

askHRgreen.org Survey Review Wave Two

December 20th, 2012



What do *you* need to know?

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Background & Objectives



Background and Objectives

- Supporting the development of the askHRgreen initiative, EAB Research is tasked with conducting a long-term research plan:
 - ✓ Message Development Focus Groups 10/2010
 - ✓ Benchmark Audience Behavior Survey 11/2010
 - ✓ Message Testing Focus Groups 12/2010
 - ✓ Wave-2 Audience Behavior Survey 11/2012
 - ❑ Wave-3 Audience Behavior Survey 11/2015
- This second survey is nearly identical to the benchmark survey, with the exceptions of a small number of new questions and removal of a section devoted to exploring media and communications use.
- This report compares responses from both surveys to measure changes in population behavior and the evolving effectiveness of the askHRgreen campaign.
- Specific objectives include:
 - Isolate and refine profiles of behavioral “offenders”
 - Investigate drivers of positive and negative behavior
 - Explore changes in behavior
 - Assess environmental knowledge and comprehension of specific behaviors’ impacts
 - Measure awareness and effectiveness of the askHRgreen campaign

Findings Summary

Improved Environmental Knowledge. The general population shows improved awareness of negative environmental behaviors and consider themselves more knowledgeable than in 2010.

Improved Behavior. Similarly, the general population shows a significant reduction in nearly all negative environmental behaviors.

Total Maximum Daily Load (TMDL). More than 10% of the population understand and accurately define the TMDL. Those aware of askHRgreen are about three times more likely to do so.

askHRgreen.org Awareness. Respondents aware of askHRgreen.org show significantly greater levels of knowledge and positive environmental behavior than the general population.

Long-Term Planning. Overall, the campaign has been highly successful in establishing an initial foothold in the community. The askHRgreen.org content improves both awareness and behavior of Hampton Roads residents who have found the site. Increasing awareness of the website offers the best opportunity to continue the positive trajectory of the HR Green efforts and improve understanding of TMDL. The longitudinal nature of this study offers a rare opportunity to measure campaign effectiveness and subsequently tweak the approach, with the expectation of steady positive change in the community.

Detailed Findings: Notes For Reading This Report

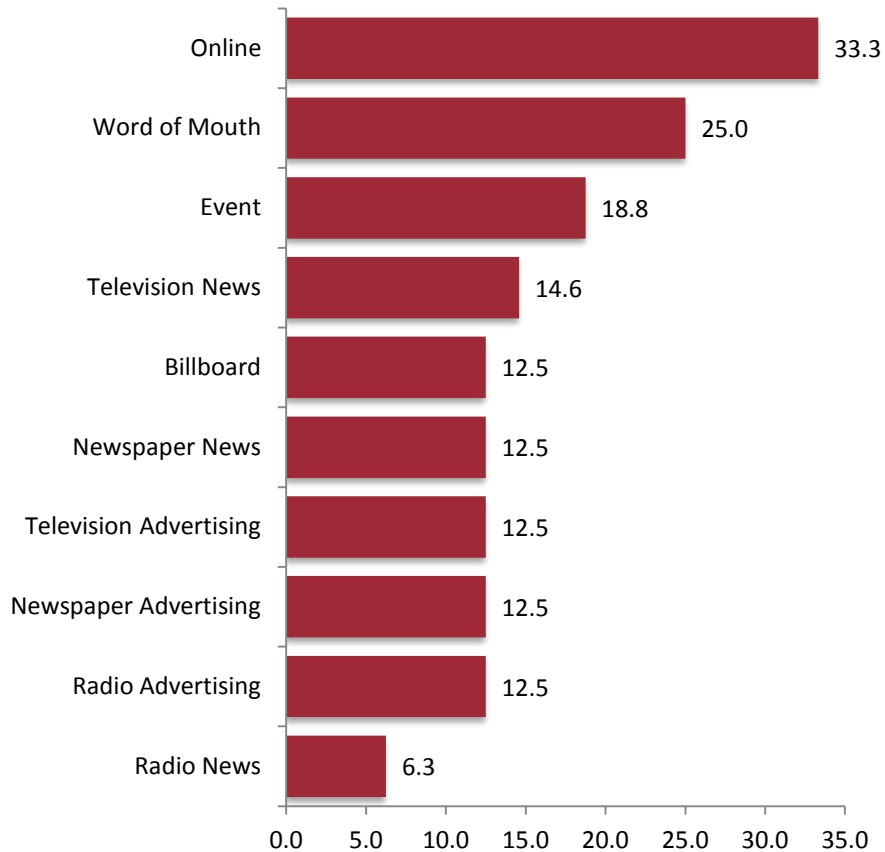
- Data for this study was collected through an online survey. Participants were obtained from a third party user panel. Respondents received a nominal incentive for participation.
- A total of 400 respondents participated in this study. With this base size, the potential sampling error for this study is +/-5%. Data is tabulated and sub-groups (for example, males and females) are tested against each other using a 95% confidence level. This is a conservative level of confidence, but is industry-standard.
- Recorded annual income levels below \$75,000 showed no major significant differences and were combined in this report to simplify the presentation of findings.
- Detailed data tables are included in the Appendix. References to appended data are noted with the letter A and corresponding table numbers in parentheses. For example, (A3).
- In representing the data, significant differences in tables are indicated as follows:
 - A **black box** surrounds percentages that are statistically significant (for example, a box around the male percentage indicates that males assign higher ratings than females on an attribute).
 - Cells in tables that are surrounded by a **red box** or **highlighted** in a lighter color than neighboring cells represent a trend or difference. Though not always representing a *statistically* significant difference (often due to small sample size of some specific categories), findings suggest that a reliable difference exists. 6

askHRgreen Awareness

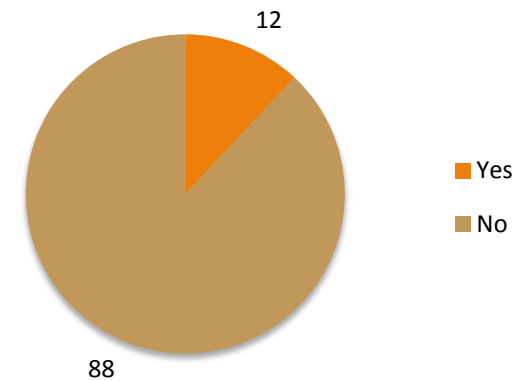
 **askHRgreen.org**

askHRgreen Awareness: Exposure

**How Did You Hear About askHRgreen.org?
(Multiple Selections Allowed)**



**Have You Heard of askHRgreen.org?
(2012)**



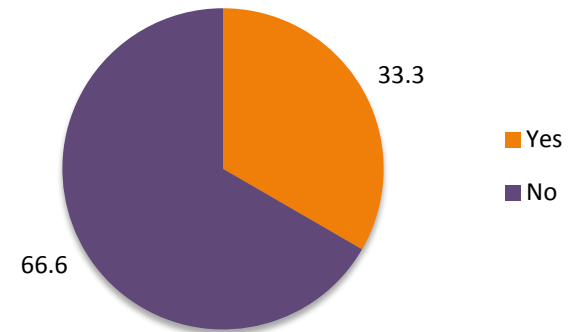
The askHRgreen campaign has effectively raised the awareness level of the program to 12% among the general population. Since the askHRgreen campaign had not yet launched in 2010, the 2012 results serve as a benchmark for future awareness.

askHRgreen Awareness: Website

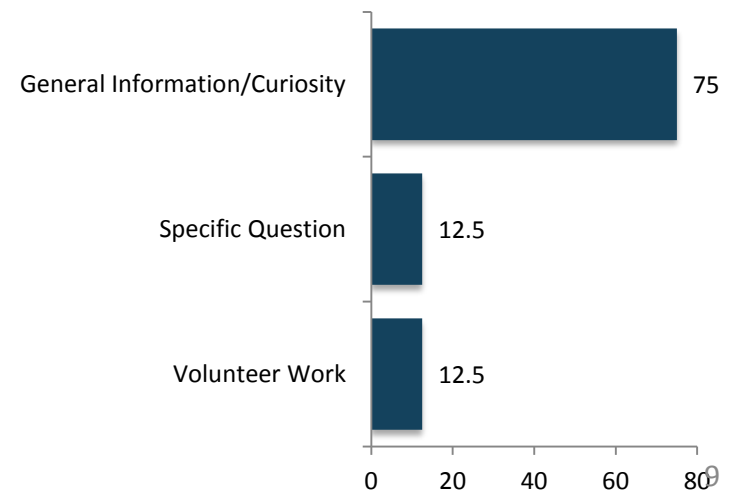
Only 33% of askHRgreen-**aware** respondents have visited the askHRgreen website, mostly for general information or curiosity. Maximizing specific incentives for website visitation may raise visitation rates.

Specific incentives may include contests, volunteer project association, school assignments, and encouraging the sharing of links to helpful or interesting pages, tools, or blog entries within askHRgreen.org.

Have You Visited the askHRgreen.org Website? (2012)



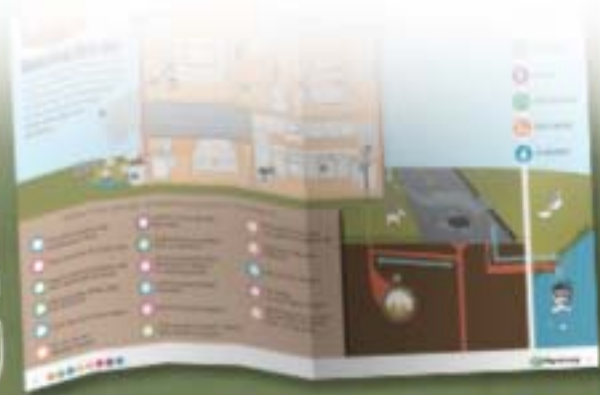
Why Did You Visit the Website?



Knowledge and Learning



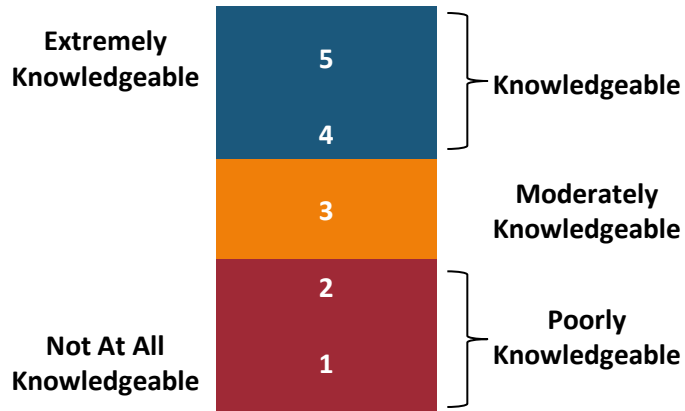
**GREEN
LEARNING**



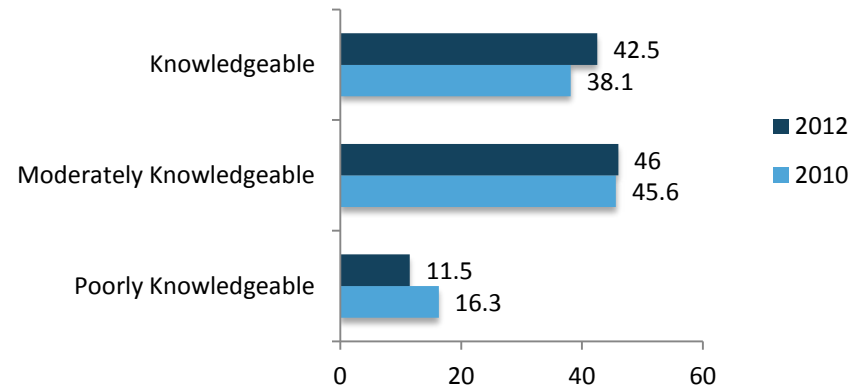
DOWNLOAD THE GREEN LEARNING EDUCATIONAL GUIDE »

Knowledge and Learning: Levels of Knowledge

How Knowledgeable do You Feel About Local Environmental Issues?



Knowledge of Local Environmental Issues

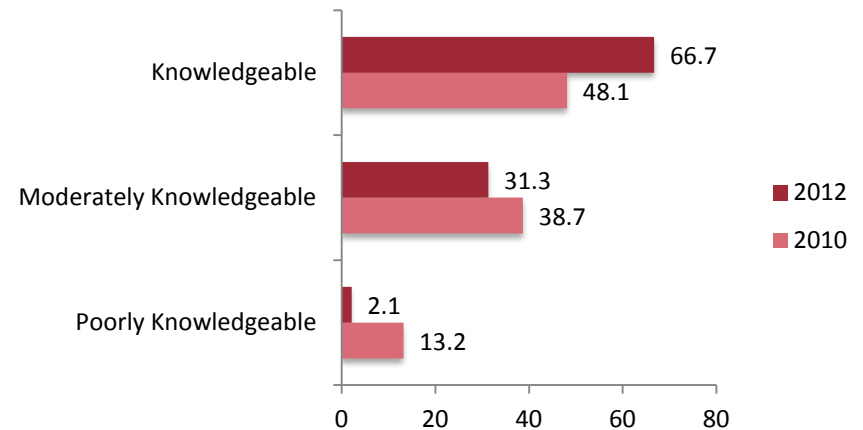


The self-perceived knowledge level for local environmental issues has increased among the general population.

Knowledge and Learning: Levels of Knowledge

% Knowledgeable About Local Environmental Issues		2010	2012
		38.1%	42.5%
Gender	Male	49.2	47.6
	Female	28.0	38.8
Age	18-34	33.7	29.8
	35-49	33.1	36.6
	50+	43.2	48.5
Education	Not College Grad	29.1	33.5
	College Grad +	44.7	48.7
Income	<\$75K	28.3	38.6
	\$75K - \$100K	41.8	42.3
	> \$100K	49.0	50.8
Marital Status	Married	41.7	44.6
	Not Married	31.0	38.2
Aware of HRgreen	Yes, Aware	48.1	66.7
	No, Not Aware	35.5	39.2

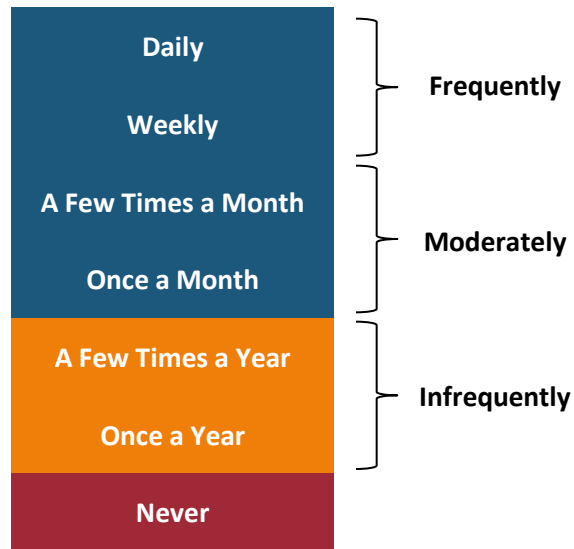
Knowledge of Local Environmental Issues Among Those Aware of askHRgreen



Perceived knowledge of environmental issues has increased most among **females**, **<\$75,000 income**, **singles**, and especially those **aware** of askHRgreen. Singles and <\$75,000 income respondents were specifically targeted by the askHRgreen campaign as offenders, which suggests the campaign has made a positive impact on its target audience's awareness of environmental issues.

Knowledge and Learning: Pursuit of Information

How Often Do You Seek Out New Information Pertaining to Environmental Issues?

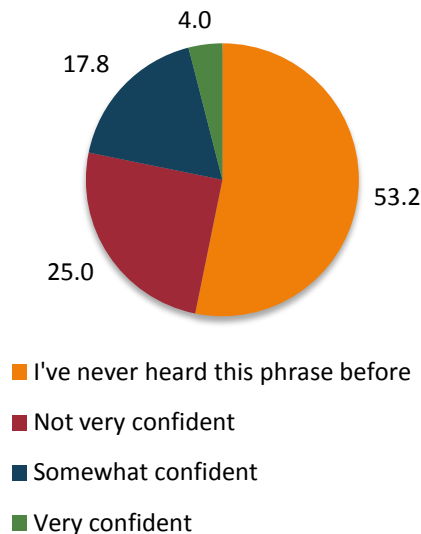


Information seeking appears to be in decline (perhaps because more residents feel knowledgeable), with one exception: respondents **aware** of askHRgreen have become the most frequent information seekers by far.

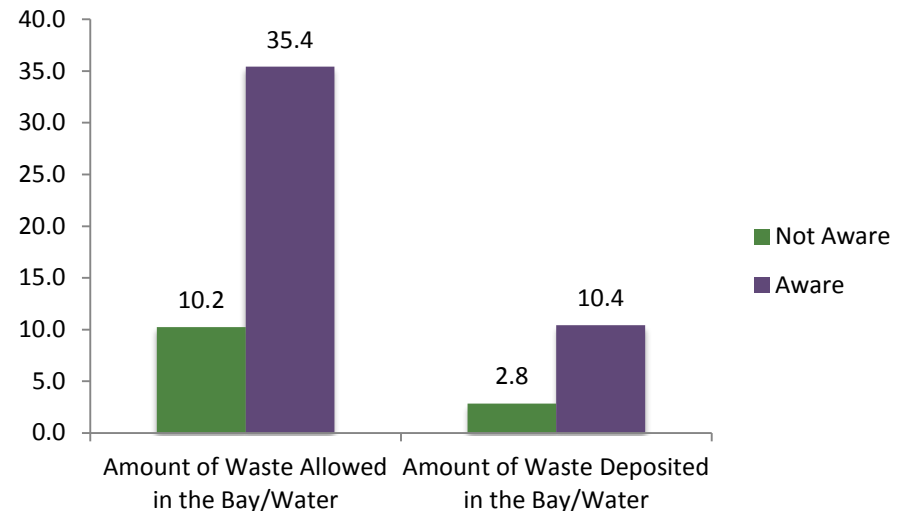
		% Who Seek Information Moderately to Frequently	
		2010 39.6%	2012 35.8%
Gender	Male	45.1	33.9
	Female	34.7	37.1
Age	18-34	41.6	28.1
	35-49	35.0	37.5
	50+	42.0	36.8
Education	Not College Grad	30.0	31.8
	College Grad +	47.1	38.2
Income	<\$75K	33.2	32.3
	\$75K - \$100K	42.9	42.3
	> \$100K	48.4	35.6
Marital Status	Married	41.7	33.1
	Not Married	35.7	41.2
Knows Local Env. Issues Well	Yes (Top-2)	61.7	58.8
	No (Bot-3)	26.0	18.7
Aware of HRgreen	Yes, Aware	47.2	66.7
	No, Not Aware	37.7	31.5

Knowledge and Learning: Total Maximum Daily Load (TMDL)

Confidence in Understanding of TMDL



% Confident and Accurate in Understanding of TMDL by askHRgreen Awareness



Only **13.25%** of the population are confident and completely accurate in their definition of TMDL (A3), suggesting a need for further education. A majority of *somewhat* to *very confident* respondents provided an accurate definition of TMDL. Most other definitions are close, but confuse TMDL as a *measure* of pollution in the watershed rather than a controlled maximum limit on pollution (A4).

Alternatively, **35.4%** of respondents **aware** of askHRgreen are confident and accurate, which suggests the campaign has effectively educated much of their audience.

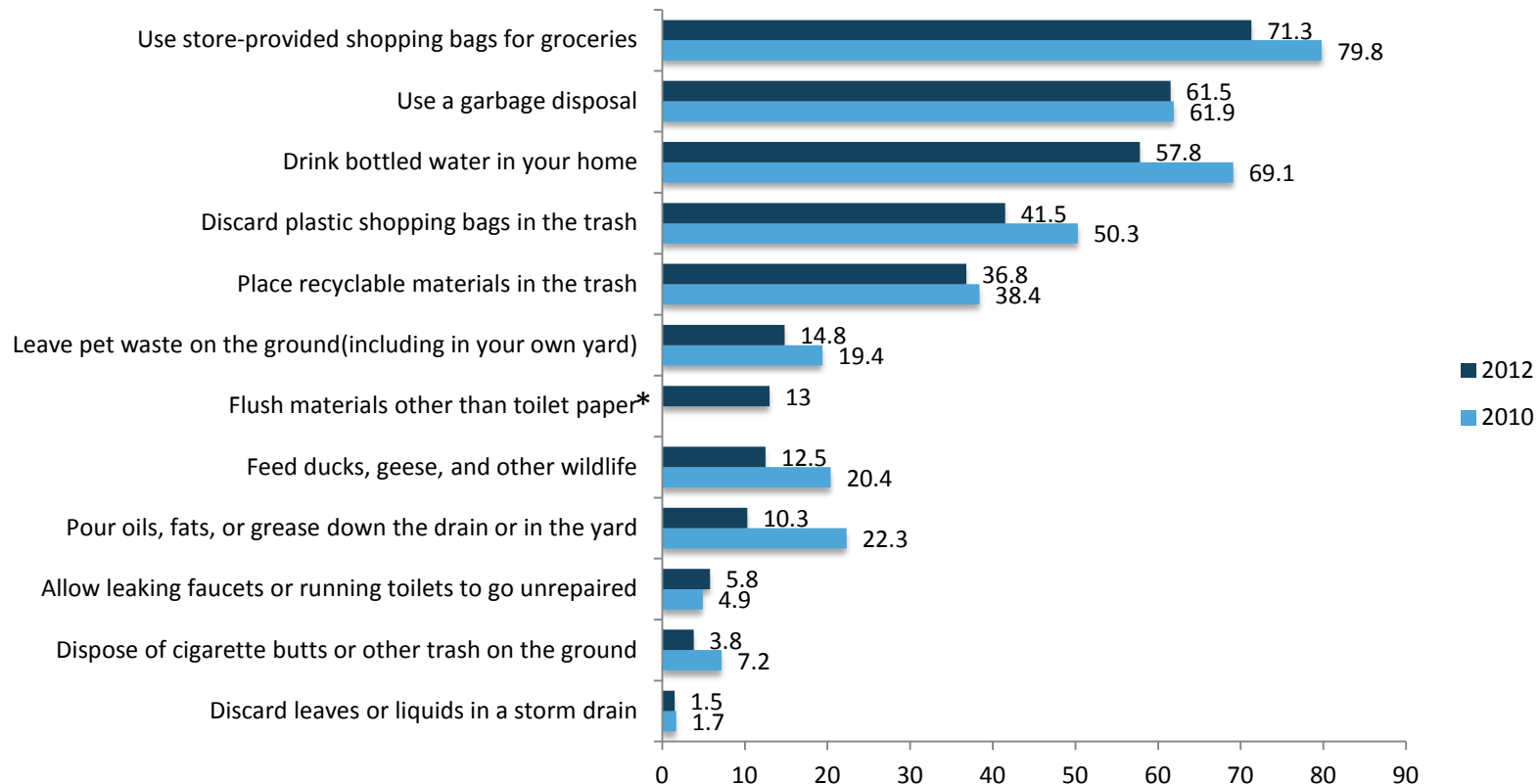
Behavior and Practices



Behavior and Practices: Offenders

The 2012 population shows consistent improvement in behavior nearly across the board.

% of Respondents Committing Negative Behaviors



Only *garbage disposal use* and *placing recyclable materials in the trash* show no significant change. AskHRgreen-**aware** respondents display a larger reduction in negative behavior than the general population for many behaviors, especially in *use of a garbage disposal (A5)*, suggesting campaign effectiveness.

**Flush materials other than toilet paper* was not included in the 2010 benchmark survey.

Behavior and Practices: Offender Profiles

Behavior	General Population?	Greatest Offenders
Discard leaves or liquids in a storm drain	No	Extremely rare behavior: no major offenders
Dispose of cigarette butts or other trash on the ground	No	Young, non-graduate, <\$75,000 income, single
Allow leaking faucets or running toilets	No	Young, non-graduate, <\$75,000 income, single
Pour oils down the drain or in the yard	No	Young, non-graduate, <\$75,000 income, single, male
Feed wildlife	No	Young, non-graduate, <\$75,000 income, female
Flush materials other than toilet paper	Yes	Young, <\$75,000 income, female
Leave pet waste on the ground	Yes	Young, non-graduate, <\$75,000 income, single, female
Over fertilize lawns	Yes	Middle age/older, graduate, high income, married, male
Place recyclable materials in the trash	Yes	Young/middle age, <\$100,000 income, single
Discard plastic shopping bags in the trash	Yes	Young, non-graduate, <\$75,000 income, single
Drink bottled water in your home	Yes	Middle age, non-graduate, <\$75,000 income
Use a garbage disposal	Yes	Older, high income, graduate, married, male
Use store-provided shopping bags for groceries	Yes	Equal among population

Tables revealing specific offender demographics are attached in the appendix of this report (A7).

Behavior and Practices: askHRgreen Aware

The 2012 respondents **aware** of askHRgreen display a much lower frequency of committing negative behavior than both the other subgroups and their 2010 survey counterparts (A8). Results continue to suggest the askHRgreen campaign's efforts have had a strong positive impact on its audience.

Feeding Wildlife

askHRgreen-**aware** respondents display better behavior than others in nearly all categories, but not feeding wildlife. They have heavily reduced *feeding wildlife* compared to 2010, but they are still participating more than those **unaware** of askHRgreen.

Aware respondents displayed a strong sense of compassion for others and the environment in verbatim responses. This same sense of compassion likely fuels their behavior when feeding wildlife. Messaging relating to this behavior may best appeal to the audience's sense of compassion by relating negative effects *on the wildlife itself* in addition to the environment.

Behavior and Practices: Perceptions

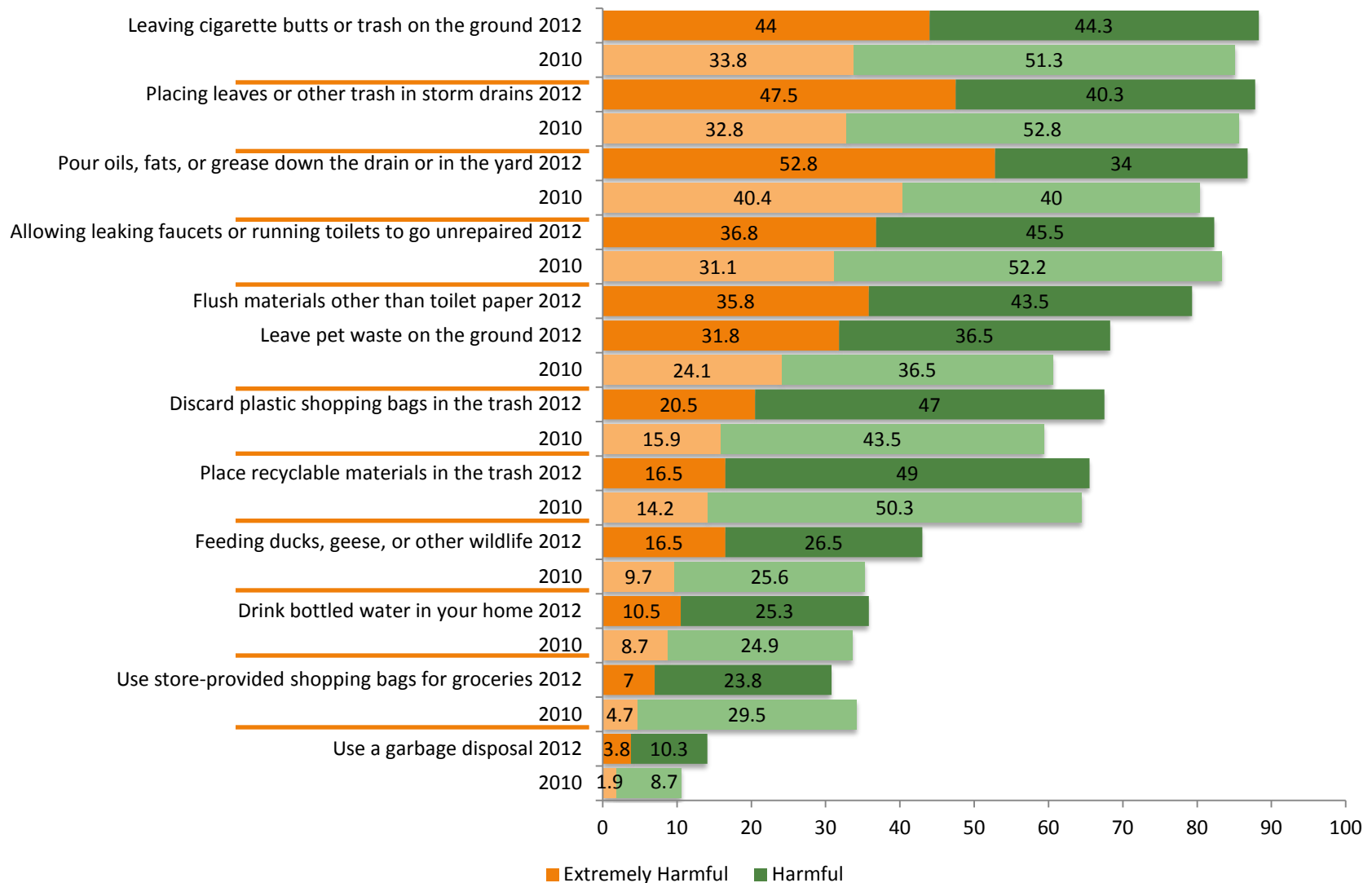
As the chart on the following page depicts, the perceived harm of negative behaviors has clearly risen since 2010. Additionally, perceptions of the level of harm a behavior exhibits are **inversely correlated** with the percentage of the population committing that behavior (i.e. the more common a negative behavior is, the less likely it is to be labeled harmful).

Respondents **aware** of askHRgreen continue to lead in behavior and comprehension as they associate greater harm with nearly all of these negative behaviors than other subgroups and the askHRgreen-**aware** 2010 respondents (A9).

This data continues to support the askHRgreen campaign's success among its audience and the general public.

Behavior and Practices: Perceptions

Perceived Harm of Negative Behavior



Behavior and Practices: Cause and Effect

To gauge knowledge of the specific consequences for negative behaviors contributing to the TMDL, respondents were presented with five negative behaviors (**actions**) that were displayed in a format similar to the table below. Respondents then attempted to choose the correct **effect**, **result of that effect**, and eventual **personal consequence** that results from each action.

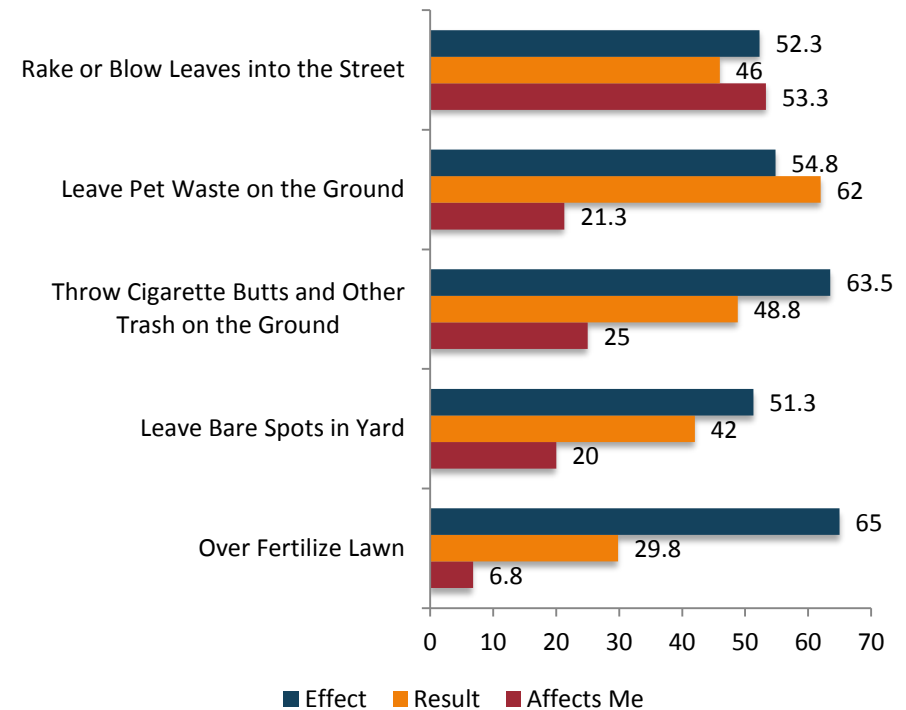
Action	Effect	Result	Affects Me
Leave Pet Waste on the Ground	Bacteria is carried to local waterways via the storm drain	Leaves and grass decompose, using up dissolved oxygen that is needed by fish and crabs	Cannot swim at local beaches nor eat local seafood
	Nitrogen and phosphorus is carried to local waterways via the storm drain	Water becomes contaminated	Decline in population of fish, oyster and other aquatic life
	Organic material is carried to local waterways via the storm drain	Algae blooms grow quickly	Decline in population of local fish and crabs
	Mercury and Arsenic are deposited into the soil	Waterways become polluted with litter	Unpleasant for swimming and harms aquatic life
	I don't know	I don't know	It doesn't affect me
			I don't know

Behavior and Practices: Cause and Effect

A surprisingly large percentage of respondents know the correct **effect** of over-fertilizing in the release of Nitrogen and Phosphorous. Unfortunately, far fewer know the **result** to be algae blooms. From there, only a trickle of respondents correctly guessed the **affects me** option as, “Waterways become discolored, smell foul and are not desirable for swimming or boating.”

Additionally, respondents were most often incorrect about the **affects me** options. This suggests a need for education on the personal impact that negative behaviors create.

**% Total Correct Responses by Action
(Arranged from Most to Fewest Correct)**



Tap Water

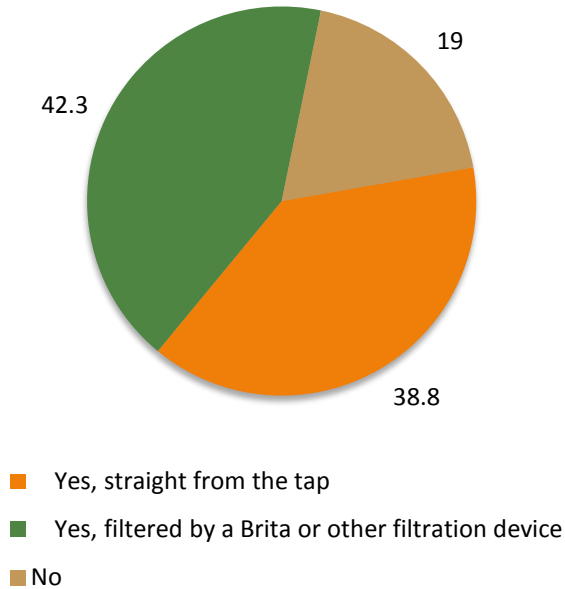
clean tap water
what's it worth to you?



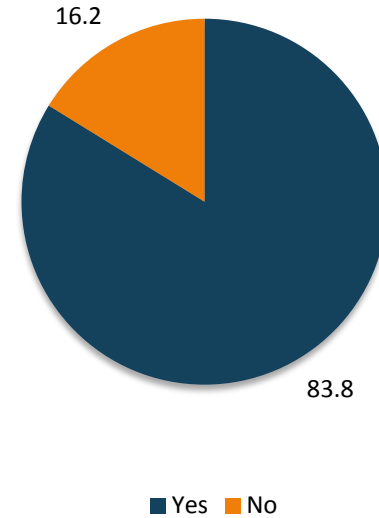
Tap water is virtually free. Save your dough for more important things... like chocolate chip cookies. 

Tap Water: Action and Opinion

Do You Drink Tap Water?



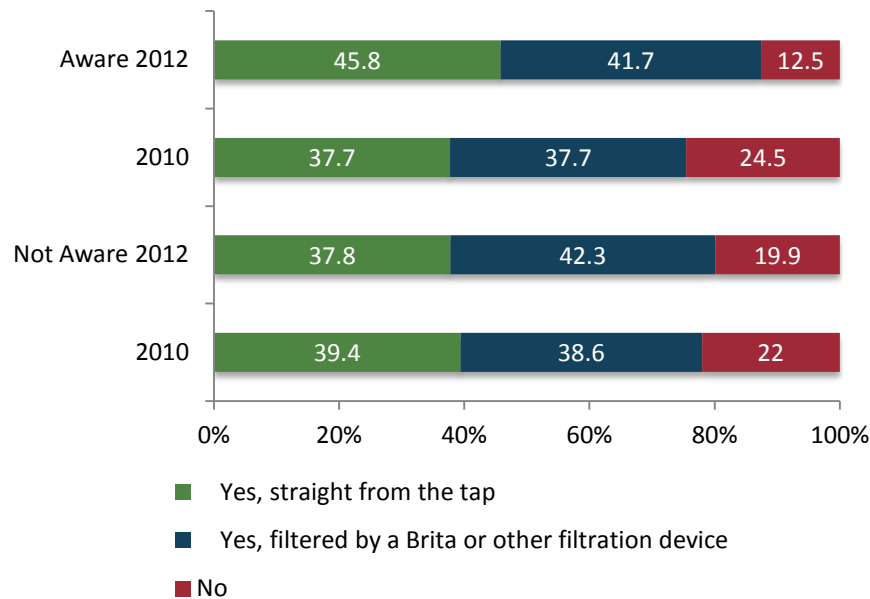
Is Tap Water a Good Value?



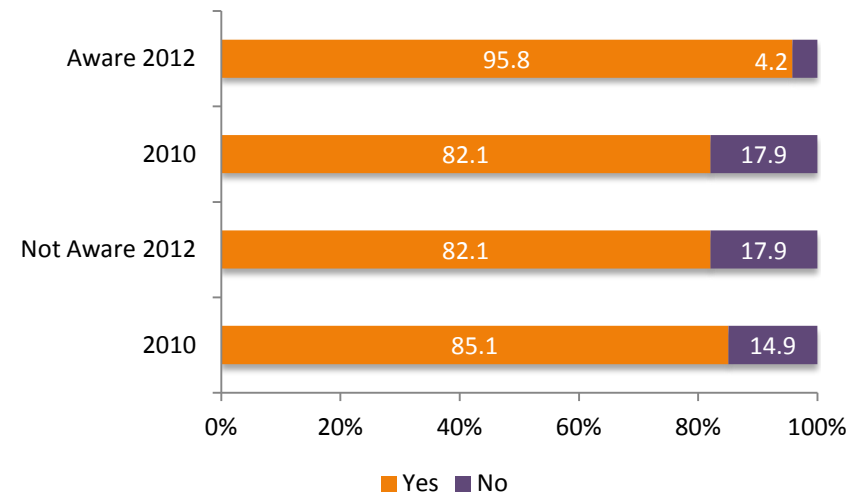
The 2012 responses for these two questions are exactly the same as those from the benchmark survey. Most people drink and value their tap water.

Tap Water: Effect of askHRgreen

Change in Tap Water Drinking Related to askHRgreen Awareness



Change in Tap Water Value Related to askHRgreen Awareness



Though the general perception of tap water has not changed, there is a noticeable positive difference in both *use* and *value* of tap water for respondents **aware** of askHRgreen, again suggesting a positive impact from the campaign.

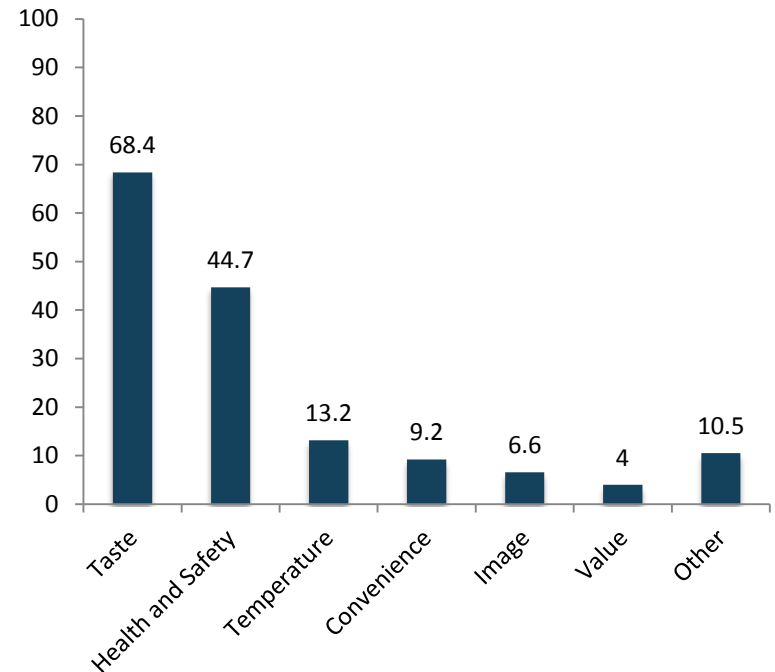
Tap Water: Concerns and Criticism

Respondents who do not drink tap water cite numerous reasons, most of which are based on **taste** and/or **health and safety** concerns.

Those rating **health and safety** as a major influencer explained with a written response. Common mentions include *chlorine, chemicals, bacteria, untrustworthy pipes, and strange tastes*.

The only noticeable demographic subgroup expressing these concerns is **non-college graduates**.

**% of Non-Tap Water Drinkers by Reason
(Multiple Selections Allowed)**



% Non-Tap Water Drinkers Concerned with Health and Safety

Not College Grad

26.3

College Grad +

18.4

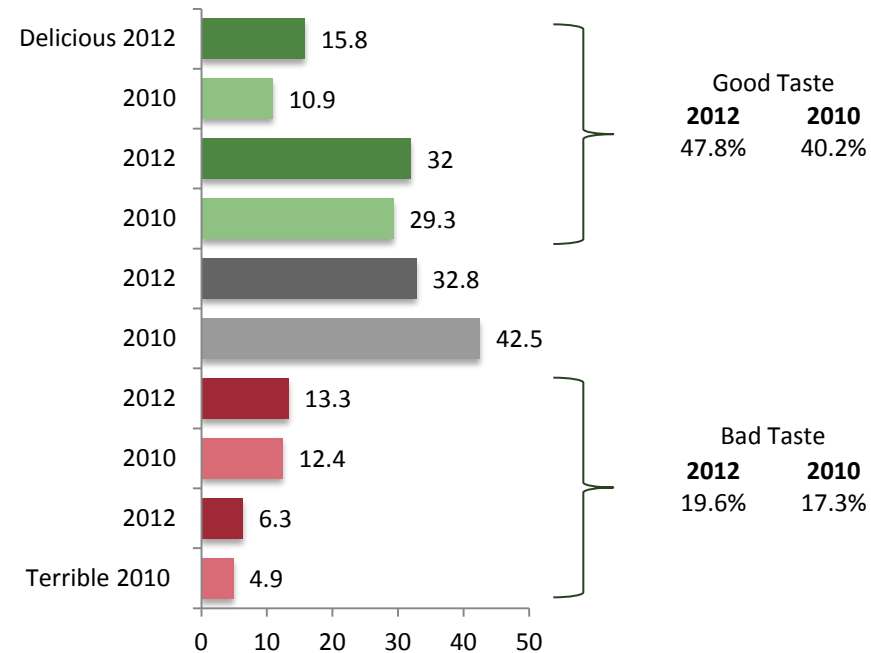
Tap Water: Flavor

Perceptions of tap water flavor have improved since 2010.

Breaking out perceptions by locality reveals no statistically significant differences, but perceptions of tap water flavor trend lower in Chesapeake (A15).

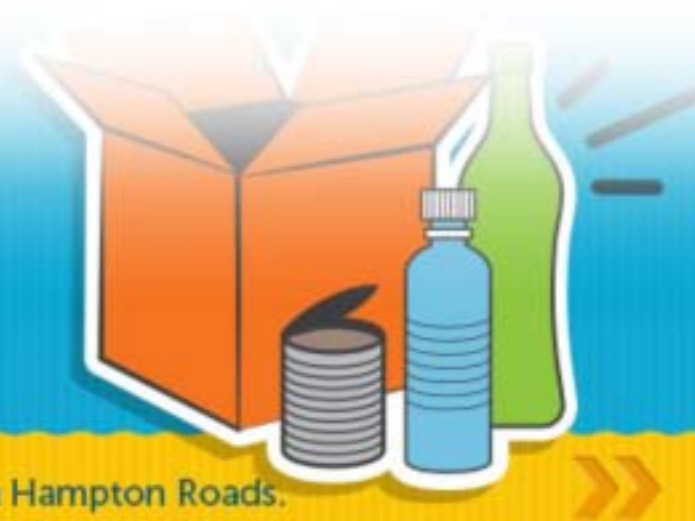
Those most likely to question their tap water's flavor are **young, single-female non-graduates** with a household income below **\$75,000** (A16).

Tap Water Flavor Perceptions



Recycling

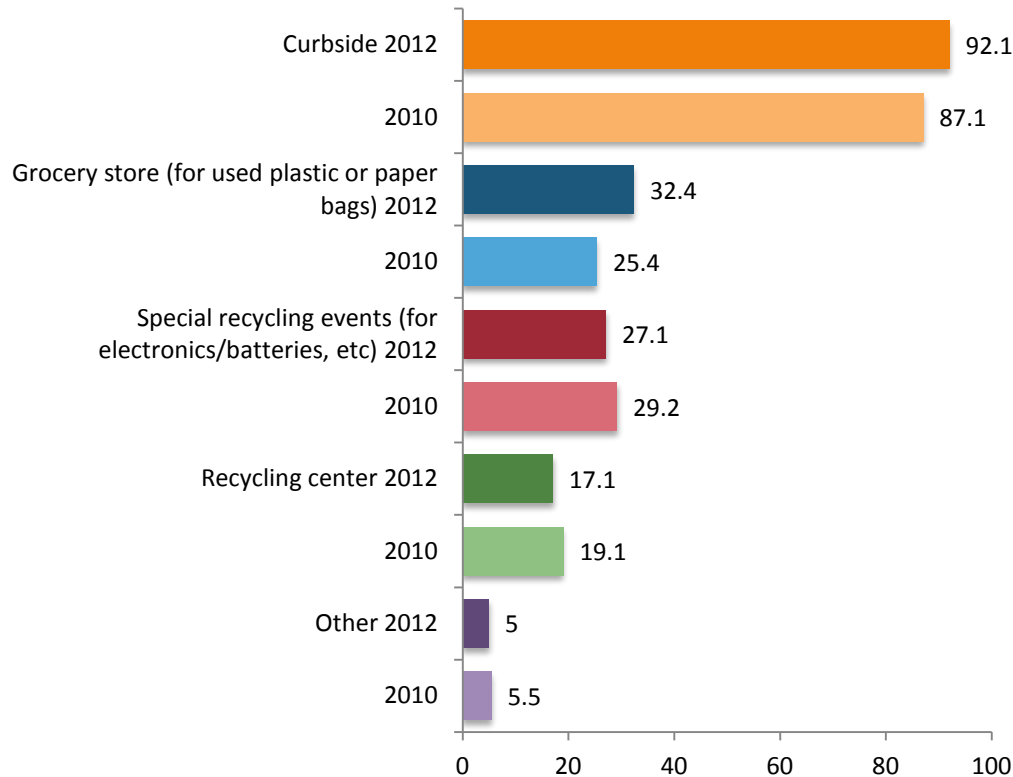
recycling rules
know the facts, Jack?



Recycling is easier than ever! Get all the info you need for recycling in Hampton Roads.

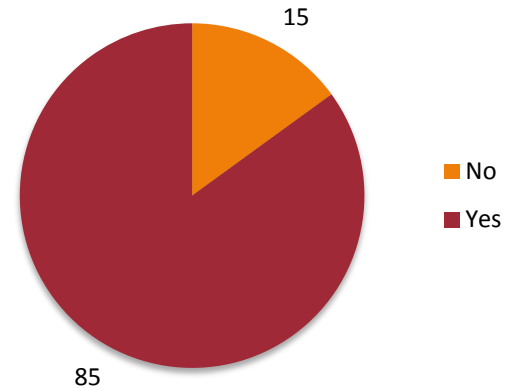
Recycling: Access and Participation

Recycling Methods

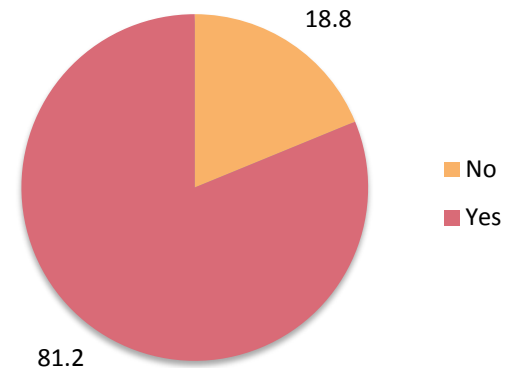


2012 responses show a small rise in those recycling regularly. While the change is not statistically significant at the 95% confidence level, it aligns with the general improvement trend seen throughout the data.

Do You Regularly Recycle? 2012



Do You Regularly Recycle? 2010

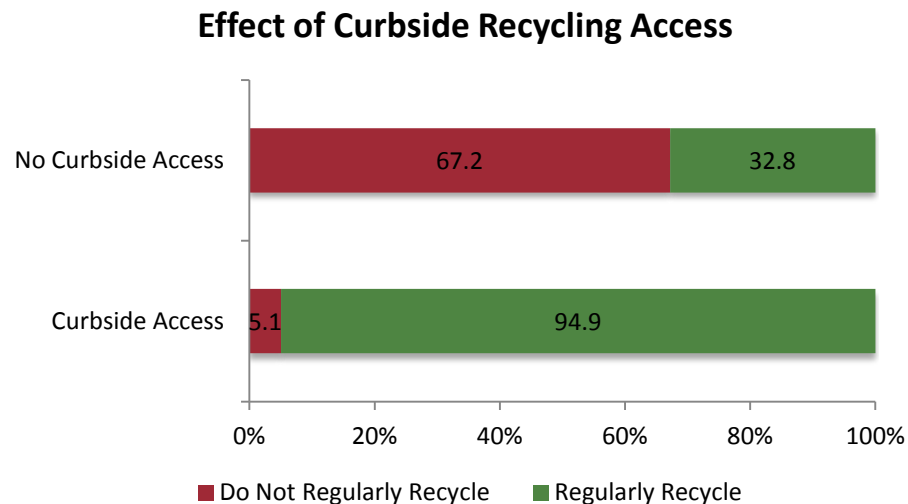


Recycling: Access and Participation

The availability and use of curbside recycling is very similar to 2010. It is the most popular method of recycling and only 5.7% of those with access to curbside recycling do not participate.

Those without access are an untapped resource.

The chart below suggests that the most effective method of increasing the *regular* recycling rate is to increase access to curbside pick-up.



Recycling: Access and Participation

Only 21.5% of respondents recycle 100% of recyclable materials. Nearly half (47.4%) recycle 80% (A17). While this shows a majority of the population recycling most materials, room to improve recycling *volume* remains.

The most common recycling drivers include **protecting the environment, reducing trash in landfills**, and **sustainability/preservation of resources** (A18).

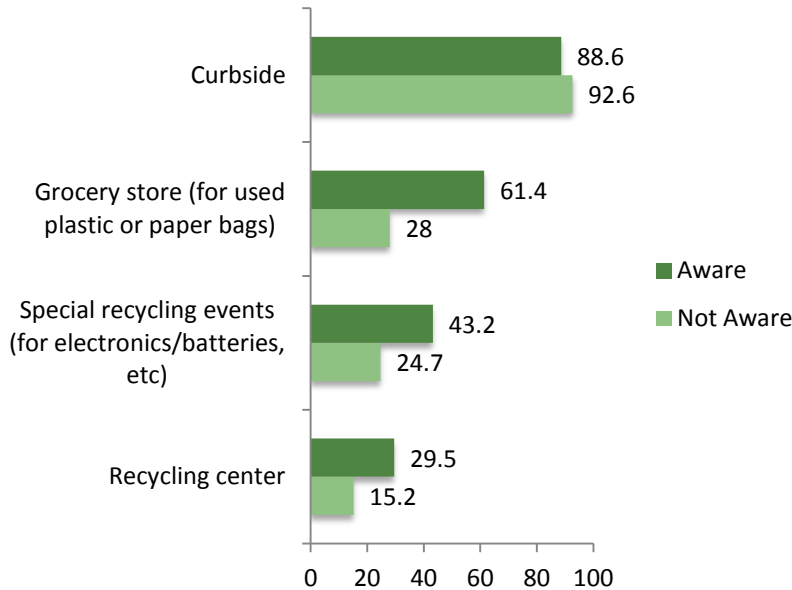
The most common and influential reasons for not recycling are **uncertainty of which items are recyclable, no residential pickup available**, and **the bin filling up too quickly** (A19, 20).

These barriers may be countered by:

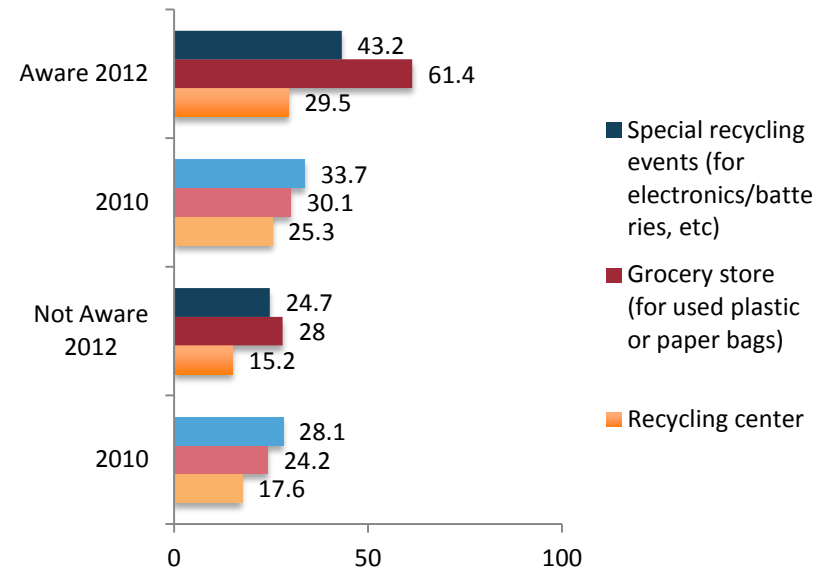
- Increasing access to residential recycling pickup
- Providing stickers for bins with a visual list of recyclable/non-recyclable items.
- Increasing awareness and ease of access to larger/extra bins

Recycling: Effect of askHRgreen

Recycling Participation by askHRgreen Awareness



Changes in Recycling Habits Among Those Aware of askHRgreen



Findings show askHRgreen-**aware** respondents are twice as likely as others to go out of their way, forgoing convenience, to recycle special items at proper locations. Since 2010, **aware** respondents have dramatically increased their participation in recycling at these locations. This reflects another great success for the campaign.

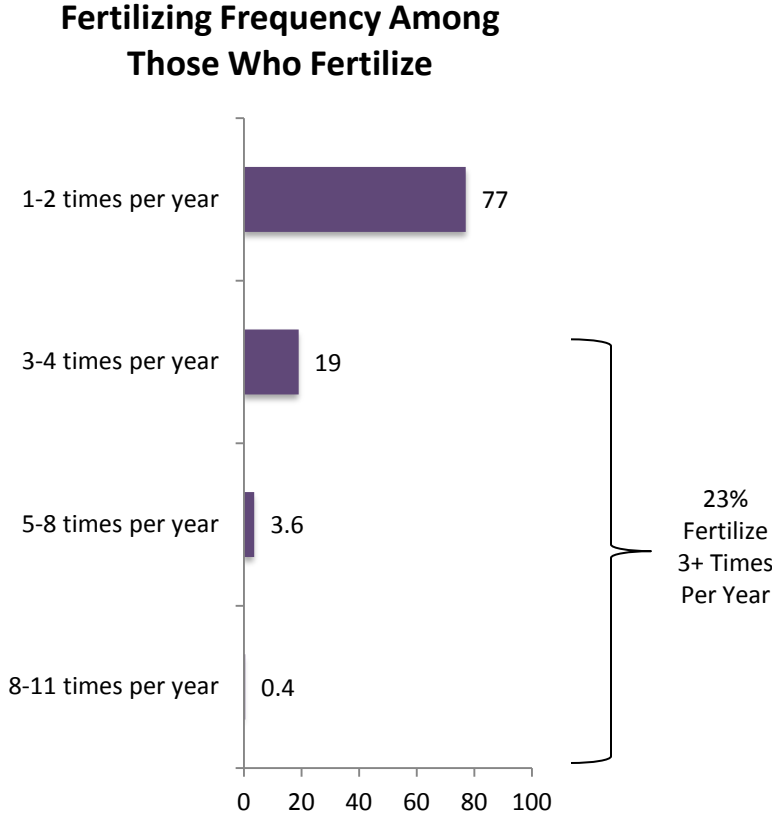
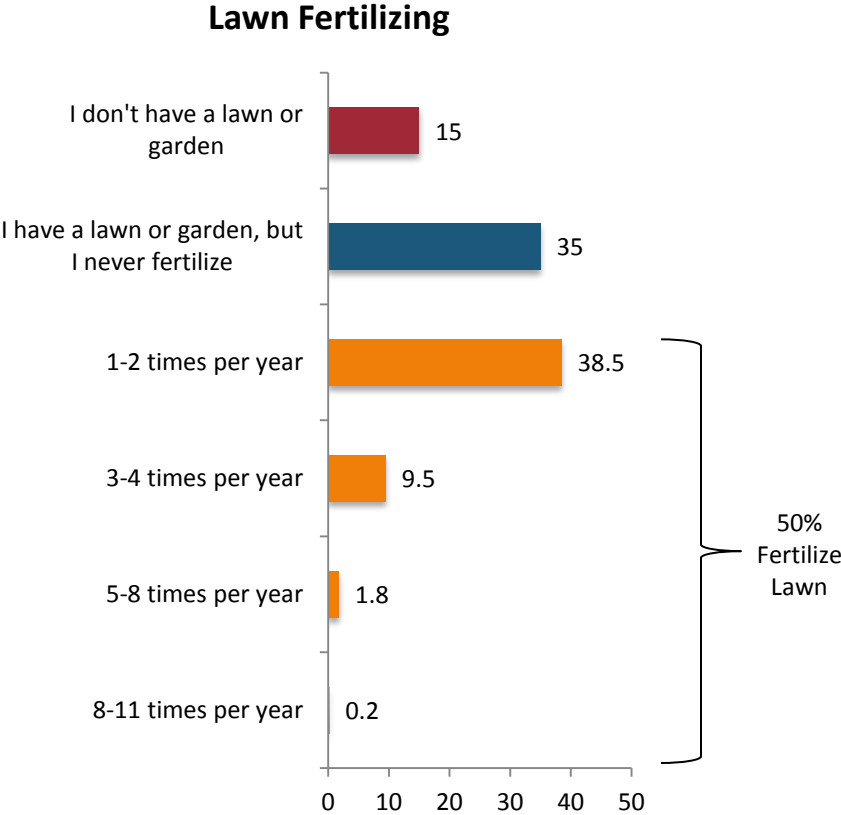
Soil, Fertilizer and Storm Drains

lawn fertilizer
stormwater washes it where?



Improper fertilizing adversely affects our waterways. And that makes for sad crabs. And sad crab eaters. >>>

Soil, Fertilizer and Storm Drains: Fertilizing Frequency



General population results for lawn fertilizing are essentially identical to those from 2010. There has been no overall change in frequency.

Soil, Fertilizer and Storm Drains: Fertilizing Frequency

Wealthy, married men aged **35+** represent the majority of fertilizer offenders. They are also very likely to be a **college graduate** and **unaware** of askHRgreen.

As the previous slide shows, nearly every person fertilizing 3+ times per year stops after 3-4 treatments. Ideal messaging should seek a slight reduction in use.

% of Those Who Fertilize Their Lawn by Frequency		1-2 Times Per Year (77%)	3+ Times Per Year (23%)
Gender	Male	67.0	33.0
	Female	85.3	14.7
Age	18-34	92.9	7.1
	35-49	66.7	33.3
	50+	78.7	21.3
Education	Not College Grad	85.1	14.9
	College Grad +	72.9	27.1
Income	<\$75K	84.7	15.3
	\$75K - \$100K	85.4	14.6
	> \$100K	66.2	33.8
Marital Status	Married	73.1	26.9
	Not Married	92.5	7.5
Aware of HRgreen	Yes, Aware	84.2	15.8
	No, Not Aware	76.2	23.8

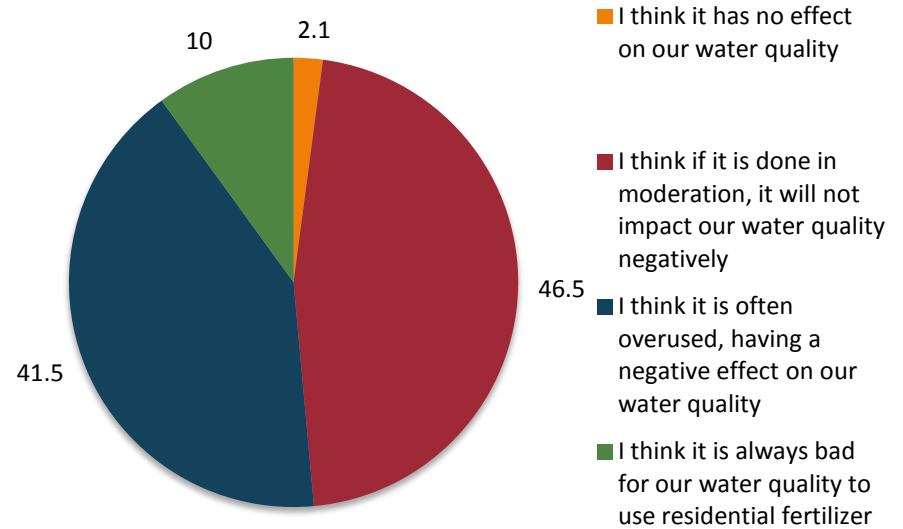
Soil, Fertilizer and Storm Drains: Fertilizing Impact

The response to this question is also nearly identical to 2010. There has been no change in general population opinion.

However, those **aware** of askHRgreen are approximately *half* as likely as others to believe that fertilizer does not harm our water quality, which represents a very significant change from the 2010 results and reflects the success of the campaign in spreading awareness.

Offenders are most likely unaware they are committing a negative behavior. Focusing on a recommended number of fertilizer uses in messaging may resolve the issue.

Fertilizing's Effect on Water Quality

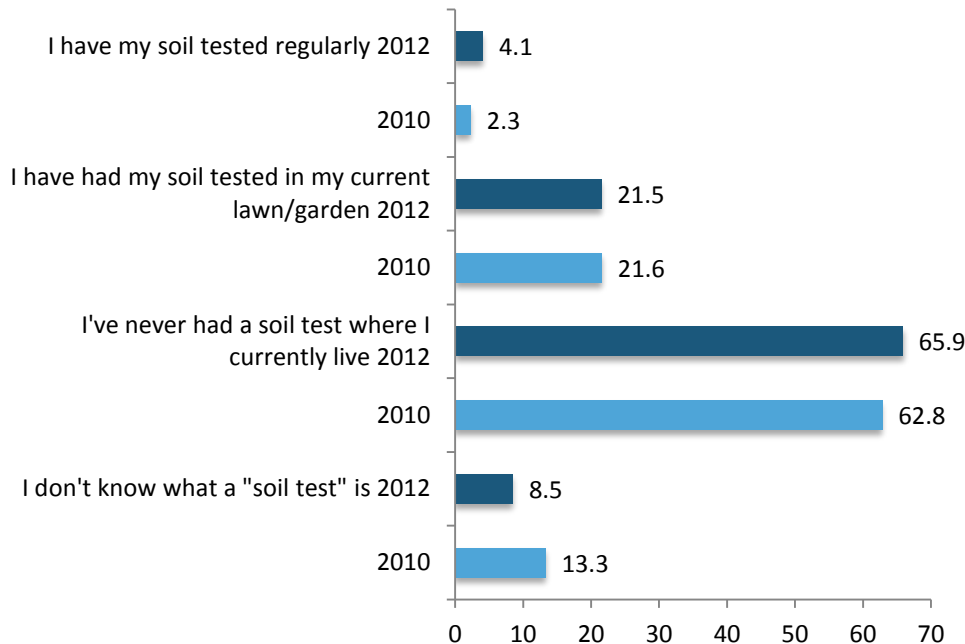


I think if it is done in moderation, it will not impact our water quality negatively		2010	2012
		45%	46.5%

Aware of HRgreen	Yes, Aware	46.2	27.9
	No, Not Aware	44.7	49.2

Soil, Fertilizer and Storm Drains: Soil Test Frequency

Soil Test Experience Among Those With Lawns



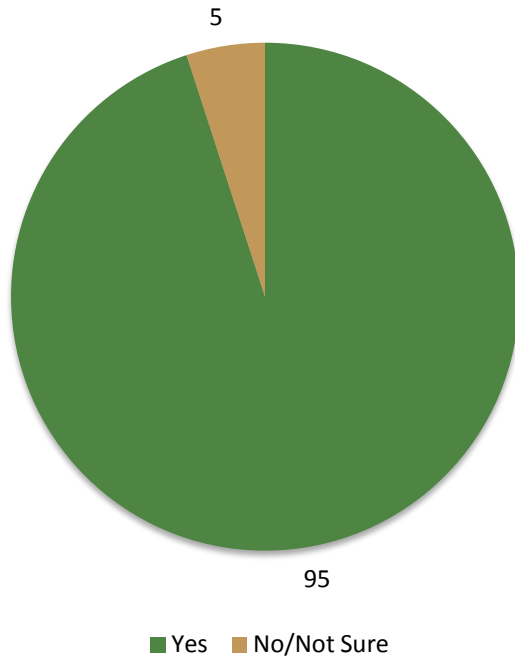
% of Those With Lawns Answering, "I've Never Had a Soil Test Where I Currently Live"

Age	18-34	78
	35-49	70.3
	50+	61.5
Education	Not College Grad	70.8
	College Grad +	62.6
Income	<\$75K	74.6
	\$75K - \$100K	72.2
	> \$100K	54.5
Marital Status	Married	63
	Not Married	73.4

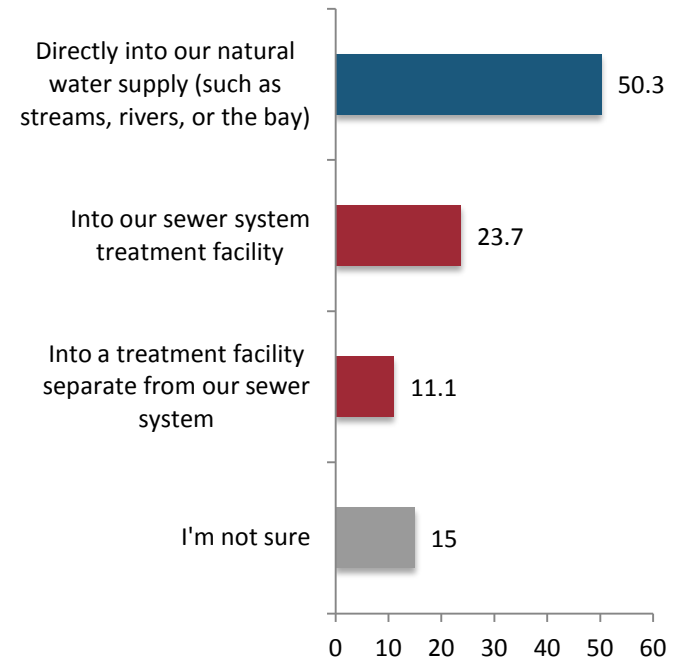
Again, soil test experience figures are nearly identical to those from 2010. Those *inexperienced* with soil tests are most likely to be **single, non-college** graduates under **50**, with an income **<\$100,000**. However, inexperience is common among all respondents and message targeting of homeowners is likely the most effective strategy. The askHRgreen-**aware** respondents do not show a greater level of experience with soil testing than others. This area of the campaign may benefit from extra attention.

Soil, Fertilizer and Storm Drains: Storm Drain Comprehension

Knows What a Storm Drain Is



Where Does the Storm Drain Flow?



As with the soil testing data, storm drain awareness and comprehension is unchanged from the benchmark study. Half of the population is ignorant of storm drains' direct flow into water supplies. However, 57.4% of askHRgreen-**aware** respondents correctly identified the flow compared to 49.2% of others (A21).

Executive Summary of Recommendations



Programmatic Recommendations:

- **Raising Awareness: Brand Ambassadors.** The askHRgreen campaign has proven very effective in educating and modifying the behavior of their audience. The askHRgreen-aware in the community are walking the walk. Consider leveraging them as brand ambassadors to grow popularity, using their contacts to raise awareness through special events and contests. For example, a prize may be awarded to those who recruit the most blog or newsletter subscribers for askHRgreen.
- **Raising Awareness: Youth.** Consider reaching parents through their children. The Green Learning Guide and selection of classroom lesson plans offered through the website are excellent resources that engage children by providing informative content and exercises. Encouraging some level of parent involvement with exercises that require visiting the askHRgreen website may be an effective means of spreading awareness. In addition, consider adding a web tab exclusively for children.
- **Push Website Visitation and Social Media Subscription.** Once individuals reach the website, the content is engaging and convincing. With a 33% visitation rate among those aware of askHRgreen (4% of the total population), there is significant opportunity for growth. Web scavenger hunts, contests, and encouraging viewers to share links to helpful pages, tools, or blog entries from askHRgreen.org may offer added incentive to visit and explore the website. Additionally, consider Facebook contests that require “liking” askHRgreen’s page as a requirement for contest entry. Participants are then encouraged to share the contest page with friends.

Communication Recommendations: Message Content and Form

- **Emphasize Behavior End Results.** Educate about the full link from negative behavior (action) to result and personal experience. Many understand the direct effect of an action, but are less likely to know the end result for the environment or the effect it has on their personal experience. For example, many respondents understand that over-fertilizing leads to Nitrogen and Phosphorous in the water, but not that it leads to algae blooms that make the water discolored, foul smelling, and unpleasant for recreational use.

Communication Recommendations: Message Content and Form

- **Address Areas Showing the Least Behavioral Improvement:** While the Hampton Roads community has improved its environmental awareness and behavior, some topics have not improved as much as others. Survey results suggest the following actions may improve results:
 - Soil Testing
 - Focus messaging on homeowners, especially older and wealthier, who fertilize.
 - Fertilizer
 - Spotlight the specific recommended number of times to fertilize. Consider framing the message to highlight “yard health” or another nod to homeowners’ desire for an attractive property within the context of the environmental message.
 - Recycling
 - Increasing access to curbside recycling presents the greatest opportunity for raising recycling rates. Consider working toward incentives or regulation for property owners in apartment complexes, etc. In addition, clarifying that homeowners may use non-traditional containers for overflow and which materials are recyclable may further increase recycling rates.
 - Feeding Wildlife
 - Compassionate individuals displaying the best environmental behavior elsewhere are the most likely to feed wildlife. Appeal to this compassion by focusing on the harm feeding does to the animals in addition to the local environment. Feeding is not a frequent activity, so offenders may not feel as though they do it often enough to matter. Emphasize the impact of individual offenses.

Communication Recommendations: Message Targeting

Runoff (Bare patches in yards, pet waste, fertilizer, raking/blowing leaves into drains)

Offenders: single family homeowners with yards.

- Focus messaging in low-density locales (single family homes/homes with large yards)
- Target older, wealthier individuals for fertilization messaging.
- Younger, <\$75,000 income (especially singles) are more likely to leave pet waste on the ground or bare patches in the yard.

Garbage Disposals

Offenders: general population, especially older, wealthier, married, and educated.

- Fully half of the population uses a garbage disposal frequently, and almost exclusively without hesitation. In accordance with its popularity, use of garbage disposals is not considered harmful and any negative effects are either unknown or ignored.
- Change requires instilling a new perception of garbage disposals throughout the community on a grand scale.
- Consider emphasizing the benefits and ease of composting as a primary message leader, supported by the harm caused by garbage disposal use.

Communication Recommendations: Message Targeting

Tap Water

Offenders: young, <\$75,000 income, and especially non-graduates.

Recycling (Recyclable materials, plastic grocery bags)

Offenders: general population.

- Though offenders skew single, younger, and <\$75,000 income (less likely to have curbside access), offenders are common among all demographics. Any messaging can be directed toward the general population, though behind-the-scenes efforts to increase curbside access may be more fruitful.

Littering (Cigarette butts, trash)

Offenders: young, <\$75,000 income, non-graduates, and often single.

- Though not common among the general population, offenders litter very frequently.
- Focus messaging by location, targeting sites with above average litter.
- 2010 focus groups suggest offenders litter frequently because they live in high-litter areas and see no harm to themselves in doing so. Messages communicating the harm to oneself (and ones' neighbors) may begin to shift community acceptance of the practice.

Communication Recommendations: Message Targeting

Household (Oils in the drain, unrepaired leaks, flushing inappropriate materials)

- Offenders: young, single, <\$75,000 income, non-graduates.
- Young, single non-graduates with a <\$75,000 income are almost exclusively guilty of pouring oils in the drain and leaving leaks unrepaired, with males being slightly more likely to pour oils.
- Neither oils in the drain nor unrepaired leaks are common and frequent behaviors, even for offenders.
- Flushing inappropriate materials is somewhat common among all demographics, with a greater incidence among younger, <\$75,000 income females.

General

- General HRGreen promotion (i.e. non behavior-specific) among <\$75,000 income, non-graduate singles may be the most cost-efficient media approach.
 - Consider prizes, coupon offerings, and/or other financial benefits as incentives for website visitation among this audience.

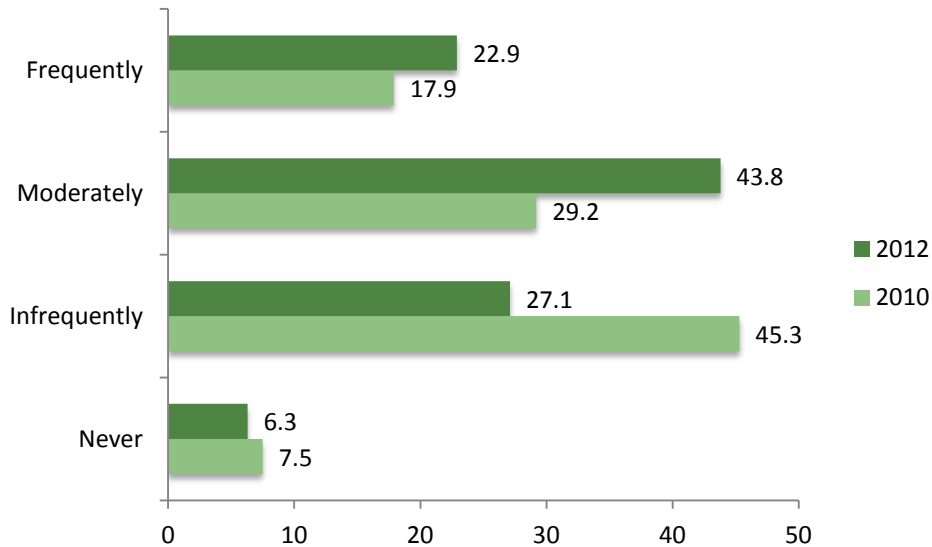
Appendix



Knowledge and Learning: Pursuit of Information

1

Frequency of Seeking Environmental Information Among Those Aware of askHRgreen



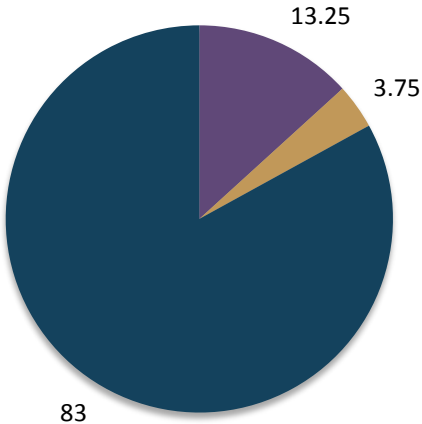
2

% Who Seek Information Infrequently		2010 44.7%	2012 46.8%
Gender	Male	41.8	47.6
	Female	47.2	46.1
Age	18-34	41.6	49.1
	35-49	46.6	42.9
	50+	44.8	48.1
Education	Not College Grad	48.0	49.4
	College Grad +	41.9	45.2
Income	<\$75K	45.9	47.5
	\$75K - \$100K	49.0	50
	> \$100K	38.1	45.8
Marital Status	Married	44.4	50.2
	Not Married	44.4	39.7
Knows Local Env. Issues Well	Yes (Top-2)	34.7	35.9
	No (Bot-3)	50.8	54.8
Aware of HRgreen	Yes, Aware	45.3	27.1
	No, Not Aware	44.5	49.4

Knowledge and Learning: Total Maximum Daily Load (TMDL)

3

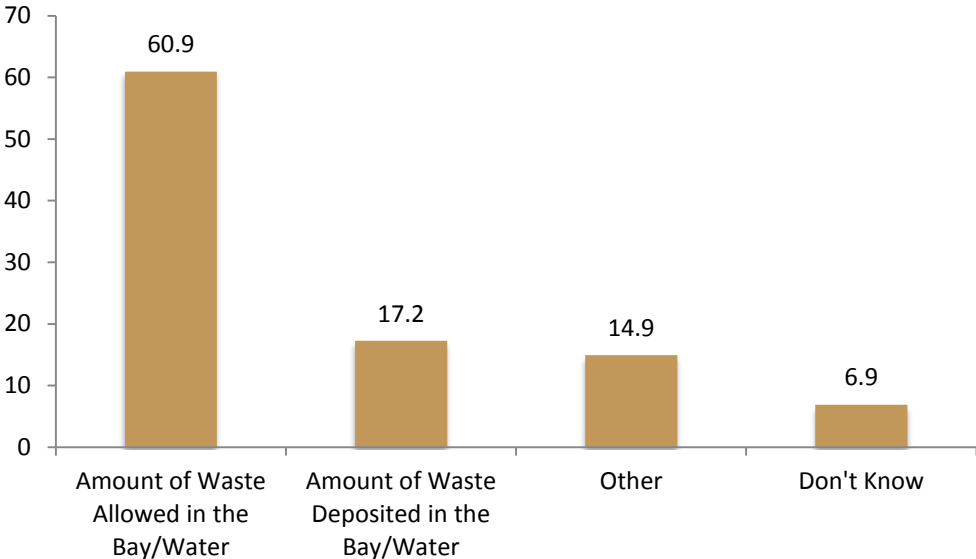
% Both Confident and Accurate in Understanding of TMDL



- Amount of Waste Allowed in the Bay/Water
- Amount of Waste Deposited in the Bay/Water
- Unsure

4

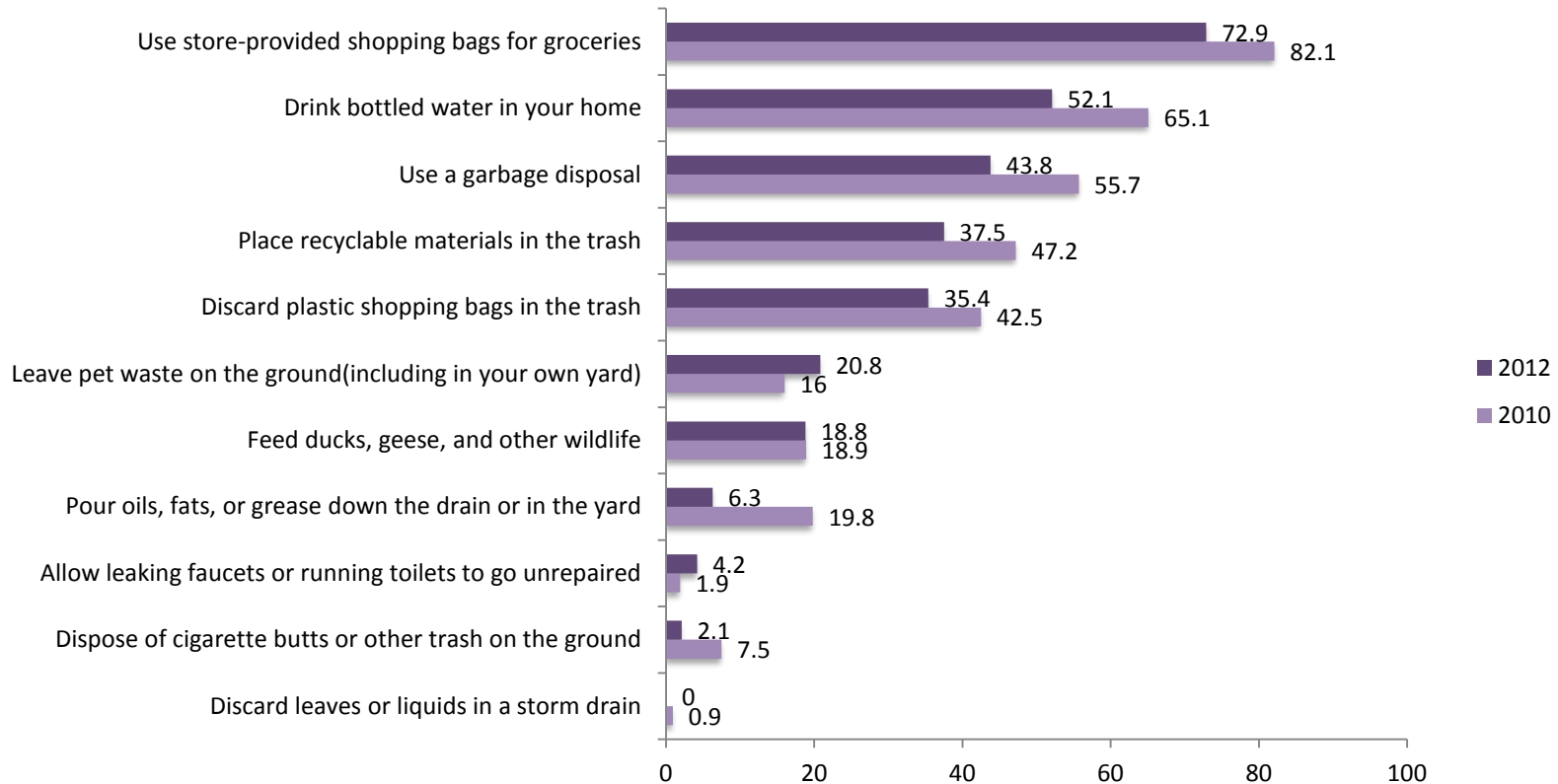
**TMDL Definitions
(From Somewhat Confident and Very Confident)**



Behavior and Practices: Offenders

5

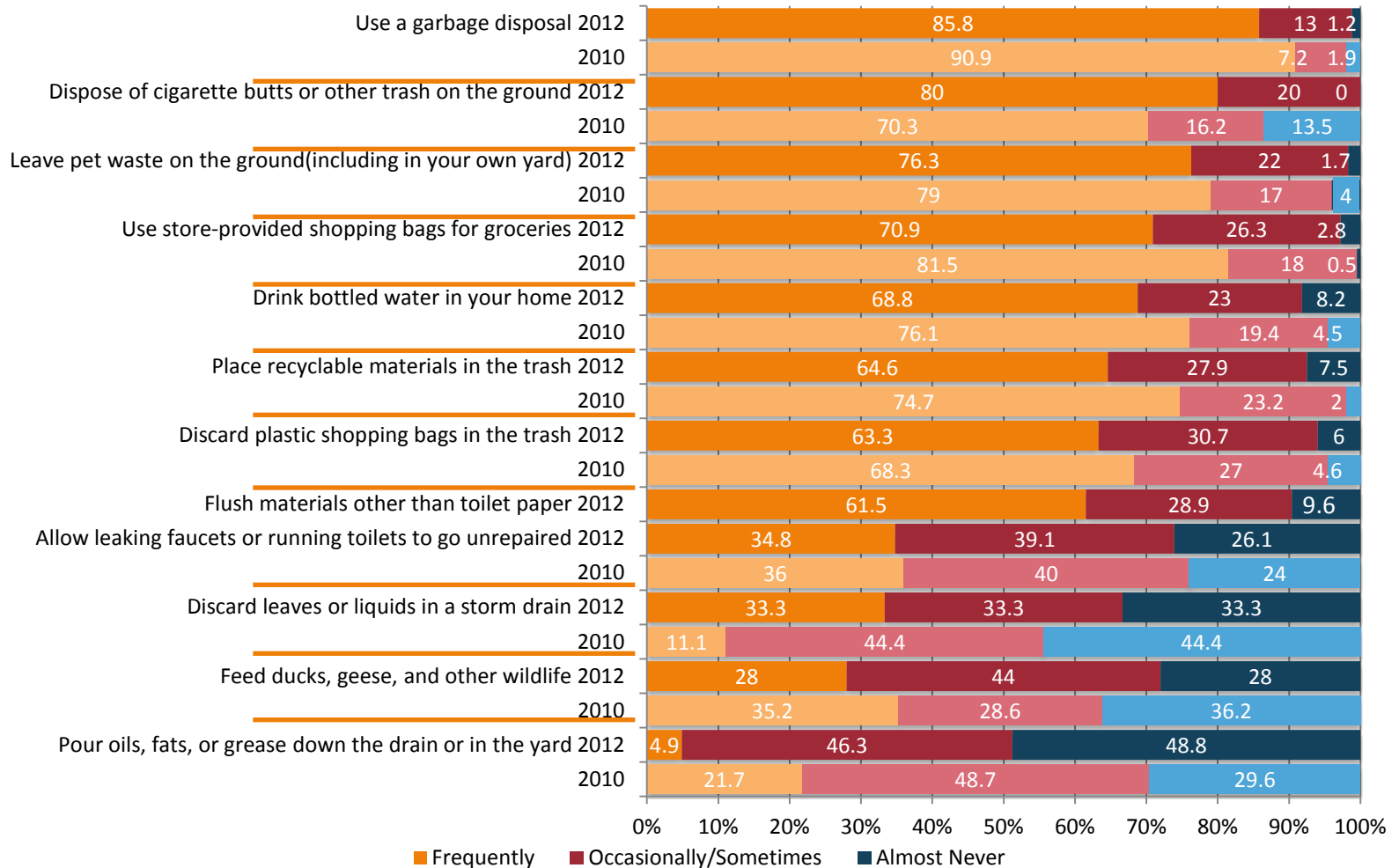
% of askHRgreen-Aware Respondents Committing Negative Behaviors



Behavior and Practices: Frequency

6

Frequency of Negative Behavior



Behavior and Practices: Frequent Offenders

7

The tables in the following three slides are intended to assist in targeting the most frequent offenders for each behavior. Highlighted subgroups display the target demographics. Subgroups lacking substantial differentiation for individual behaviors are not included.

Dispose of cigarette butts or other trash on the ground*	Total		Age			Education		Income			Marital Status			
			18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K	Married	Not Married		
	Frequently	3.0	10.5	2.7	1.3	6.5	0.4	6.3	2.6	0.0	2.2	4.6		
	Occasionally	0.8	0.0	1.8	0.4	1.8	0.0	0.6	1.3	0.8	0.7	0.8		
Allow leaking faucets or running toilets to go unrepaired*	Total		Age			Education		Income			Marital Status			
			18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K	Married	Not Married		
	Frequently	2.0	3.5	1.8	1.7	1.8	2.2	3.8	1.3	0.0	0.7	4.6		
	Occasionally	2.3	3.5	3.6	1.3	3.5	1.3	0.6	1.3	3.4	2.2	2.3		
Pour oils, fats, or grease down the drain or in the yard	Total		Gender		Age			Education		Income			Marital Status	
			Male	Female	18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K	Married	Not Married
	Frequently	0.5	0.6	0.4	1.8	0.0	0.4	1.2	0.0	0.6	0.0	0.0	0.4	0.8
	Occasionally	4.8	6.5	3.4	8.8	5.4	3.5	5.9	3.9	6.3	9.0	1.7	3.0	8.4
Feed ducks, geese, and other wildlife	Total		Gender		Age			Education		Income				
			Male	Female	18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K		
	Frequently	3.5	1.8	4.7	7.0	0.9	3.9	4.7	2.6	6.3	2.6	0.8		
	Occasionally	5.5	3.6	6.9	8.8	8.0	3.5	8.2	3.5	8.9	2.6	3.4		

*Sample size is too small to be reliable.

Behavior and Practices: Frequent Offenders

Behaviors with high frequencies may suggest a target demographic that displays the **most** frequency, but is not necessarily the *only* valid target demographic. Behaviors eliciting high frequencies with all subgroups may be most efficiently combatted with a broadly targeted program.

Flush materials other than toilet paper	Total		Gender		Age			Income						
			Male	Female	18-34	35-49	50+	<\$75K	\$75K - \$100K	>\$100K				
	Frequently	8.0	6.0	9.5	17.5	11.6	3.9	10.1	7.7	5.9				
	Occasionally	3.8	1.8	5.2	8.8	3.6	2.6	1.9	5.1	2.5				
Leave pet waste on the ground (including in your own yard)	Total		Gender		Age			Education			Income		Marital Status	
			Male	Female	18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	>\$100K	Married	Not Married
	Frequently	11.3	5.4	15.5	26.3	12.5	6.9	15.3	8.3	15.8	9.0	6.8	9.3	15.3
	Occasionally	3.3	3.6	3.0	3.5	6.3	1.7	1.8	4.4	1.9	5.1	3.4	3.3	3.1
Place recyclable materials in the trash	Total		Age			Income			Marital Status					
			18-34	35-49	50+	<\$75K	\$75K - \$100K	>\$100K	Married	Not Married				
	Frequently	23.8	26.3	29.5	20.3	24.7	26.9	21.2	21.9	27.5				
	Occasionally	10.3	19.3	8.9	8.7	9.5	9.0	11.0	8.2	14.5				
Discard plastic shopping bags in the trash	Total		Age			Education		Income			Marital Status			
			18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	>\$100K	Married	Not Married		
	Frequently	26.3	31.6	26.8	24.7	32.9	21.5	31.0	20.5	25.4	24.9	29.0		
	Occasionally	12.8	5.3	19.6	11.3	10.0	14.9	10.1	19.2	11.0	13.8	10.7		

Behavior and Practices: Frequent Offenders

Drink bottled water in your home		Age			Education		Income						
	Total	18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K				
	Frequently 39.8	40.4	47.3	35.9	46.5	34.6	42.4	34.6	37.3				
Occasionally 13.3	17.5	17.0	10.4	12.4	14.0	15.8	11.5	11.9					
Use a garbage disposal	Total	Gender		Age			Education		Income		Marital Status		
		Male	Female	18-34	35-49	50+	Not College Grad	College Grad +	<\$75K	\$75K - \$100K	> \$100K	Married	Not Married
	Frequently 52.8	58.3	48.7	45.6	48.2	56.7	50.0	54.8	46.8	50.0	68.6	56.1	45.8
Occasionally 8.0	7.7	8.2	5.3	10.7	7.4	3.5	11.4	6.3	7.7	7.6	9.3	5.3	
Use store-provided shopping bags for groceries	Total	There are no significant differences among respondents using store-provided shopping bags for groceries.											
	Frequently 50.5												
	Occasionally 18.8												

Behavior and Practices: Low Frequency

8

Frequency of Negative Behaviors with askHRgreen Awareness*							
		Frequently		Occasionally		Almost Never	
		Aware	Not Aware	Aware	Not Aware	Aware	Not Aware
Leave pet waste on the ground	2012	70	77.6	30	20.4	0	2
	2010	82.4	78.3	17.6	16.9	0	4.8
Use store-provided shopping bags for groceries	2012	65.7	71.6	31.4	25.6	2.9	2.8
	2010	75.9	83	23	16.7	1.1	0.3
Use a garbage disposal	2012	61.9	88	38.1	10.7	0	1.3
	2010	83.1	92.7	11.9	6.2	5.1	1.2
Place recyclable materials in the trash	2012	55.6	65.9	27.8	27.9	16.7	6.2
	2010	72	75.7	28	21.6	0	2.7
Drink bottled water in your home	2012	52	70.9	44	20.4	4	8.7
	2010	76.8	76	15.9	20.2	7.2	3.8
Discard plastic shopping bags in the trash	2012	29.4	67.1	58.8	27.5	11.8	5.4
	2010	62.2	69.6	37.8	24.8	0	5.6
Pour oils, fats, or grease down the drain or in the yard	2012	0	5.2	33.3	47.4	66.7	47.4
	2010	19	22.3	42.9	50	38.1	27.7
Feeding ducks, geese, or other wildlife	2012	33.3	26.8	44.4	43.9	22.2	29.3
	2010	45	32.9	25	29.4	30	37.6
Flush materials other than toilet paper	2012	0	68.9	71.4	22.2	14.3	8.9

*Sample size too small to display some behaviors

Behavior and Practices: Perceptions

9

Perceived Harm of Behaviors by askHRgreen Awareness							
		Extremely Harmful		Harmful		Combined	
		Aware	Not Aware	Aware	Not Aware	Aware	Not Aware
Placing leaves or other trash in storm drains	2012	60.4	45.7	31.3	41.5	91.7	87.2
	2010	39.6	31.1	50	53.5	89.6	84.6
Leaving cigarette butts or trash on the ground	2012	54.2	42.6	37.5	45.2	91.7	87.8
	2010	35.8	33.3	50.9	51.3	86.7	84.6
Pour oils, fats, or grease down the drain or in the yard	2012	60.4	51.7	29.2	34.7	89.6	86.4
	2010	44.3	39.4	38.7	40.3	83	79.7
Allowing leaking faucets or running toilets to go unrepaired	2012	39.6	36.4	43.8	45.7	83.4	82.1
	2010	38.7	29.1	49.1	53.1	87.8	82.2
Place recyclable materials in the trash	2012	25	15.3	50	48.9	75	64.2
	2010	15.1	13.9	49.1	50.6	64.2	64.5
Discard plastic shopping bags in the trash	2012	33.3	18.8	41.7	47.7	75	66.5
	2010	14.2	16.4	51.9	41.3	66.1	57.7
Leave pet waste on the ground	2012	39.6	30.7	31.3	37.2	70.9	67.9
	2010	25.5	23.7	35.8	36.7	61.3	60.4
Feeding ducks, geese, or other wildlife	2012	16.7	16.5	27.1	26.4	43.8	42.9
	2010	6.6	11.7	22.6	17.6	29.2	29.3
Drink bottled water in your home	2012	18.8	9.4	14.6	26.7	33.4	36.1
	2010	17	16.4	13.2	17.1	30.2	33.5
Use store-provided shopping bags for groceries	2012	12.5	6.3	37.5	21.9	50	28.2
	2010	7.5	14.9	13.2	14.4	20.7	29.3
Use a garbage disposal	2012	2.1	4	18.8	9.1	20.9	13.1
	2010	14.2	25.2	26.4	24.9	40.6	50.1
Flush materials other than toilet paper	2012	31.3	36.4	39.6	44	70.9	80.4

Behavior and Practices: Cause and Effect % With Correct Responses

10

Action		Effect	Result	Affects Me
Rake or Blow Leaves into the Street		Organic Material Is Carried to Local Waterways via the Storm Drain	Leaves and Grass Decompose, Using Up Dissolved Oxygen that Is Needed by Fish and Crabs	Decline in Population of Local Fish and Crabs
Gender	Male	54.2	44.6	55.4
	Female	50.9	47	51.7
Age	18-34	40.4	33.3	35.1
	35-49	52.7	42.9	49.1
	50+	55	50.6	59.7
Education	Not College Grad	42.4	41.2	47.6
	College Grad +	60.1	50	57.9
Income	<\$75K	46.8	44.9	49.4
	\$75K - \$100K	61.5	51.3	66.7
	> \$100K	55.9	46.6	51.7
Marital Status	Married	52.8	47.2	53.2
	Not Married	51.1	43.5	53.4
Knows Local Env. Issues Well	Yes (Top-2)	59.4	52.9	58.8
	No (Bot-3)	47	40.9	49.1
Aware of HRgreen	Yes, Aware	68.8	62.5	60.4
	No, Not Aware	50	43.8	52.3

Behavior and Practices: Cause and Effect % With Correct Responses

11

Action		Effect	Result	Affects Me
Leave Pet Waste on the Ground		Bacteria Is Carried to Local Waterways Via the Storm Drain	Water Becomes Contaminated	Cannot Swim at Local Beaches nor Eat Local Seafood
Gender	Male	48.2	59.5	20.8
	Female	59.5	63.8	21.6
Age	18-34	45.6	49.1	15.8
	35-49	54.5	58	22.3
	50+	57.1	67.1	22.1
Education	Not College Grad	55.3	60	17.6
	College Grad +	54.4	64	23.7
Income	<\$75K	55.7	62	19.6
	\$75K - \$100K	48.7	60.3	20.5
	> \$100K	56.8	63.6	22.9
Marital Status	Married	54.6	63.9	21.9
	Not Married	55	58	19.8
Knows Local Env. Issues Well	Yes (Top-2)	58.2	65.9	27.6
	No (Bot-3)	52.2	59.1	16.5
Aware of HRgreen	Yes, Aware	60.4	66.7	27.1
	No, Not Aware	54	61.4	20.5

Behavior and Practices: Cause and Effect % With Correct Responses

12

Action		Effect	Result	Affects Me
Throw Cigarette Butts and Other Trash on the Ground		Litter Is Carried to Local Waterways via the Storm Drain	Waterways Become Polluted With Litter	Unpleasant for Swimming and Harms Aquatic Life
Gender	Male	61.3	48.8	24.4
	Female	65.1	48.7	25.4
Age	18-34	64.9	49.1	28.1
	35-49	59.8	47.3	19.6
	50+	64.9	49.4	26.8
Education	Not College Grad	62.9	44.7	21.8
	College Grad +	64	51.8	27.2
Income	<\$75K	67.1	51.9	27.8
	\$75K - \$100K	60.3	47.4	30.8
	> \$100K	62.7	50	20.3
Marital Status	Married	63.9	51.3	23.8
	Not Married	62.6	43.5	27.5
Knows Local Env. Issues Well	Yes (Top-2)	63.5	54.1	27.1
	No (Bot-3)	63.5	44.8	23.5
Aware of HRgreen	Yes, Aware	56.3	41.7	18.8
	No, Not Aware	64.5	49.7	25.9

Behavior and Practices: Cause and Effect % With Correct Responses

13

Action		Effect	Result	Affects Me
Leave Bare Spots in Yard		Dirt Is Carried to Local Waterways via the Storm Drain	Waterways Become Cloudy from Excessive Sediment	Decline in Population of Fish, Oyster and Other Aquatic Life
Gender	Male	57.1	47	25
	Female	47	38.4	16.4
Age	18-34	29.8	19.3	10.5
	35-49	38.4	36.6	11.6
	50+	62.8	50.2	26.4
Education	Not College Grad	42.4	33.5	15.3
	College Grad +	58.3	48.7	23.7
Income	<\$75K	48.1	34.2	15.8
	\$75K - \$100K	56.4	51.3	23.1
	> \$100K	55.9	49.2	25.4
Marital Status	Married	52.4	44.6	21.6
	Not Married	48.9	36.6	16.8
Knows Local Env. Issues Well	Yes (Top-2)	60.6	52.9	27.1
	No (Bot-3)	44.3	33.9	14.8
Aware of HRgreen	Yes, Aware	60.4	54.2	29.2
	No, Not Aware	50	40.3	18.8

Behavior and Practices: Cause and Effect % With Correct Responses

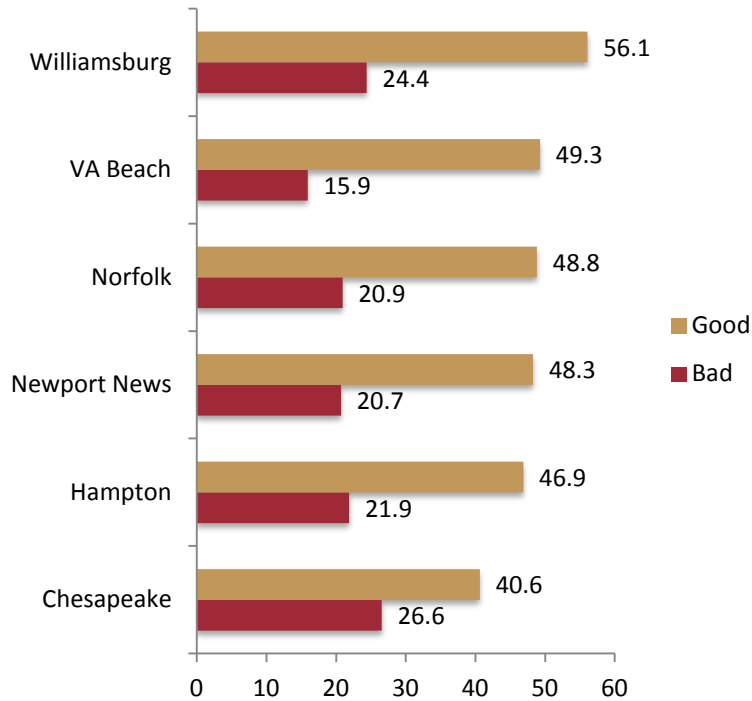
14

Action		Effect	Result	Affects Me
Over Fertilize Lawn		Nitrogen and Phosphorus Is Carried to Local Waterways via the Storm Drain	Algae Blooms Grow Quickly	Waterways Become Discolored, Smell Foul and Are Not Desirable for Swimming or Boating
Gender	Male	69.6	42.9	7.1
	Female	61.6	20.3	6.5
Age	18-34	33.3	14	7
	35-49	65.2	22.3	7.1
	50+	72.7	37.2	6.5
Education	Not College Grad	55.9	21.8	6.5
	College Grad +	72.4	35.5	7
Income	<\$75K	57	22.2	7
	\$75K - \$100K	74.4	35.9	5.1
	> \$100K	70.3	37.3	8.5
Marital Status	Married	70.6	34.6	6.7
	Not Married	53.4	19.8	6.9
Knows Local Env. Issues Well	Yes (Top-2)	74.1	45.9	8.2
	No (Bot-3)	58.3	17.8	5.7
Aware of HRgreen	Yes, Aware	77.1	50	12.5
	No, Not Aware	63.4	27	6

Tap Water: Flavor

15

Tap Water Flavor Perceptions by City



16

% Who Say Their Tap Water Has a Bad Flavor

2010
17.3%

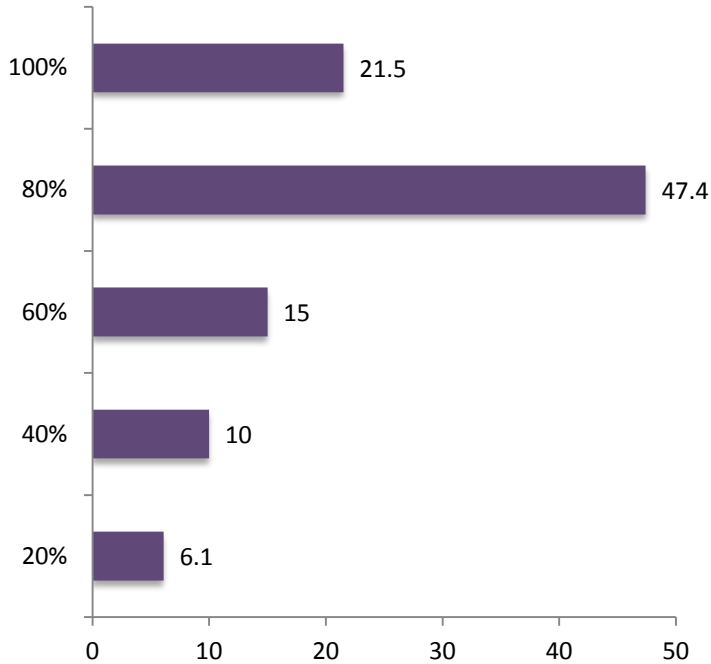
2012
19.5%

		2010	2012
Gender	Male	14.3%	16.1
	Female	19.9%	22
Age	18-34	28.7%	35.1
	35-49	17.2%	22.3
	50+	12.8%	14.3
Education	Not College Grad	21.5%	25.3
	College Grad +	13.7%	14.9
Income	<\$75K	24.9%	24.7
	\$75K - \$100K	9.2%	15.4
	\$100K+	11.0%	11.9
Married	Yes	16.0%	16
	No	18.7%	26.7

Recycling: Access and Participation

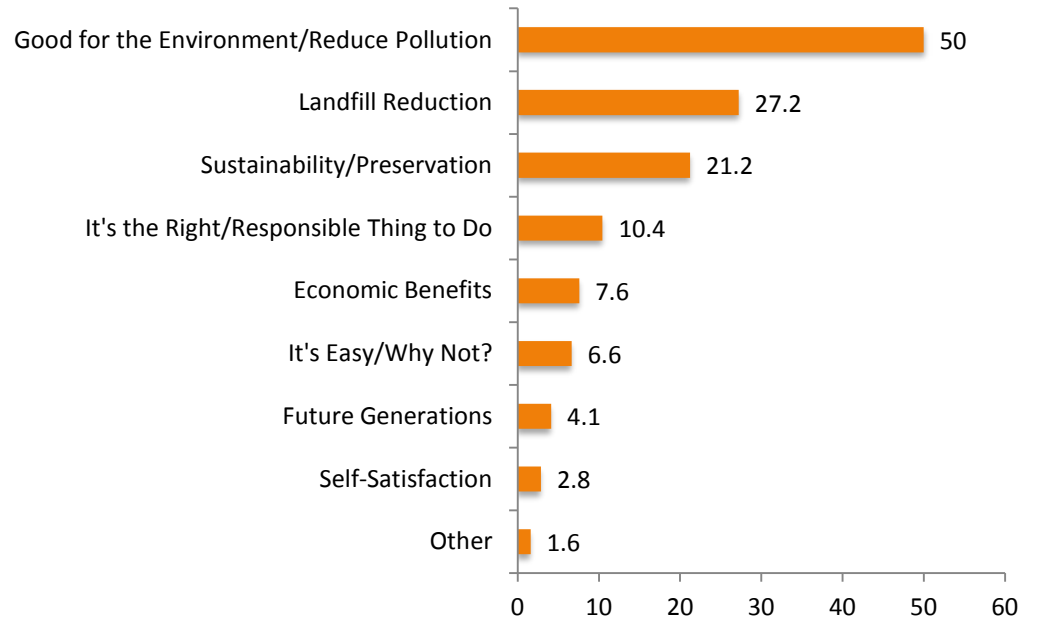
17

% of Recyclable Materials Recycled



18

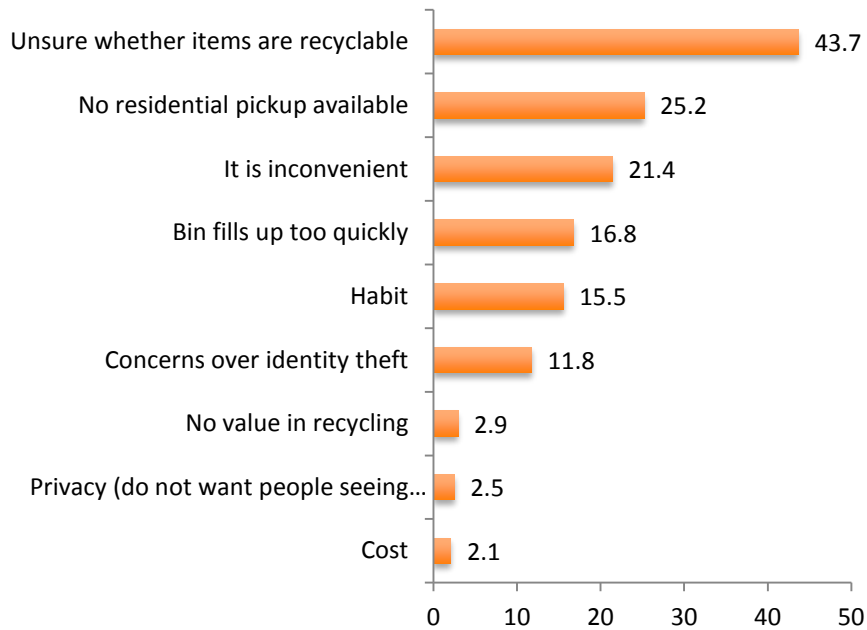
**Why Do You Recycle?
(Multiple Responses Allowed)**



Recycling: Access and Participation

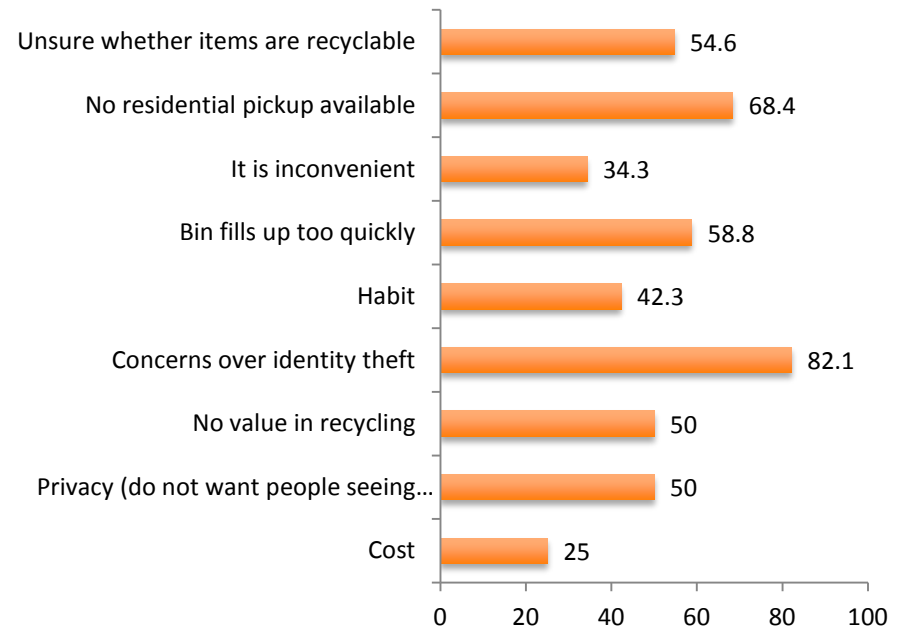
19

Reasons For Not Recycling



20

% Rating Reasons as Influential



Soil, Fertilizer and Storm Drains: Storm Drain Comprehension

21

Storm drain water flows directly into our water supply		50.3%
Aware of HRgreen	Yes, Aware	57.4
	No, Not Aware	49.2