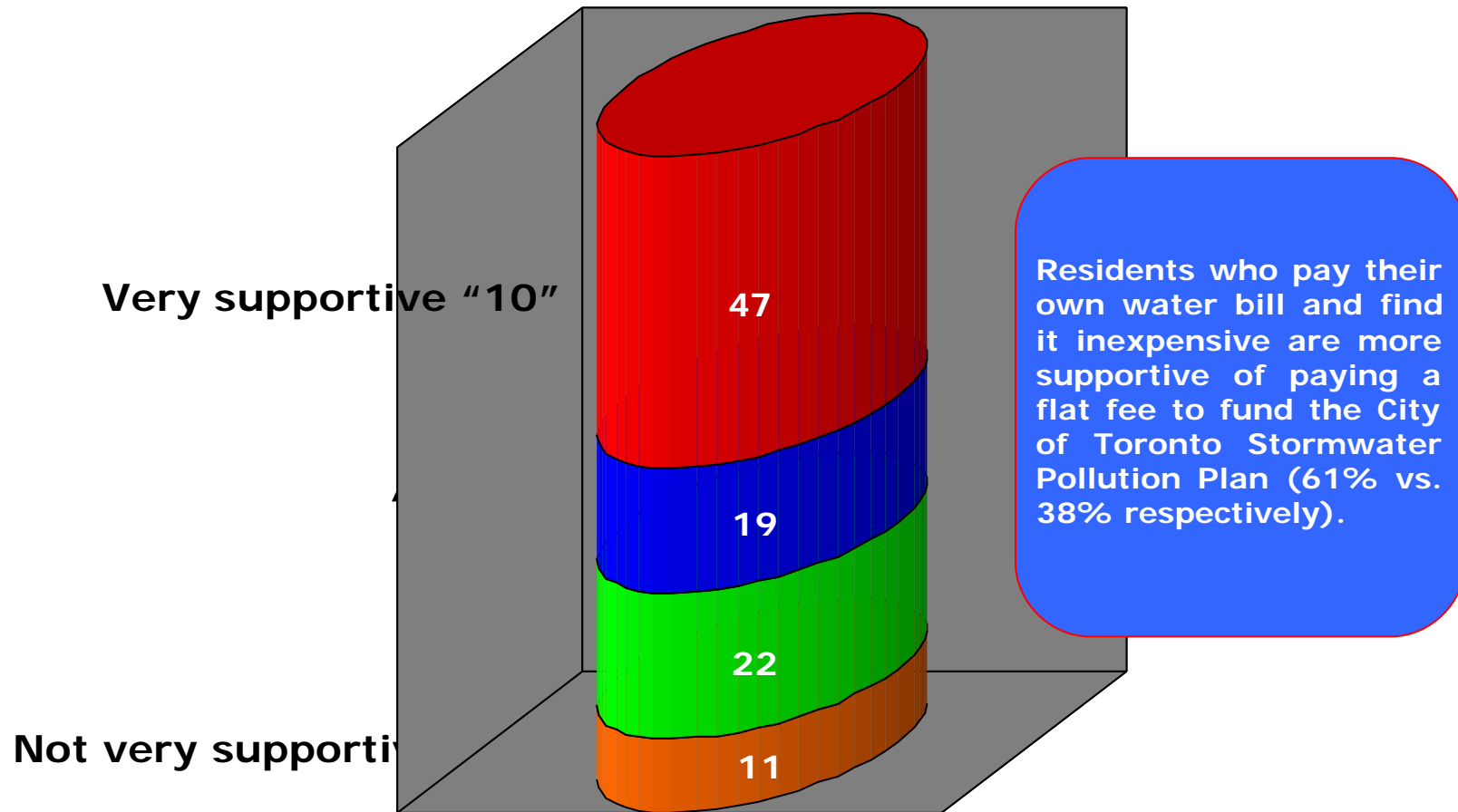
Level Of Support For Specific Initiatives To Reduce Stormwater Pollution By The City



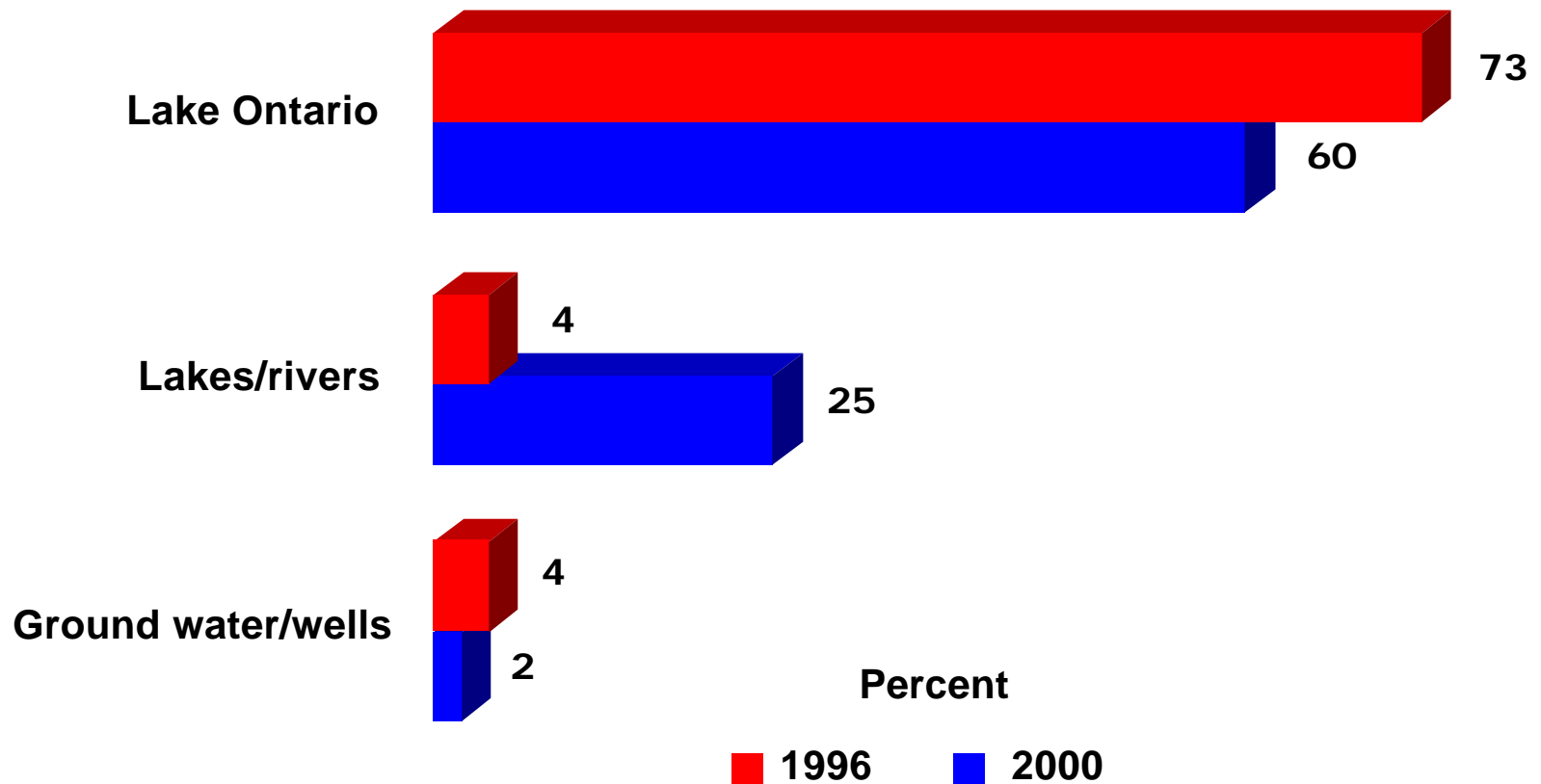
Should The City Of Toronto Allocate Financial Resources To Deal With Stormwater Pollution?



Level Of Support For Paying A Flat Fee To Fund The City Stormwater Pollution Plan

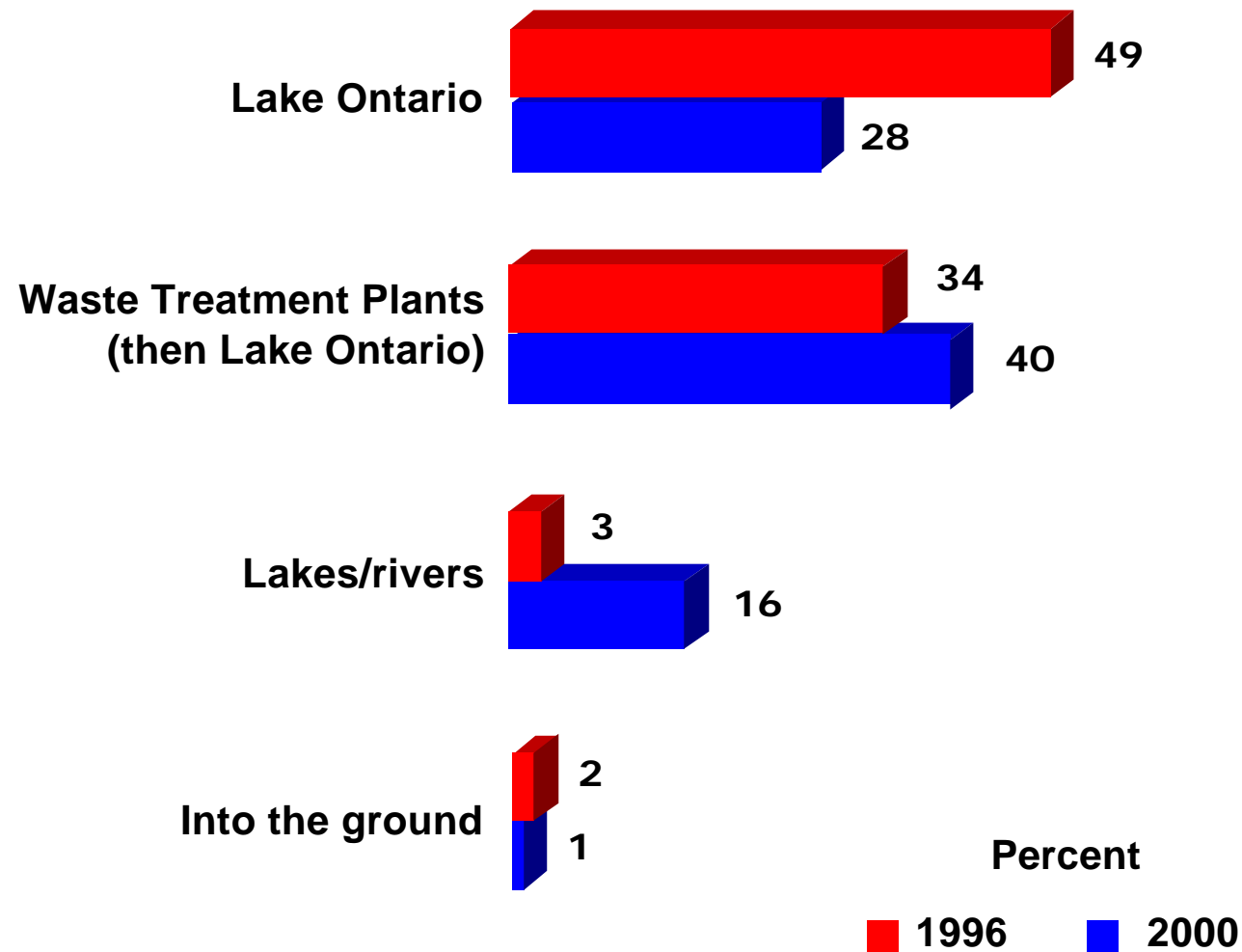


Perceived Source Of Toronto's Tap Water



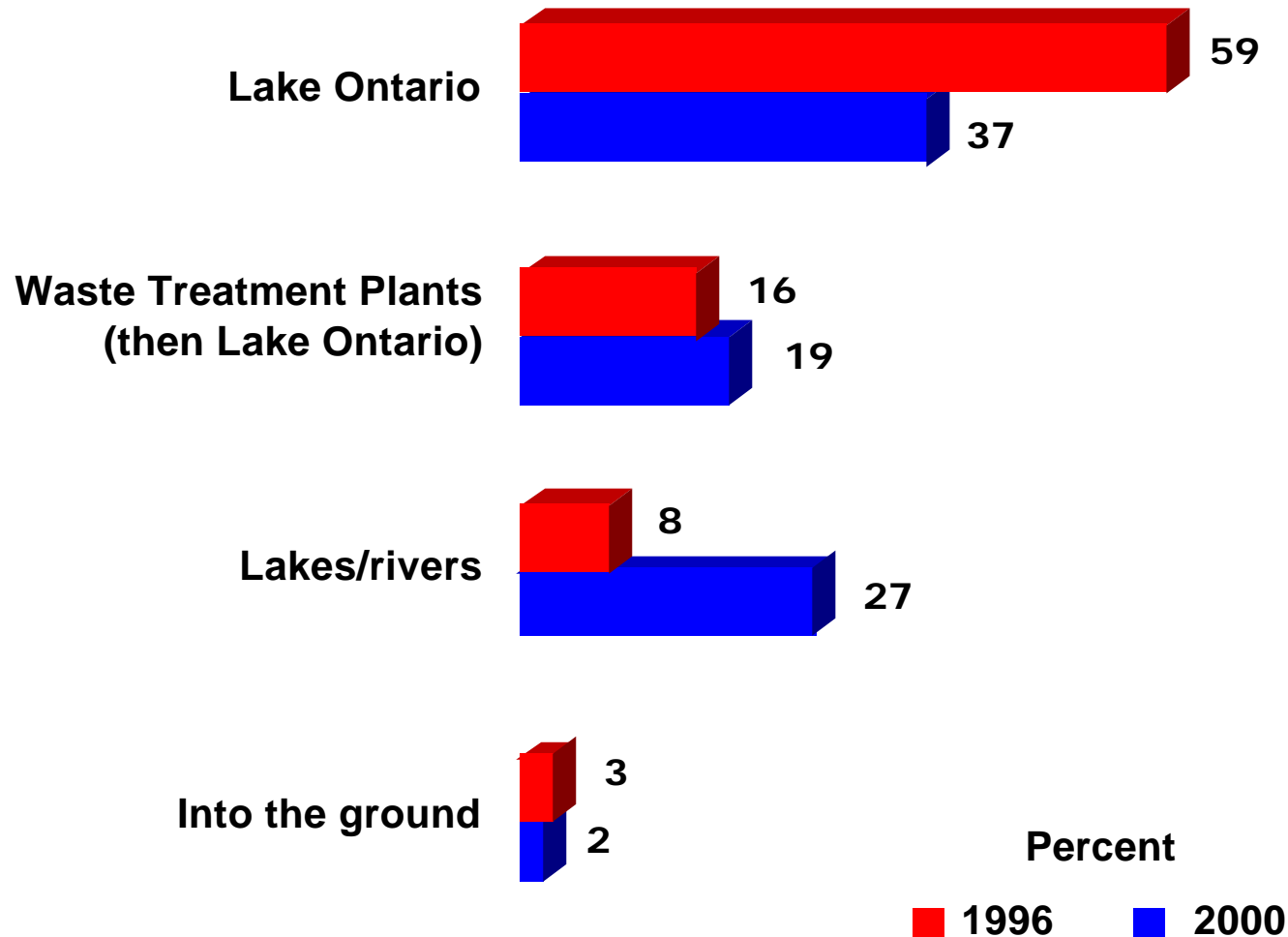
Combining the answers for Lake Ontario/Lakes/rivers, there is a significant increase in the proportion of Toronto residents who correctly identify a lake as the source of our tap water.

Perceived Destination Of Sewage



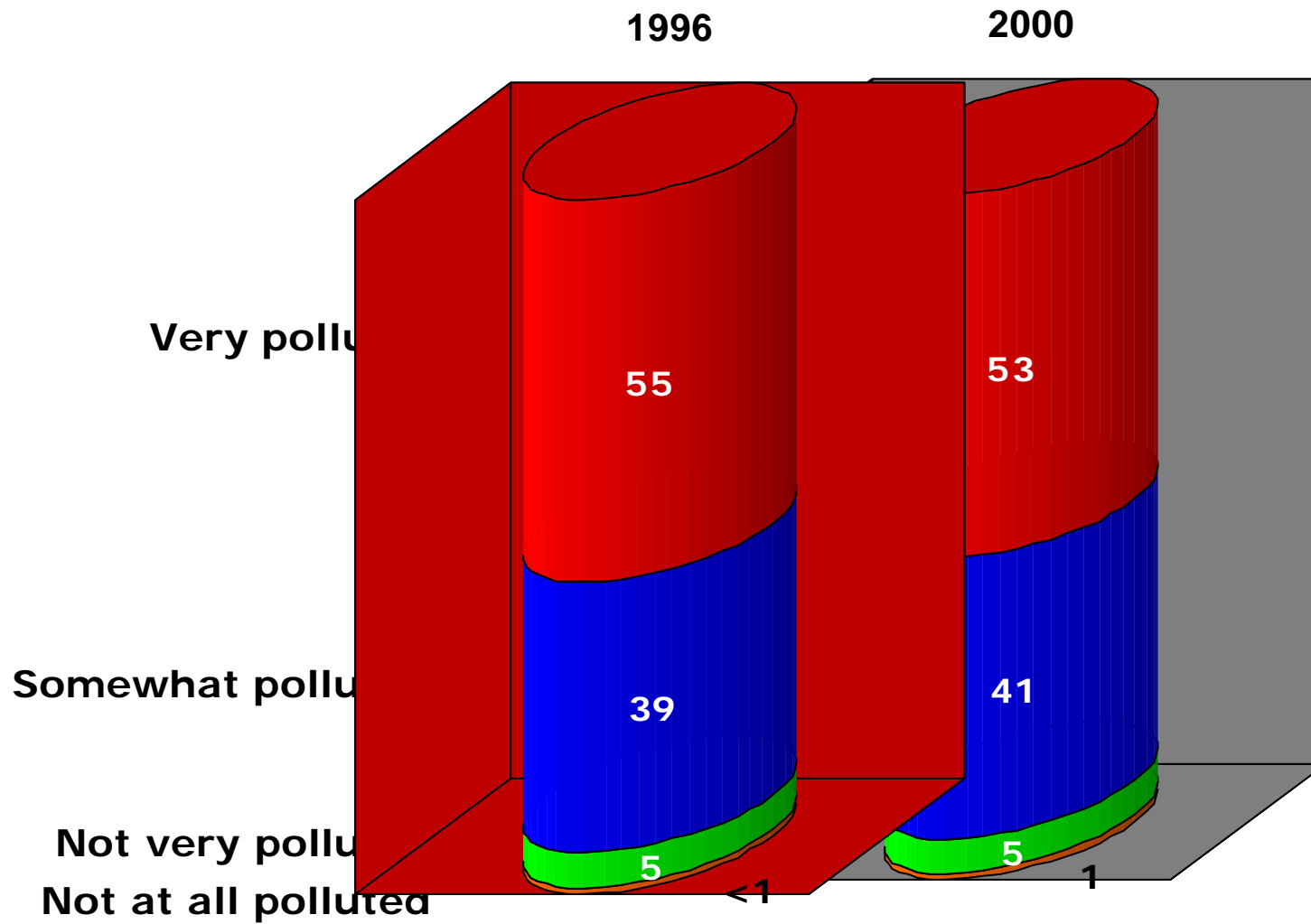
In the current year 2000, there are more residents identifying waste treatment plants as the destination of sewage.

Perceived Destination Of Stormwater



Comparing 1996 to 2000, the proportion of residents claiming a lake is the destination of stormwater is roughly equivalent, 67% vs. 64% respectively (combination of Lake Ontario/lake/river).

Overall Perception Of Lake Pollution Levels



Executive Summary

**Number of challenges and opportunities
for Spring 2000 Campaign**

Stage One: Educate

- ✓ **Build awareness of stormwater pollution**
 - ✓ **Better than what was expected going in**
 - ✓ **Many already there, half not**
- ✓ **Comprehension strong**
 - ✓ **Understanding of sewer overflow and waste water overflow**
- ✓ **Combined sewer less salient**

Executive Summary

Stage Two: Motivate

- ✓ Stormwater pollution not as emotionally driven as other environmental issues
 - ✓ Need to build the “care” component
- ✓ Convince individual residents they can do something — stormwater may seem too overwhelming

Stage Three: Call To Action

- ✓ Call to action is a delicate balancing act
 - ✓ Need to reinforce empowerment; Little actions just as important as big actions
- ✓ Government can play a role, both in terms of funding and clean up — the public is on side