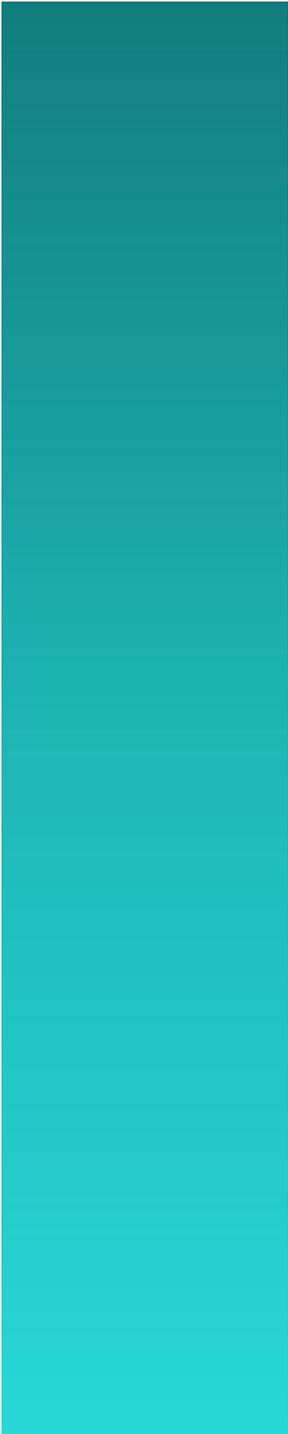


2015 Project WIN / MS4 Public Behavior Change Assessment Survey Summary

October 27, 2015

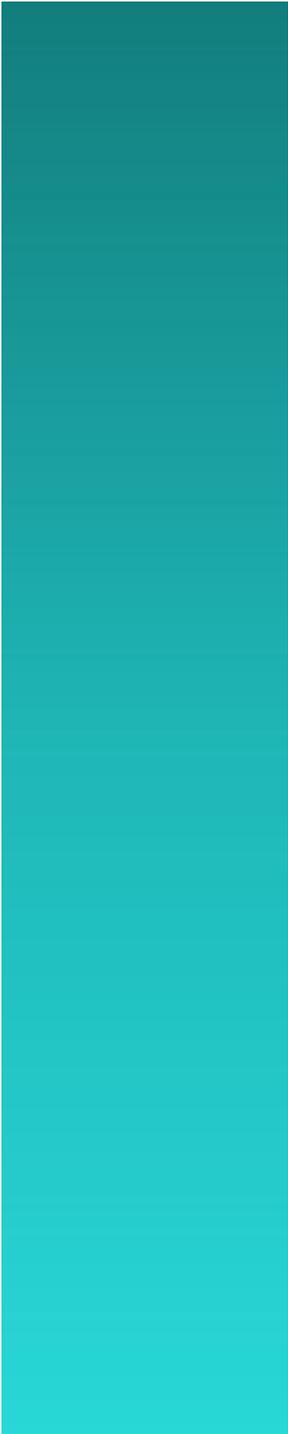


REPORT CONTENTS

- Survey Objectives
- Survey Overview
- Key Findings
- Detailed Findings
- Appendix A: Online Survey
- Appendix B: Zip Code Segmentation Maps

Survey Objectives

- The purpose of the survey was to understand the following prior to developing a Project WIN public outreach communications strategy:
 - Public attitudes toward clean waterways as an environmental issue.
 - Awareness and knowledge of key water pollution issues.
 - Public willingness to change behaviors to improve and protect the community's waterways.
 - Updated elements of an effective strategic public outreach communications plan.



SURVEY OVERVIEW

OVERVIEW – Online Survey

- The survey used was the same version as in 2013. Due to the length of the survey, a prize drawing was used to increase the response rate.
- A total of 25,000 survey invitations (vs 20,000 in 2013) were sent out over 9 business days from July 1 to July 17. The survey was kept open through July 31.
 - 807 (3.2%) e-mails bounced back (6.5% in 2013)
 - 204 (0.8%) people opted out of the survey (0.4% in 2013)
 - 2011 (0.9%) respondents failed the screening process (1.0% in 2013)
 - 309 (1.3%) partially completed the survey (3.1% in 2013)
 - 1,018 (4.2%) respondents completed the entire survey (5.4% in 2013)
 - 957 (94.5%) respondents entered the prize drawing (94.5% in 2013)
 - The survey margin of error is +/- 3%

Survey Methodology

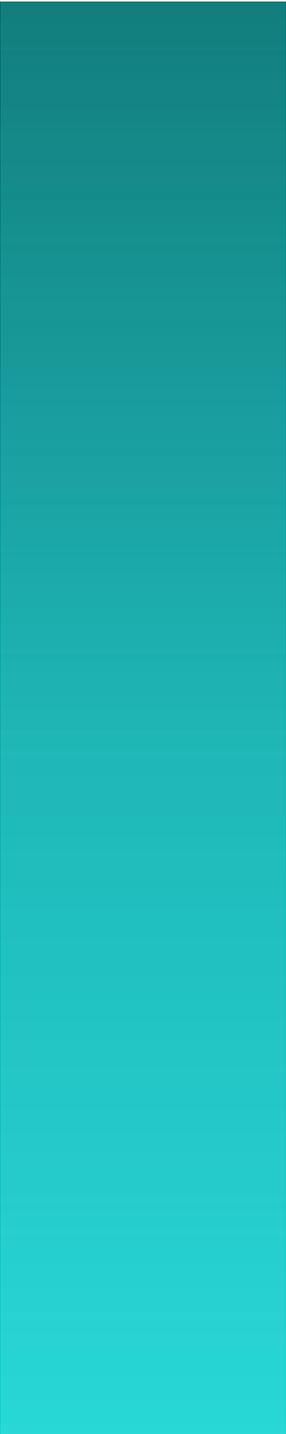
- Respondents were required to be Jefferson County residents and not employed in any of the following industries: Advertising or Marketing, Marketing Research, TV or Radio Station, Public Utility.
- No quotas were placed on age, gender or zip code. However, the collected sample was an excellent demographic and geographic cross-section of Jefferson County residents.
- The e-mail list used for survey solicitations was provided by Louisville Water in 2013.
- The survey was 10-15 minutes in length.
- The data was weighted using age, gender, rent/own residence and ZIP code area to match the current demographics of the MSD customer base. This is the same procedure used for the 2013 survey.

ZIP Code Segmentation

- ZIP codes were mapped as close as possible to the sewer and watersheds (see Appendix B).
- The segmentation resulted in 6 areas:
 - Downtown & West City [40202, 40203, 40208, 40210, 40211, 40212, 40215]
 - East City [40204, 40205, 40206, 40207, 40217, 40218, 40220]
 - Southwest [40216, 40258]
 - South County [40209, 40213, 40214, 40219, 40225, 40228, 40229, 40272, 40047, 40109, 40118, 40177]
 - East County [40018, 40023, 40243, 40245, 40291, 40299]
 - Northeast County [40025, 40059, 40222, 40223, 40241, 40242]

Demographics by ZIP Code

	Total	Downtown West City	SouthWest	East City	South Co.	North East Co.	East Co.
Age (Mean)	46.0	42.4	49.4	42.4	45.4	46.1	55.4
% Male/Female	48/52	25/75	30/70	52/48	38/62	76/24	64/36
% HH with Kids <18	42.8	53.7	52.4	25.5	53.6	48.4	31.2
% College graduate +	61.4	54.6	43.7	69.8	48.4	81.8	69.5
Income (Mean)	\$69,258	\$49,212	\$64,085	\$64,214	\$63,837	\$97,626	\$85,527
% Own Residence	63.1	37.1	67.9	54.3	71.9	80.0	69.2
% Dog Ownership	48.7	39.0	55.1	47.7	65.0	31.3	41.1
% Use Fertilizer	30.5	9.8	17.7	29.8	22.6	38.7	64.8



KEY FINDINGS

KEY FINDINGS

Notable significant shifts since 2013

Favorable shifts in awareness or attitude

- The importance of waterway protection (+11.0%)
- The importance residents place on having clean waterways (Top 2, +8.0%)
- Runoff and flooding given as reasons why waterways become polluted after a rain (+25.8%)
- Rainwater runoff cited as a leading cause of water pollution (Top 2, +6.3%)
- Residents who agree about being personally responsible for reducing rainwater runoff pollution (Top 2, +10.7%)
- Residents who are willing to take action to reduce water pollution, even if others did not (Top 2, +9.2%)
- Those who say water pollution frightens them (Top 2, +8.7%)
- Those who agree that reliable evidence of water pollution exists (Top 2, +8.9%)
- Residents who want fact-based messaging (up in various categories) as opposed to general information (-12.4%)
- The awareness of MSD's role beyond wastewater management
 - Cleans/purifies/filters water (+9.6%)
 - Cleans sewers (+9.4%)
 - Provides drainage/runoff control (+5.7%)
 - Prevents flooding (+5.9%)

KEY FINDINGS

Notable significant shifts since 2013

Unfavorable shifts in awareness or attitude

- Lack of desire to use local waterways for recreational purposes due to pollution (+7.0%)
- Rating overall quality of local waterways as Fair or Poor (+19.3%)
- Residents who say sewer system overflow occurs frequently in their area (Top 2, +8.9%)
- Residents who think putting fats, oils and grease down the drain causes sewer system overflow (-6.7%)

KEY FINDINGS

Public attitudes toward clean waterways

- Louisville residents think that protecting our waterways from pollution is one of the most important environmental issues the community faces today.
- While it is increasingly important to residents to have clean rivers, creeks and ponds, their rating of the overall quality of our waterways dropped significantly since 2013.
- *Key insight: Louisville residents want and value clean waterways. Public outreach efforts should focus on behavioral cause and effect, and how to change behaviors for positive outcomes.*

KEY FINDINGS

Knowledge of the issues

- More residents rated Jefferson County's water quality as **fair** or **poor** than in 2013 citing pollution, trash, debris, sewage, storm runoff and odors as primary reasons.
 - Residents across every geographic segment were more likely to rate fair or poor than in 2013.
- Similar to the 2013 survey, residents generally are not very informed about the **causes** of rainwater runoff pollution and sewer system overflow. However, they are more aware of the **impact** of rainwater runoff on area pollution.
 - Only 12% feel informed/very informed about the causes of rainwater runoff and only 14% feel informed/very informed about the causes of sewer system overflow.
 - Almost two-thirds don't know or aren't sure if it is safe to use area waterways after it rains.
 - Slightly more than one-third think that rainwater runoff causes waterways to become polluted after a rain.

KEY FINDINGS

Knowledge of the issues (continued)

- Residents do not fully understand the role of the sewer system in the rain management process.
 - Almost two-thirds don't know or aren't sure if storm water is treated before being released back to our waterways.
 - Men seem to understand more than women that rainwater runoff and sewer system overflow are leading causes of water pollution.
 - Almost two-thirds say the evidence they have seen about water pollution is reliable and sufficient. Another one-third is not sure.
- *Key insight: Evidence-based information about waterway pollution will help build awareness of the issues and affect behavior change.*

KEY FINDINGS

Willingness to take action

- Half of residents say they do not currently take actions to reduce water pollution, though a large majority (83%) think there are things they **could be doing** to reduce water pollution. Among those who do take action:
 - There is a significant shift in those who would “not litter” to those who would actively “pick up trash.”
 - South County (41%) and East City residents (26%) and residents under age 25 (65%) are most likely to pick up trash.
 - Fewer residents would be careful about what’s poured in a drain than in 2013. Among those who are careful, 26% of Downtown/West City residents, 32% of East County residents and 28% of adults age 45-54 are most careful about what they pour down the drain.

KEY FINDINGS

Willingness to take action *(continued)*

- While most residents (94%) agree that “everyone can do their part” to reduce the effects of water pollution, there has been a slight decrease in this segment since 2013.
- More positively, there has been a significant increase in those who feel personally accountable for reducing waterway pollution (69%), and those who would do their part regardless of the actions of others (69%).
 - Younger residents under 25 (100%) and East City residents (85%) feel especially accountable.
 - A large majority (84%) continue to hold government, business and industry responsible for reducing rainwater runoff and sewer system overflow.

KEY FINDINGS

Willingness to take action (*continued*)

- Residents currently take more actions relative to litter to reduce water pollution. Their willingness to take specific actions is slightly different than in 2013, and skews toward reducing litter.
 - In 2015, residents are willing to take these four actions to reduce water pollution: pick up trash, not put FOGs down the drain, not use lawn chemicals, and not litter.
 - In 2013, residents were willing to: not put FOGs down the drain, not flush wipes, properly dispose of household chemicals, and pick up trash in the gutter.
 - Women are much more likely to install a rain barrel (59%), create a rain garden (57%) and have an environmentally friendly lawn (52%) than men.

KEY FINDINGS

- *Key insights: Consistent with placing increased importance on clean waterways, more residents are taking action, want to take action, and feel personally accountable for change. The opportunity for outreach is to segment and target campaigns toward demographics with the propensity to act in certain areas (e.g.: dog owners, families with young children, women), and to empower them with share-able information and tools so they can advocate for behavior change within their social networks.*

KEY FINDINGS

Communications/How to Engage

- Most residents (82%) have no prior awareness of the impact of rainwater runoff pollution or sewer system overflow and ways they can prevent it.
 - Those who are aware of waterway issues and ways to prevent water pollution recall information about conserving water, redirecting rain water to the yard, not adding to the problem and sewer overflow issues. They heard these messages through TV, newspaper and brochures.
 - Those who were aware of issues in 2013 recall information about sewer overflow issues, or being careful about what is poured down the drain. They heard messages through the same channels: TV, newspaper and brochures.

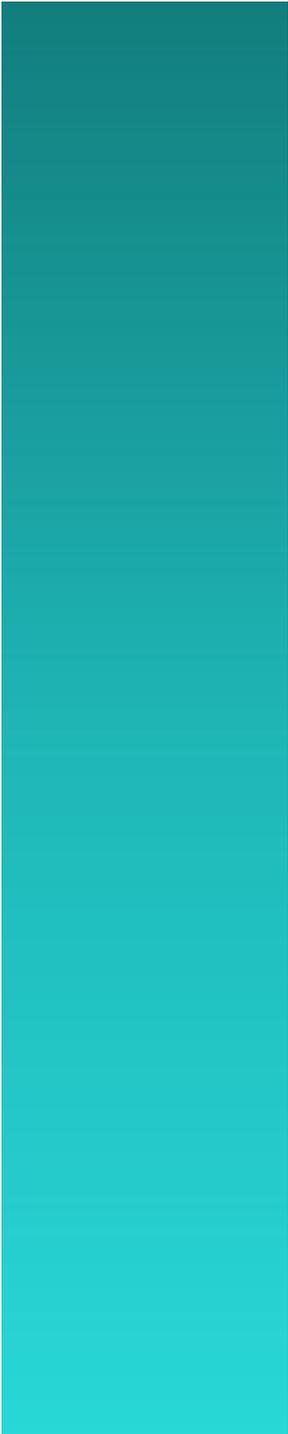
KEY FINDINGS

Communications/How to Engage (*continued*)

- Residents want to be educated and incented to get them to pay attention to water pollution issues.
- Specifically, they would like to hear messages focused on cause and effect, prevention, ways to help, school-based education and statistical data to take action.
 - Younger residents under 25 (61%), women (56%) and East City residents (53%) would prefer an emotionally-charged campaign.
 - Younger residents under 25 (80%) and East City residents (71%) would also respond to statistical data.

KEY FINDINGS

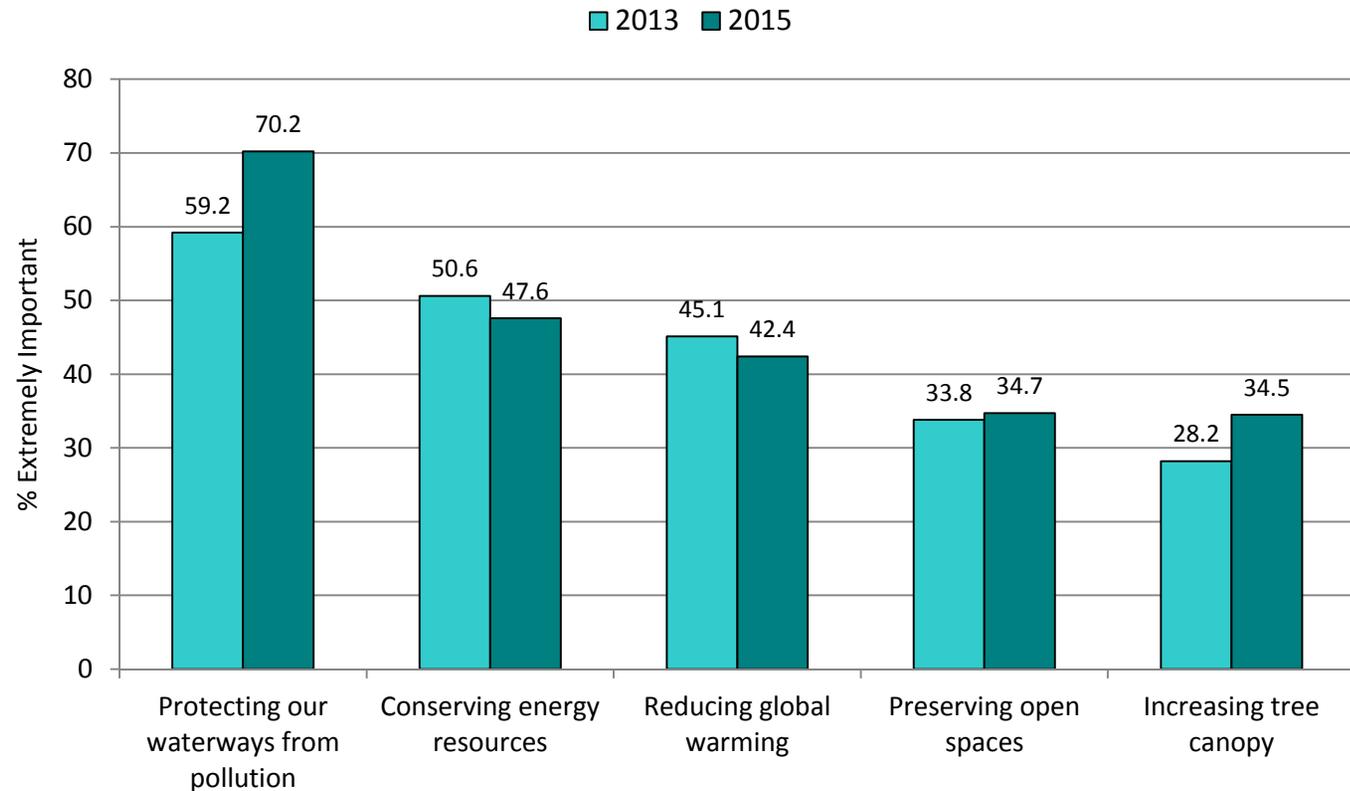
- *Key insight: Most residents are unaware and uneducated about community waterway issues. For those who are aware, their perceptions about the issues and desired behaviors are inconsistent and hypothetically shaped by external influence, such as the news media.*
- *Key insight: The opportunity for MSD is to take a leadership role in educating and driving change by leveraging an integrated mix of media, but especially social media and the social networks of citizens who are also environmental advocates.*



DETAILED FINDINGS

Q3 RESULTS – Importance of Environmental Issues

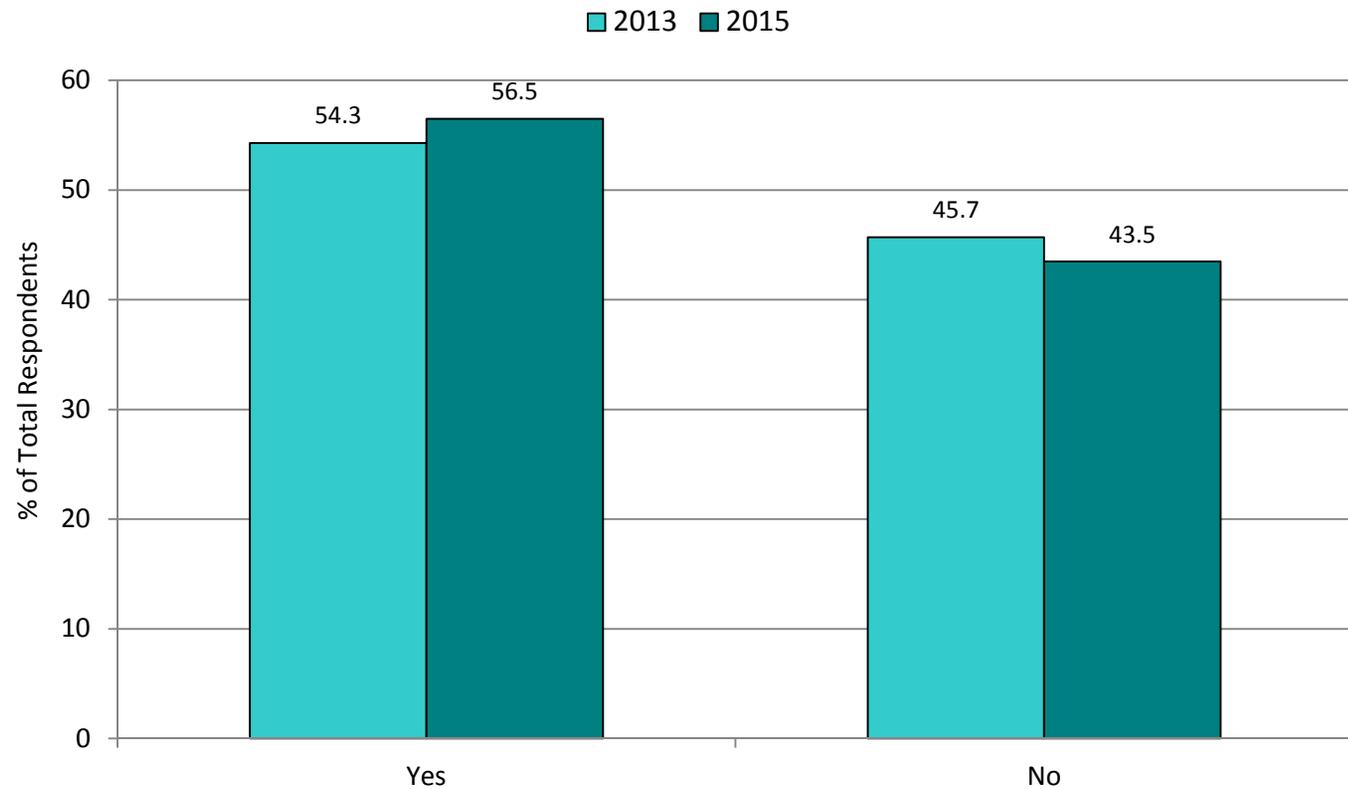
For each of the following environmental issues, indicate how important you feel the issue is to you.



- Waterway protection importance increased significantly from 2013 to 2015. This increase was driven by Southwest (61.3% to 81.8%), East County (57.2% to 77.6%) and Downtown/West City (46.2% to 68.3%).

Q4 RESULTS – Waterway Use

Do you use the river, creeks and ponds for recreational purposes in Jefferson County, Kentucky?



- Young residents under 25 (78.9%) continue to be the biggest recreational users, while those who are age 65+ use waterways the least (35.6%).

Q5 RESULTS – Waterway Use

Why don't you use the river, creeks and ponds for recreational purposes? (Total Respondents, open-end)	2013 (%)	2015 (%)
Don't want to / no interest	21.6	8.2
Don't own a boat	15.0	12.4
Not an outdoor / water person	14.8	14.9
Pollution / contamination / unclean water	12.9	19.9
Don't fish	10.5	10.2
Go outside of Louisville / Jefferson County for this	8.1	6.1
Age / too old	6.8	8.9
Busy lifestyle / work too much	6.2	9.8
Not sure what's available	5.3	1.5
Don't swim	4.1	5.1
Disabled	3.6	8.1
Do not live by any	3.5	5.4

- Use of waterways for recreational purposes due to pollution/contamination increased. This increase was from those age 30-39 (54.5%), females (34.9%), and residents in Downtown/West City (35.9%) and Southwest (28.6%) .
- Interest in waterway use declined across most geographic areas.

Q6 RESULTS – Overall Quality/Health of River, Creeks and Ponds

How would you rate the overall water quality or health of the river, creeks, and ponds in Jefferson County, Kentucky?



- Overall water quality/health ratings of Excellent and Very Good decreased significantly from 2013 to 2015. Ages 25-34 (67.6%), renters (64.2%), Downtown/West City residents (64.1%) and Northeast County residents (61.9%), had the highest Fair/Poor ratings.

Q7 RESULTS – Overall Quality/Health of River, Creeks and Ponds

Why do you give that rating? (Total Respondents, open-end)	2013 (%)	2015 (%)
Lots of pollution / trash / debris / dirty	29.4	44.2
Visual observation / look of it	17.9	5.0
Lakes are ok – river is bad	7.8	0.7
Sewage / storm runoff	7.6	9.9
From what I read / hear	5.5	6.0
Clean	4.2	4.8
Well maintained	4.0	1.2
Always room for improvement	3.9	10.9
Haven't had any issues / problems	2.9	2.1
They're ok / not that bad	2.7	10.4
Conditions are improving	2.2	2.6
My perception / impression	2.0	2.4
All others	4.7	1.7
Don't know	13.7	0.8

- Residents in the Northeast (22.3%) and East (24.3%) Counties were not as likely to mention pollution as a reason for their rating.
- Those under 25 mentioned pollution/trash the most (60.6%).

Q7 RESULTS – Overall Quality/Health of River, Creeks and Ponds

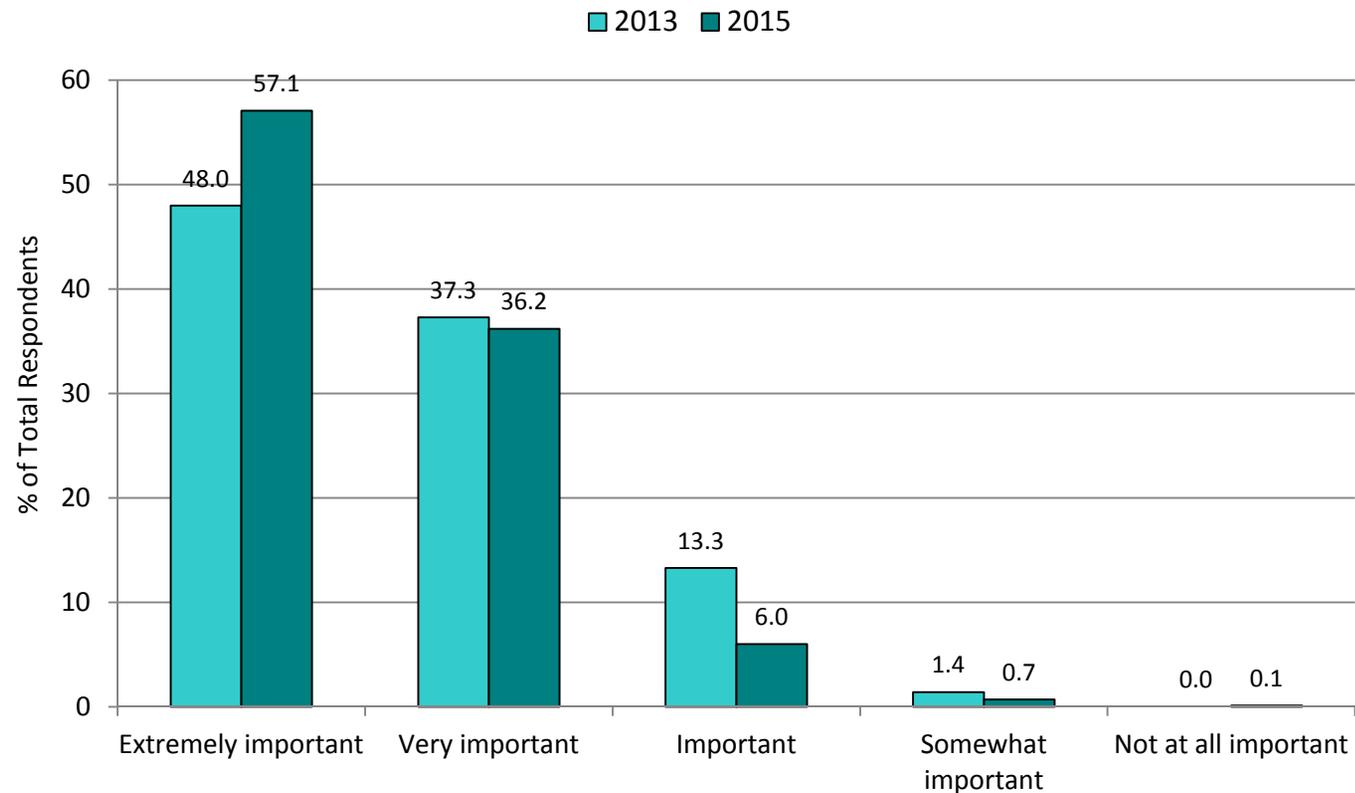
Why do you give that rating? [Those who rated Excellent or Very Good]	2013 (%)	2015 (%)
Clean	11.7	26.3
Always room for improvement	4.0	15.7
Conditions are improving	3.6	14.9
They're OK / not that bad	0.6	12.0
Good quality	3.3	9.3

Why do you give that rating? [Those who rated Fair or Poor]	2013 (%)	2015 (%)
Lots of pollution / trash / debris / dirty	54.6	58.4
Sewage / storm runoff	13.5	15.1
Odors / smelly	3.4	11.6
Poor quality	2.6	9.8
Lack of upkeep	1.9	8.9

- As highlighted above, the public perceives waterway health is degraded by pollution and trash, but are attributing this perception less to visual observation.

Q8 RESULTS – Importance of Clean River, Creeks and Ponds

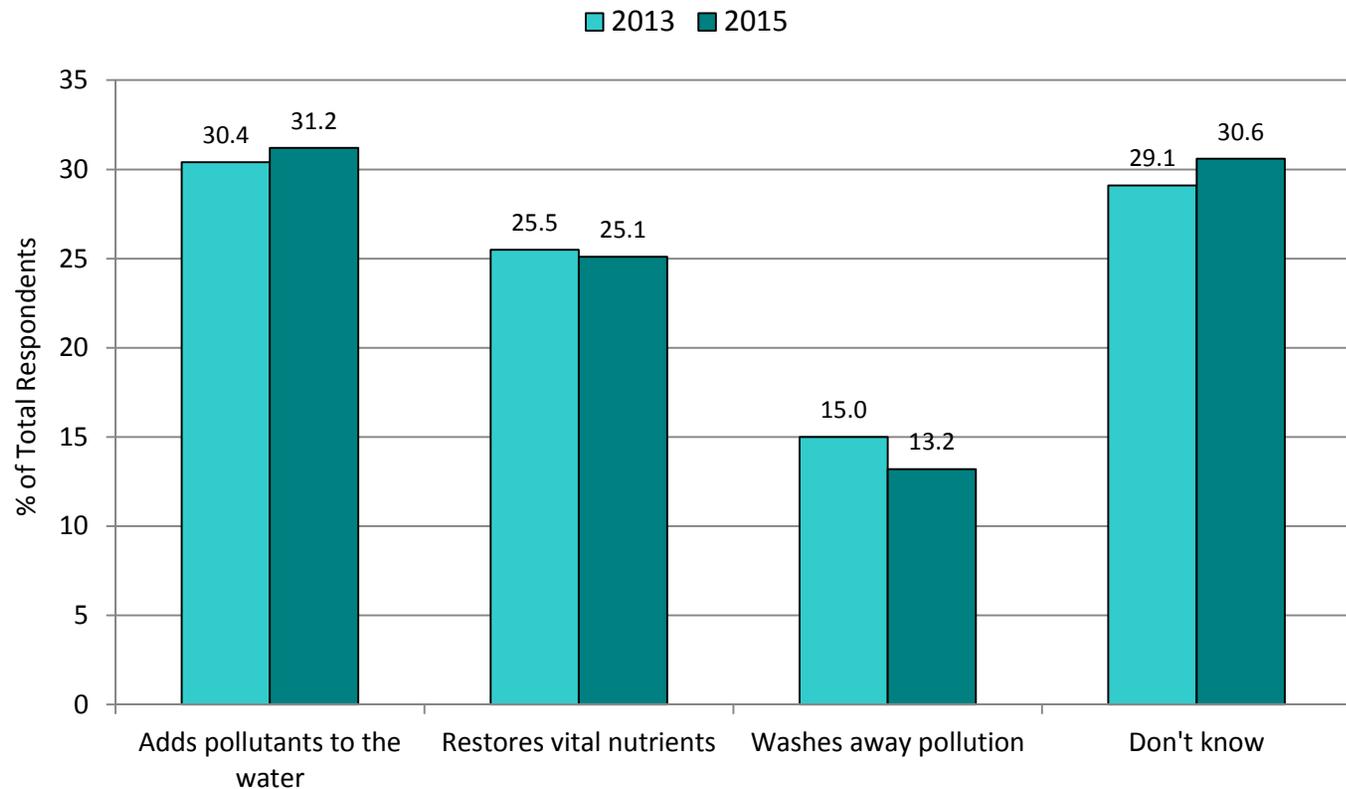
How important is it to you that your community has clean rivers, creeks and ponds?



- As a whole, residents saying that it is extremely/very important that the community having clean rivers, creeks and ponds has increased significantly from 2013 (85.3%) to 2015 (93.3%).

Q9 RESULTS – Effect of Rain on Quality of River, Creeks and Ponds

How does rain affect the water quality or health of our river, creeks and ponds? Please select one.



- Perceptions on how the rain affects the water quality / health of our river, creeks and ponds has remained constant from 2013 to 2015.
- Almost one-third (30.6%) still don't know how rain affects water quality.

Q10 RESULTS – Post-Rain Pollution

After it rains, you should not use the local area river, creeks and ponds because they have become unsafe with increased levels of pollution and bacteria.



- Residents in the Northeast County (47.5%) and East County (47.1%) exhibited the strongest agreement.
- Those under 25 (39.5%) and 65 or over (36.7) showed the strongest disagreement.

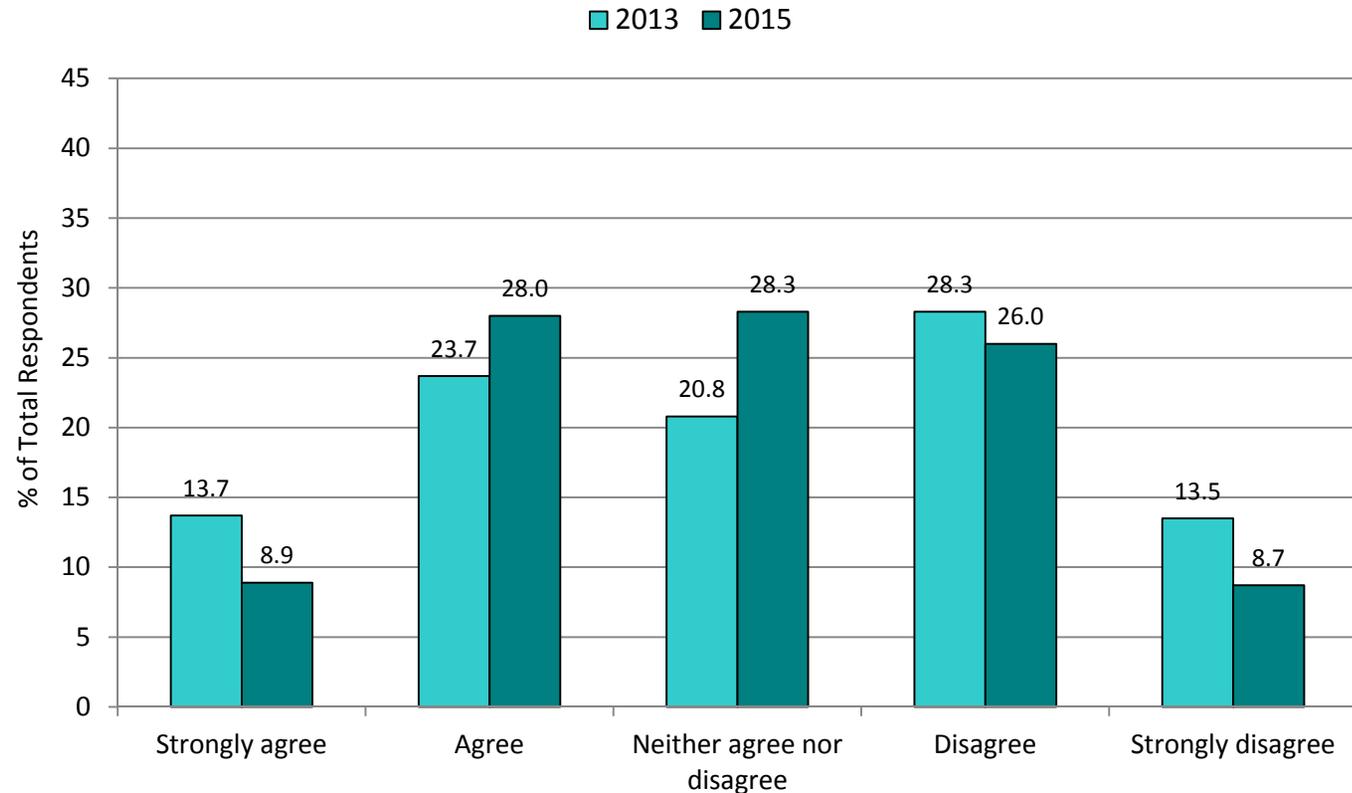
Q11 RESULTS – Post-Rain Pollution

What do you think would cause the river, creeks and ponds to become polluted after a rain? (open-end)	2013 (%)	2015 (%)
Runoff / flooding	10.8	36.6
Trash / litter / debris getting washed into it	17.1	20.6
Fertilizers / pesticides / lawn sprays/chemical runoff	14.0	20.6
Ground pollution	12.5	17.2
Sewage overflow	10.5	12.6
Run-off from streets / roads / parking lots / cars	11.4	11.3
Air pollution	7.6	7.4
Don't know	12.0	4.6
Industrial waste	3.0	2.9
Acid rain / rain carries pollutants	10.9	1.6
Run-off from farms / fields / agriculture	4.2	0.7
All others	7.8	0.2

- Those 65 or over (61.1%) or residing in East County (58.6%) are most likely to believe runoff / flooding causes waterways to become polluted.
- Females think the main causes of pollution are runoff / flooding (89.7%) and litter / trash (88.0%). Males believe fertilizers / pesticides (76.1%) and trash (62.3%) are the causes.
- Shift in runoff perception could be shaped by extraordinarily wet spring, and June's above-average rainfall and subsequent flooding.

Q12a RESULTS – Pollution, Runoff, & Sewer Overflow

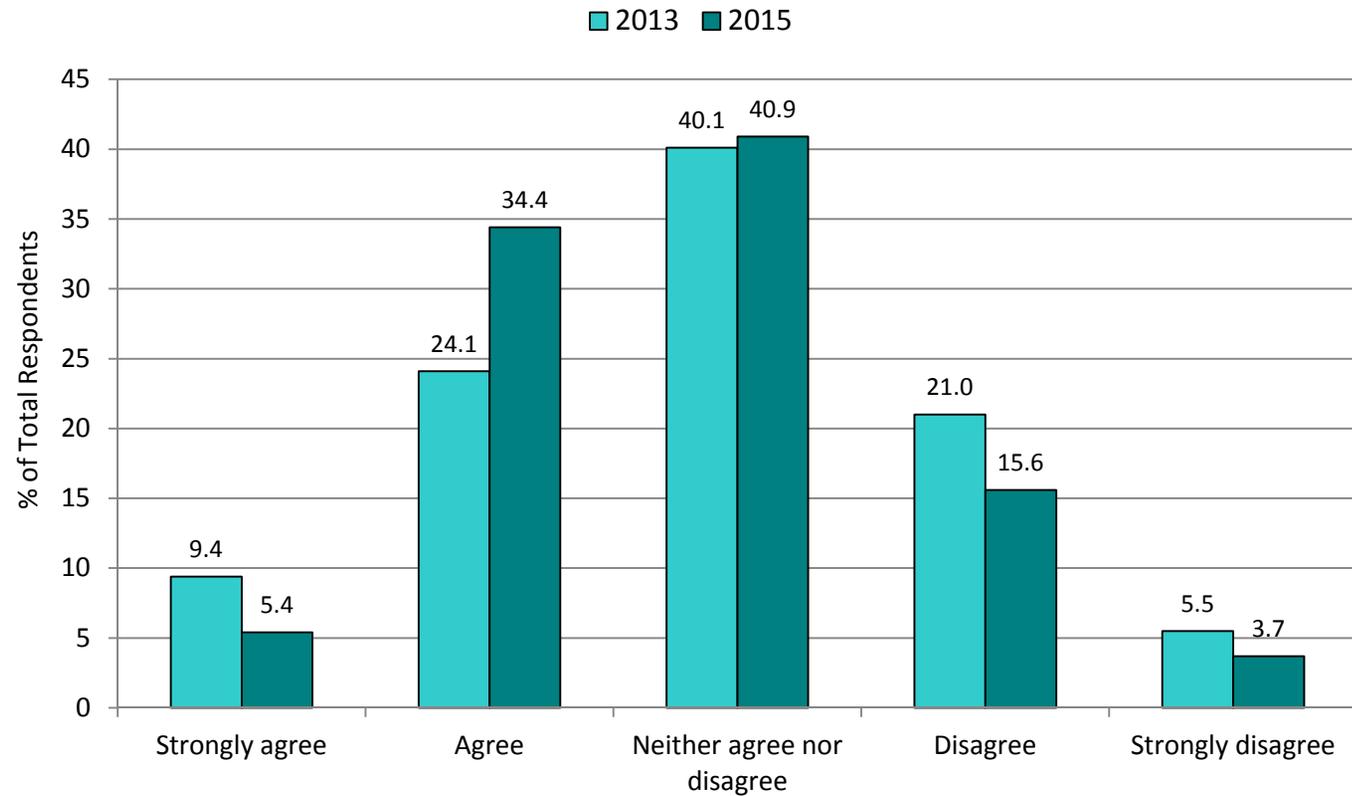
Water that flows through the street gutters/storm drains goes through a treatment facility before being released into our waterways.



- Almost half of Downtown residents strongly agree / agree (49.2%) that storm runoff water is treated, as do females (45.8%) and those with a High School education or less (51.4%).
- 63.0% of all respondents were unsure or did not agree with this statement.

Q12b RESULTS – Pollution, Runoff, & Sewer Overflow

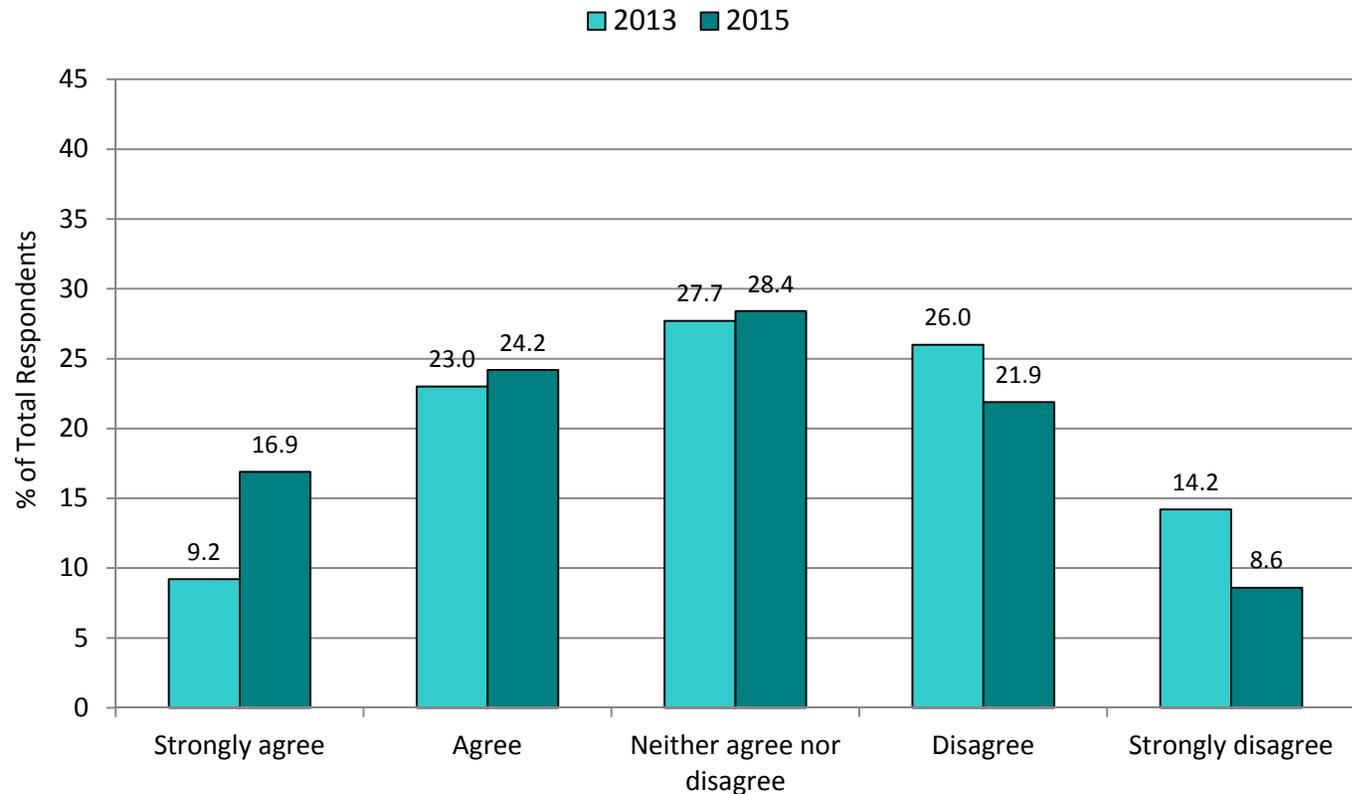
Rainwater runoff is a leading cause of water pollution in my area.



- Overall agreement (agree / strongly agree) has increased from 2013 (33.5%) to 2015 (39.8%).
- Male respondents agree/strongly agree (50.4%) that rainwater runoff causes pollution.
- Respondents 65 or over disagree/strongly disagree (38.7%) with this statement.

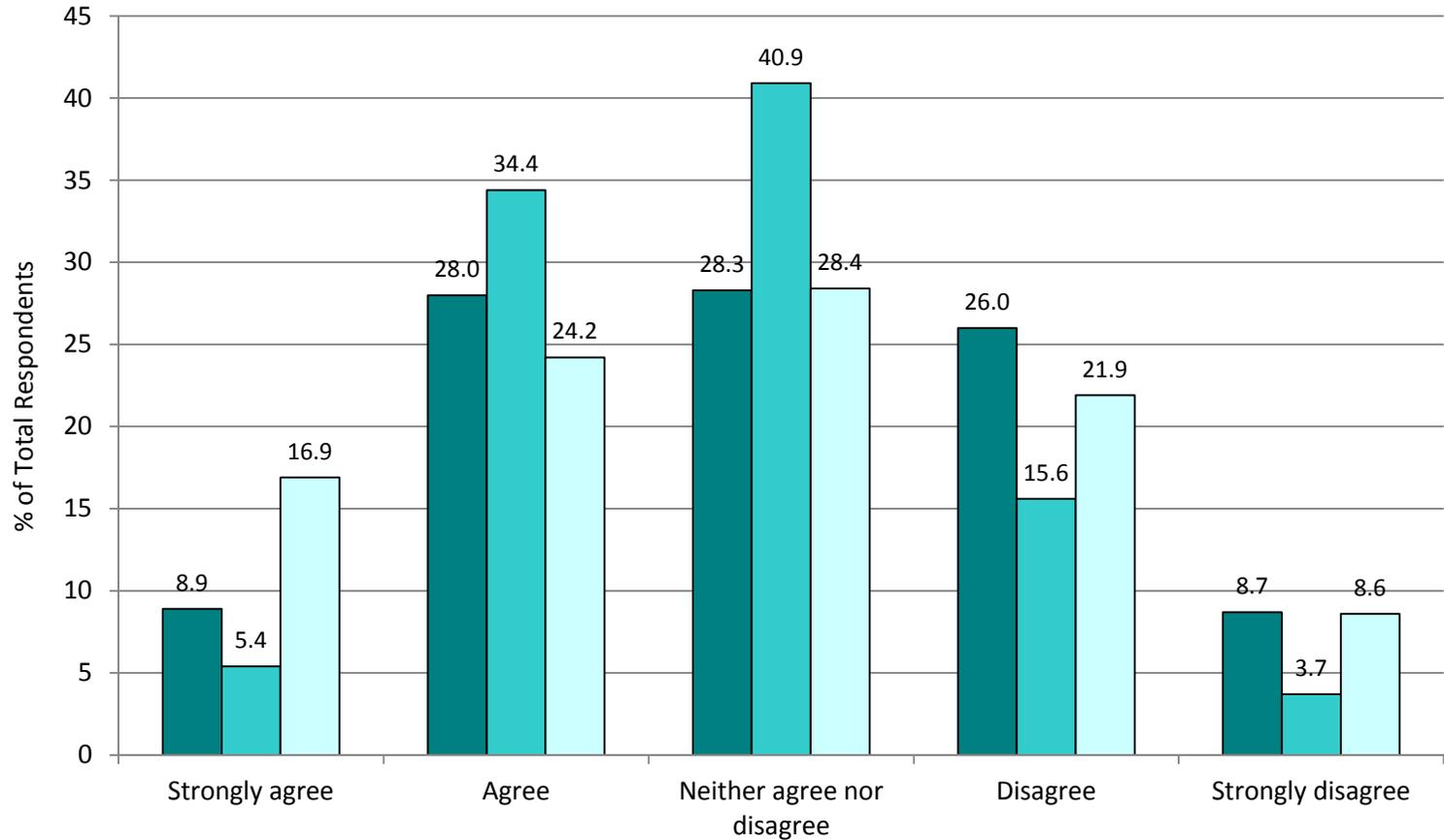
Q12c RESULTS – Pollution, Runoff, & Sewer Overflow

Sewer system overflow occurs frequently in my area.



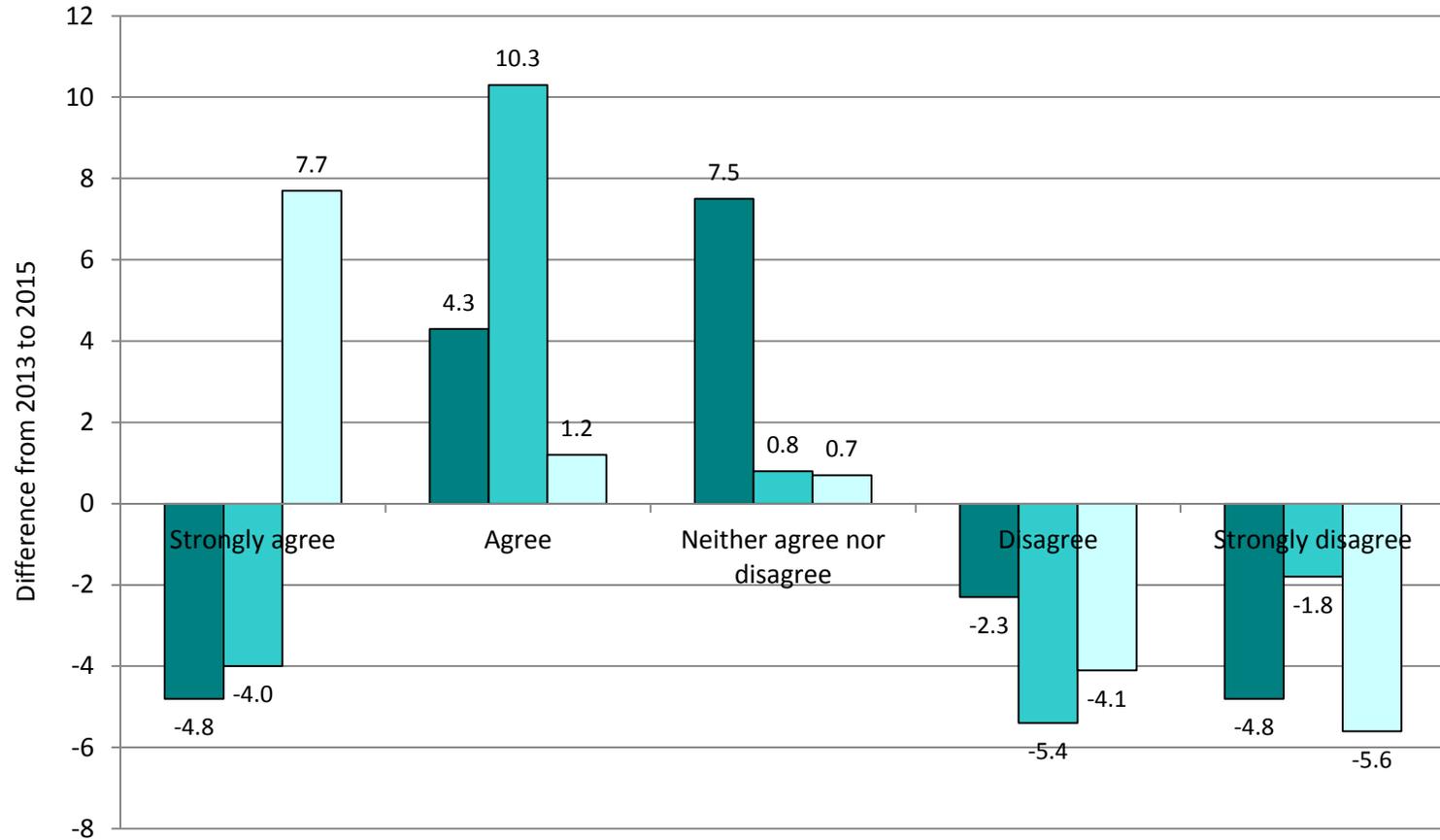
- Those who strongly agree that sewer system overflow occurs frequently increased significantly from 2013 (9.2%) to 2015 (16.9%). This increase was driven by those 30 or younger (49.0%), households with children (38.6%) and those in northeast county (24.8%).
- Ages 65 and over (47.3%) disagree/strongly disagree the most.

Q12 TOTAL RESULTS BY ISSUE – Pollution, Runoff, & Sewer Overflow



- Water that flows through street gutters and storm drains goes through a treatment facility before being released in our waterways.
- Rainwater runoff is a leading cause of water pollution in my area.
- Sewer system overflow occurs frequently in my community.

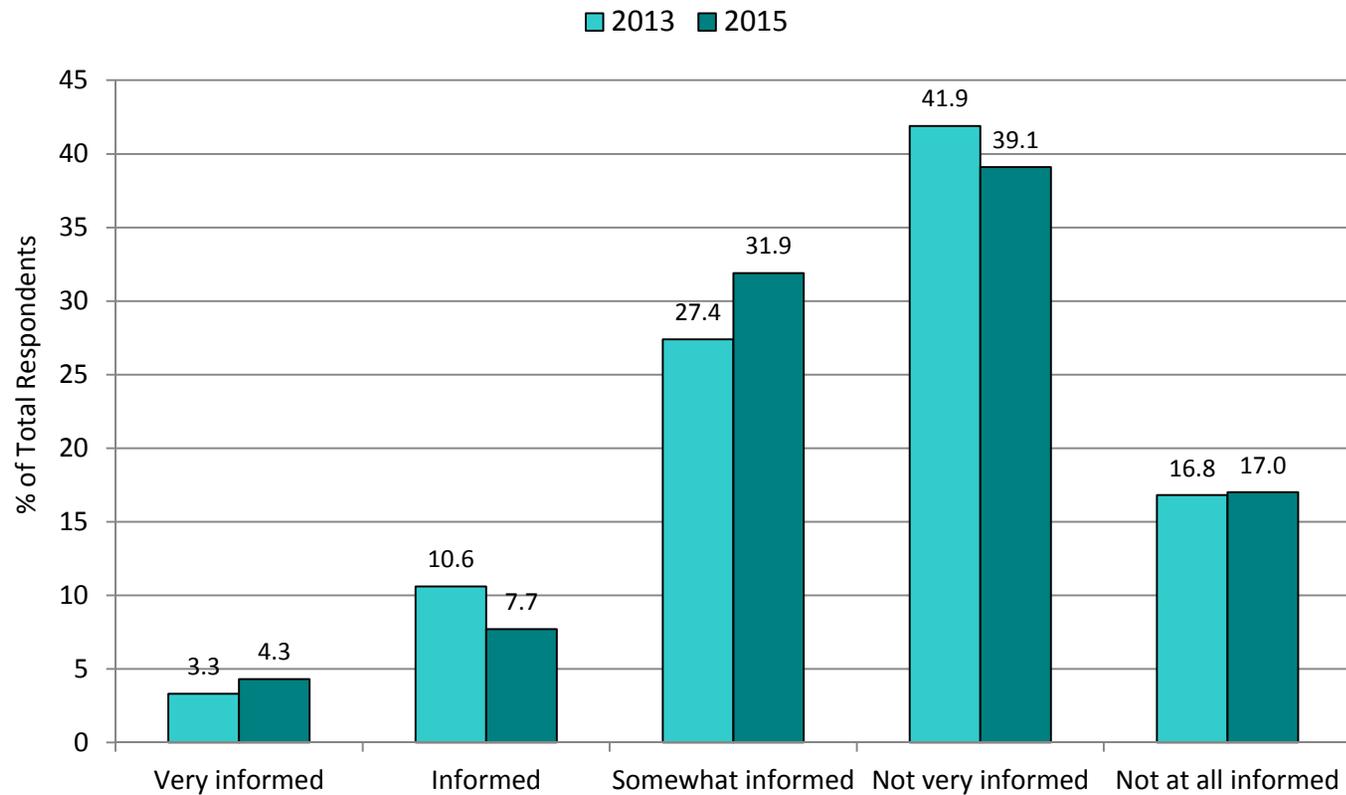
Q12 TOTAL RESULTS BY ISSUE – Pollution, Runoff, & Sewer Overflow



- Water that flows through street gutters and storm drains goes through a treatment facility before being released in our waterways.
- Rainwater runoff is a leading cause of water pollution in my area.
- Sewer system overflow occurs frequently in my community.

Q13 RESULTS – Causes of Rainwater Runoff Pollution

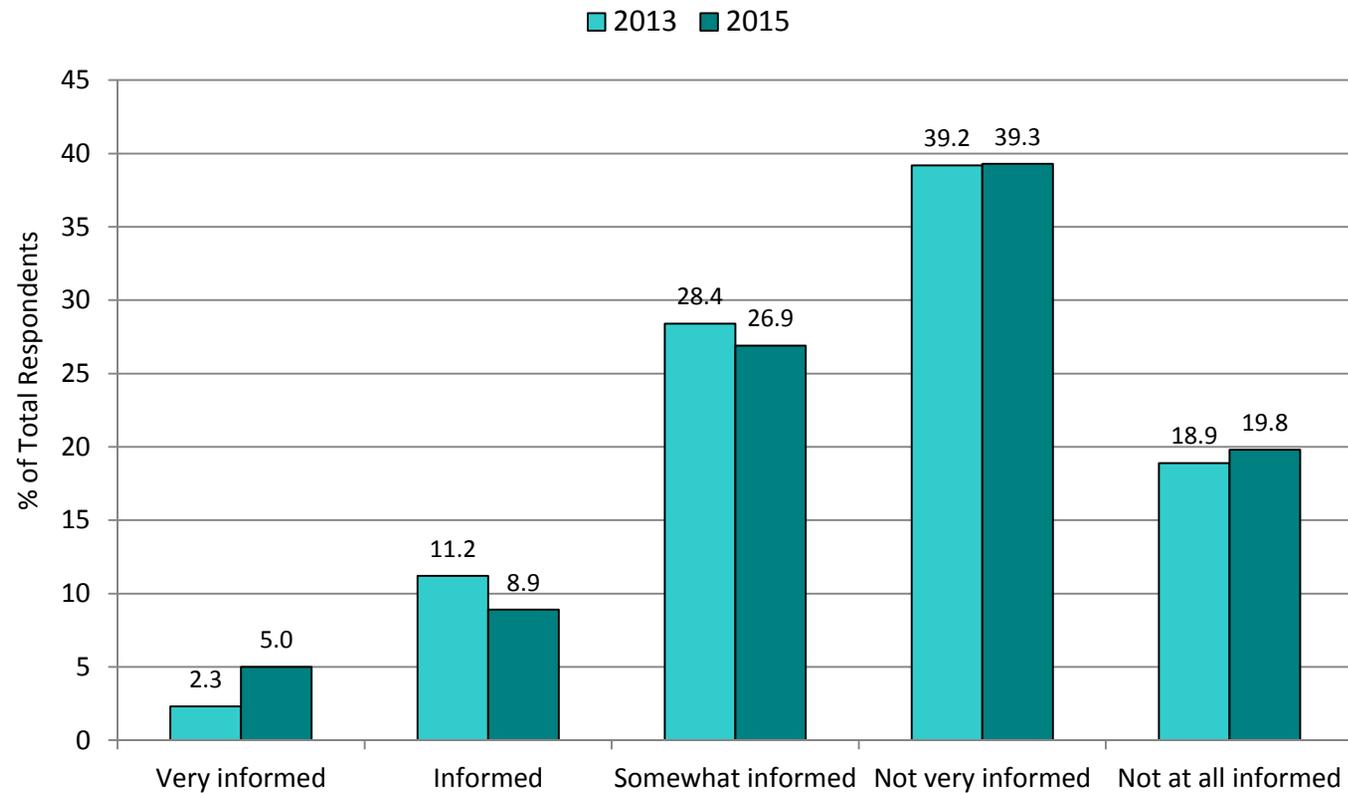
How informed do you feel about the causes of rainwater runoff pollution in your area?



- Northeast county residents feel informed/very informed (29.9%), while those age 25-44 still feel they are not very informed/not at all informed (72.1%).
- Southwest residents feel they are not at all informed (28.3%).

Q14 RESULTS – Causes of Sewer System Overflow

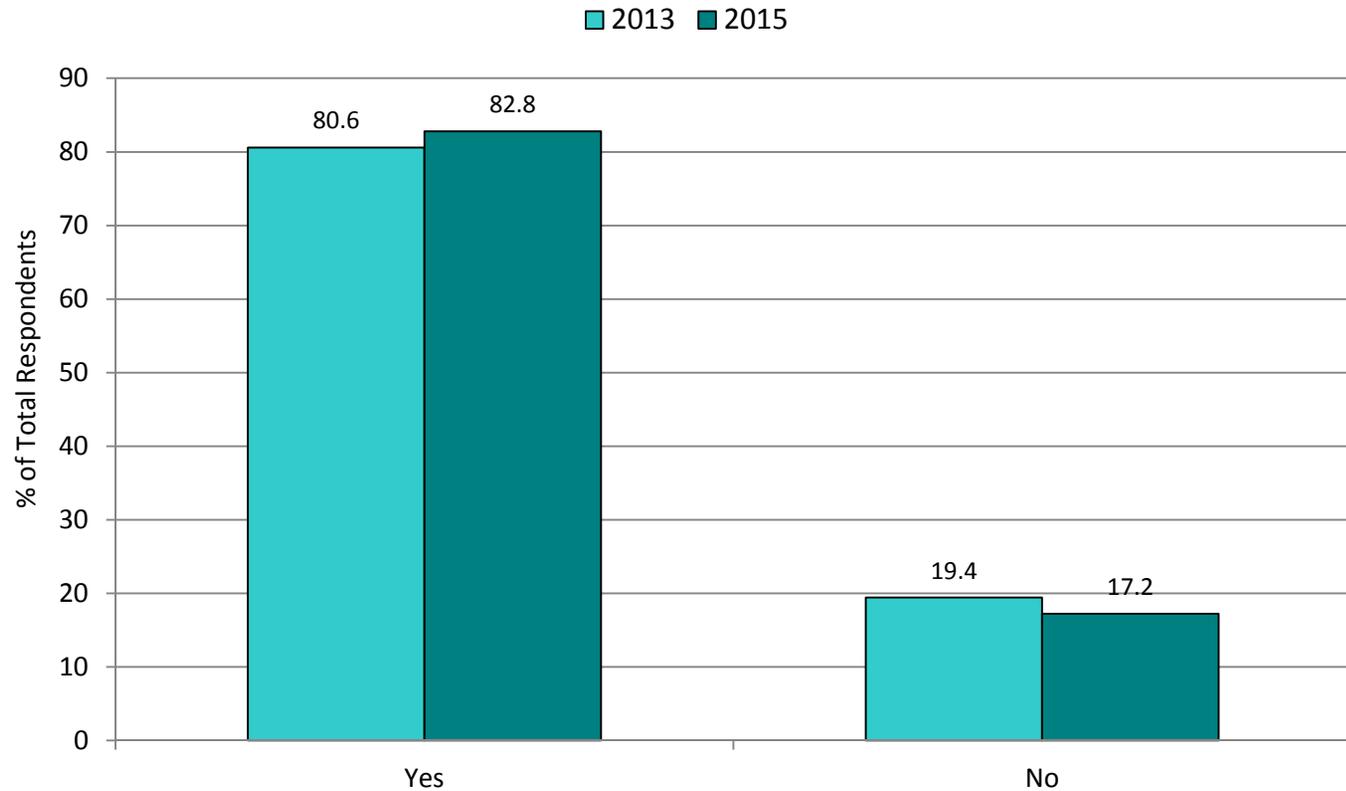
How informed do you feel about the causes of sewer system overflow in your area?



- As with rainwater runoff pollution, those age 25-44 remain not very informed/not at all informed (74.2%).
- Males (24.8%) feel informed/very informed relative to females (4.1%). However, females feel they are not very / not at all informed (68.4%).

Q15 RESULTS – Actions for Pollution Reduction

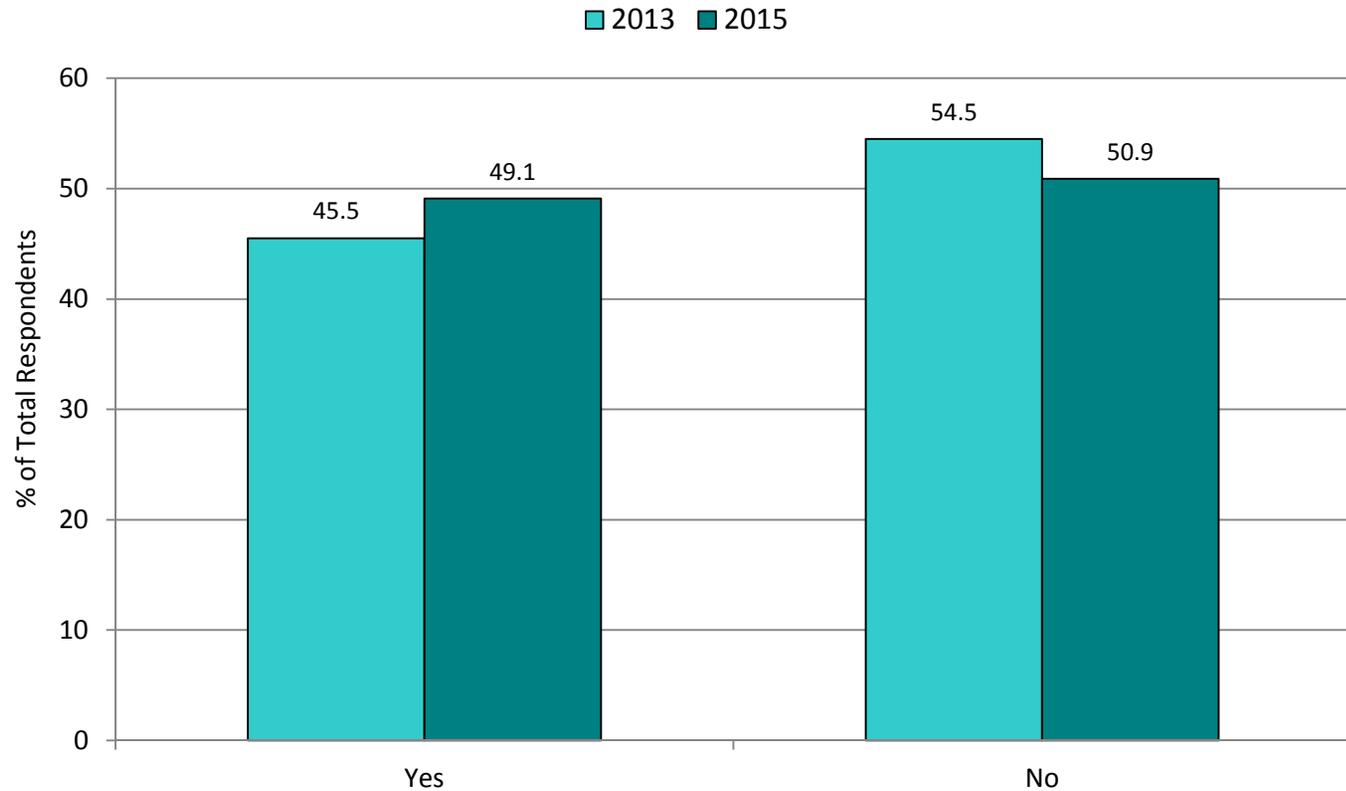
Do you think there are actions you can take to reduce water pollution in the river, creeks and ponds?



- Most favorable stance on taking action remain: those under 25 (100%); reside in the South County (86.5%); and families with kids under 6 (90.3%).
- Least favorable remain seniors 65+ (58.2%).

Q16 RESULTS – Actions for Pollution Reduction

Rainwater runoff and sewer system overflow contribute to water pollution. Do you currently take actions to reduce water pollution?



- Respondents who reported that they take actions for the purpose of reducing water pollution increased slightly from 2013 (45.5%) to 2015 (49.1%).
- Those most likely to take action are: ages 45-64 (53.4%) and dog owners (53.2%).

Q17 RESULTS – Actions for Pollution Reduction (Total)

What actions do you currently take to reduce water pollution? (open-end, asked if “yes” to #16)	2013 (%)	2015 (%)
Pickup trash / litter	2.9	24.1
Careful about what I pour into ground/down drain/dispose	28.0	17.9
Don't use chemicals on lawn	16.4	16.9
By not littering/polluting/using trash cans	27.2	13.5
Clean up sewer/street drains	7.4	12.5
Recycling	8.6	10.2
Don't wash clothes/use dishwasher during rain	6.4	9.9
Conserve water	5.2	5.8
Not flushing medicines	3.2	4.7
Redirecting rain water/gutters to yard	4.3	3.3
Rain barrels	4.7	2.9
Use green products	3.7	2.4
Maintain car/vehicle	3.3	2.1
Disconnected downspouts	3.2	2.1

Q17 RESULTS – Actions for Pollution Reduction by Age

What actions do you currently take to reduce water pollution? (open-end, asked if “yes” to #16)	<25	25-34	35-44	45-54	55-64	65+
Pick up trash/litter	66.5	25.7	31.2	13.0	6.5	2.3
Careful about what I pour into ground/down drain/dispose	-	24.5	19.0	27.5	15.6	22.5
Don't use chemicals on lawn	-	12.5	17.8	16.9	30.0	24.2
By not littering/polluting/using trash cans	-	17.9	12.2	21.4	13.2	16.7
Clean up sewer/street drains	-	18.4	12.7	19.5	15.3	10.3
Recycling	32.8	2.2	11.1	6.4	5.3	1.4
Don't wash clothes/use dishwasher during rain	33.5	3.1	3.9	4.7	5.1	5.4
Limit runoff	-	4.8	7.1	3.3	5.6	22.8
Clean up pet waste	32.8	3.8	0.4	1.0	0.3	1.2
Conserve water	-	10.3	3.9	9.4	5.1	6.6
Being more aware	-	4.4	5.0	5.2	5.9	8.7
Not flushing medicines	-	1.0	3.3	8.2	4.6	9.9
Don't put grease down drain	-	13.7	3.2	5.9	3.8	2.4
Don't dump anything into sewers	-	3.2	7.8	5.3	5.3	4.3

Q17 RESULTS – Actions for Pollution Reduction by ZIP Area

What actions do you currently take to reduce water pollution? (open-end, asked if “yes” to #16)	Downtown West City	South West	East City	South Co.	North East Co.	East Co.
Pick up trash/litter	20.5	18.1	26.0	41.0	7.6	6.0
Careful about what I pour into ground/down drain/dispose	26.3	21.5	10.2	19.7	4.3	31.8
Don't use chemicals on lawn	3.9	24.4	17.6	17.3	19.2	20.8
By not littering/polluting/using trash cans	21.0	3.9	12.2	17.8	2.4	15.1
Clean up sewer/street drains	11.0	22.9	16.8	11.2	7.7	7.5
Recycling	11.5	2.7	25.4	5.5	3.1	1.2
Don't wash clothes/use dishwasher during rain	5.3	2.7	6.8	2.3	50.7	1.0
Limit runoff	11.3	-	16.7	1.8	4.6	3.3
Clean up pet waste	-	-	26.8	0.4	1.6	0.1
Conserve water	6.8	19.3	6.4	2.3	4.3	5.5
Being more aware	-	12.1	1.8	5.0	1.3	14.6
Not flushing medicines	-	15.4	4.1	2.5	0.4	13.7
Don't put grease down drain	6.1	5.9	5.9	2.5	2.8	6.2
Don't dump anything into sewers	11.2	-	3.0	1.3	3.2	9.0

Q18 RESULTS – Actions for Pollution Reduction

Do you think any of these actions would increase the amount of pollution from rainwater runoff? (Select all that apply)	2013 (%)	2015 (%)
Improperly disposing hazardous waste, such as paint and motor oil	94.3	97.7
Putting trash in the street gutter	93.1	87.0
Allowing fluids to leak from cars and trucks	91.3	63.3
Using non environmentally friendly lawn chemicals	87.3	92.3
Leaving pet waste on the ground	71.1	69.3
Washing your car in the driveway or street	55.4	56.2

- Respondents perception that putting trash in the street gutter and allowing fluid leaks from cars and trucks would increase rainwater runoff pollution decreased significantly from 2013 to 2015.
- The decrease in street gutter trash was driven by renters (78.5%) and those age 25 or under (78.9%).
- The decrease in fluid leaks was impacted by mainly by those age 25-44 (52.6%).

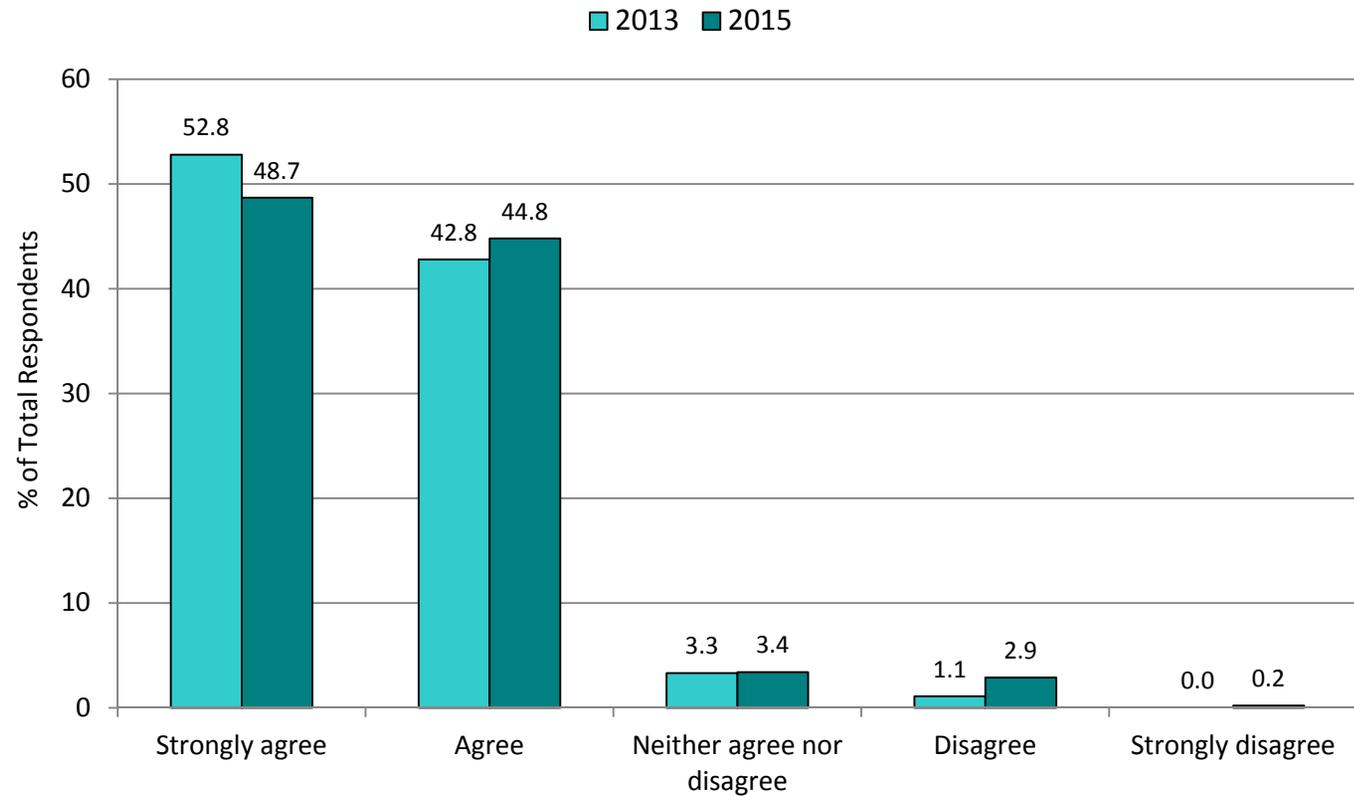
Q19 RESULTS – Actions for Pollution Reduction

Do you think any of these actions cause sewer system overflow? (Select all that apply)	2013 (%)	2015 (%)
Pouring fats, oils, greases and food particles down the sink	84.8	78.1
Flushing diaper wipes and other wet wipes down the toilet	84.6	83.4
Putting lawn grass clippings and leaves in the street gutter	82.2	80.1
Flushing hair down the toilet	64.4	61.5
Connecting the groundwater sump pump to the basement sewer connection	56.1	51.6
Flushing dental floss down the toilet	54.3	52.6
Using water-using appliances, such as a dishwasher or clothes washer, when it is raining	36.4	36.4

- Modest decreases in all contributing areas suggest that residents remain unaware and uneducated about the causes of sewer system overflow, and hence their ability to affect positive change.
- East County residents (97.4%) and those 50+ (92.2%) are most likely to associate pouring FOGs down the drain with sewer system overflow. Those under 25 (58.9%) are less likely to make that association.

Q20(a) RESULTS – Water Quality & Health of River, Creeks and Ponds

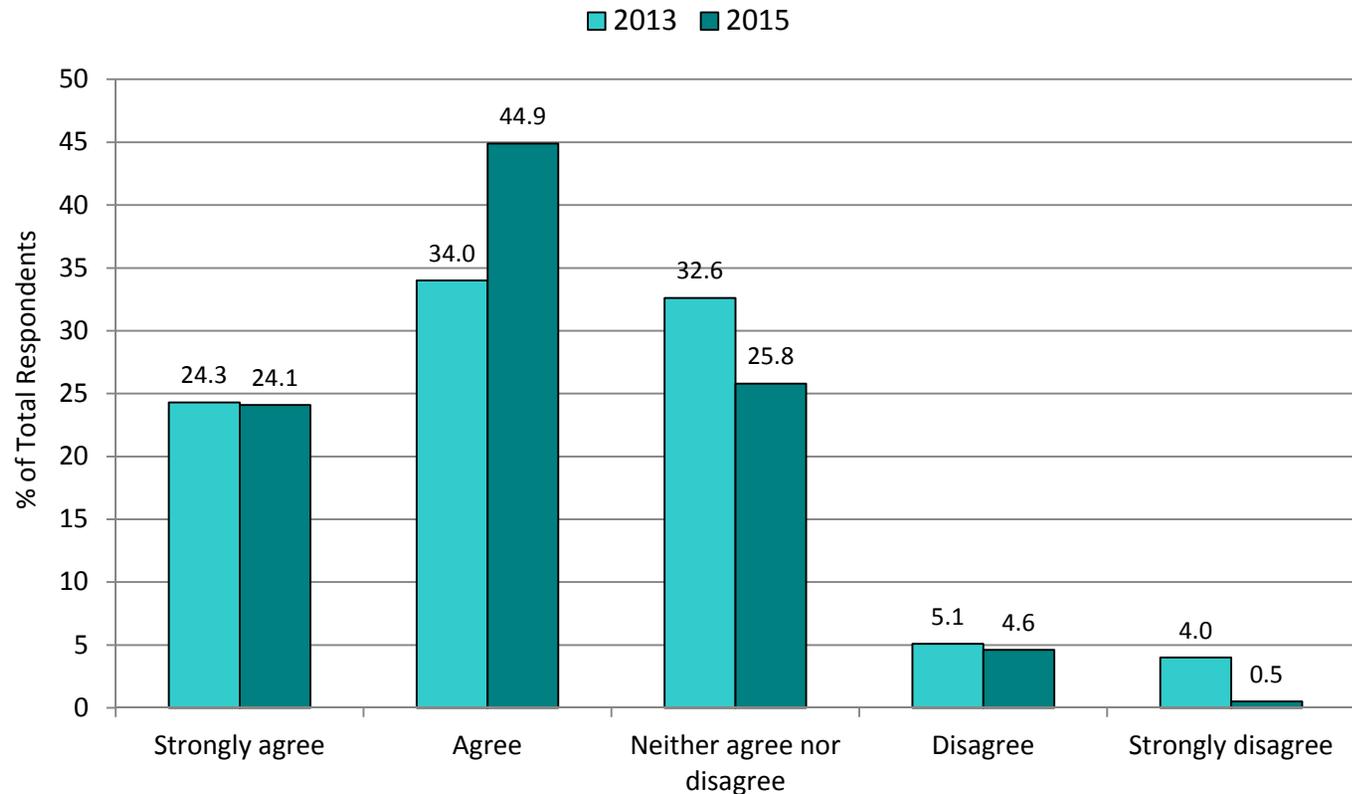
We can all do our part to reduce the effects of water pollution.



- Females had significantly stronger agreement (55.9%) than males (40.7%) about doing their part to reduce pollution.
- Residents in the Southwest strongly agreed most often (68.7%).

Q20(b) RESULTS – Water Quality & Health of River, Creeks and Ponds

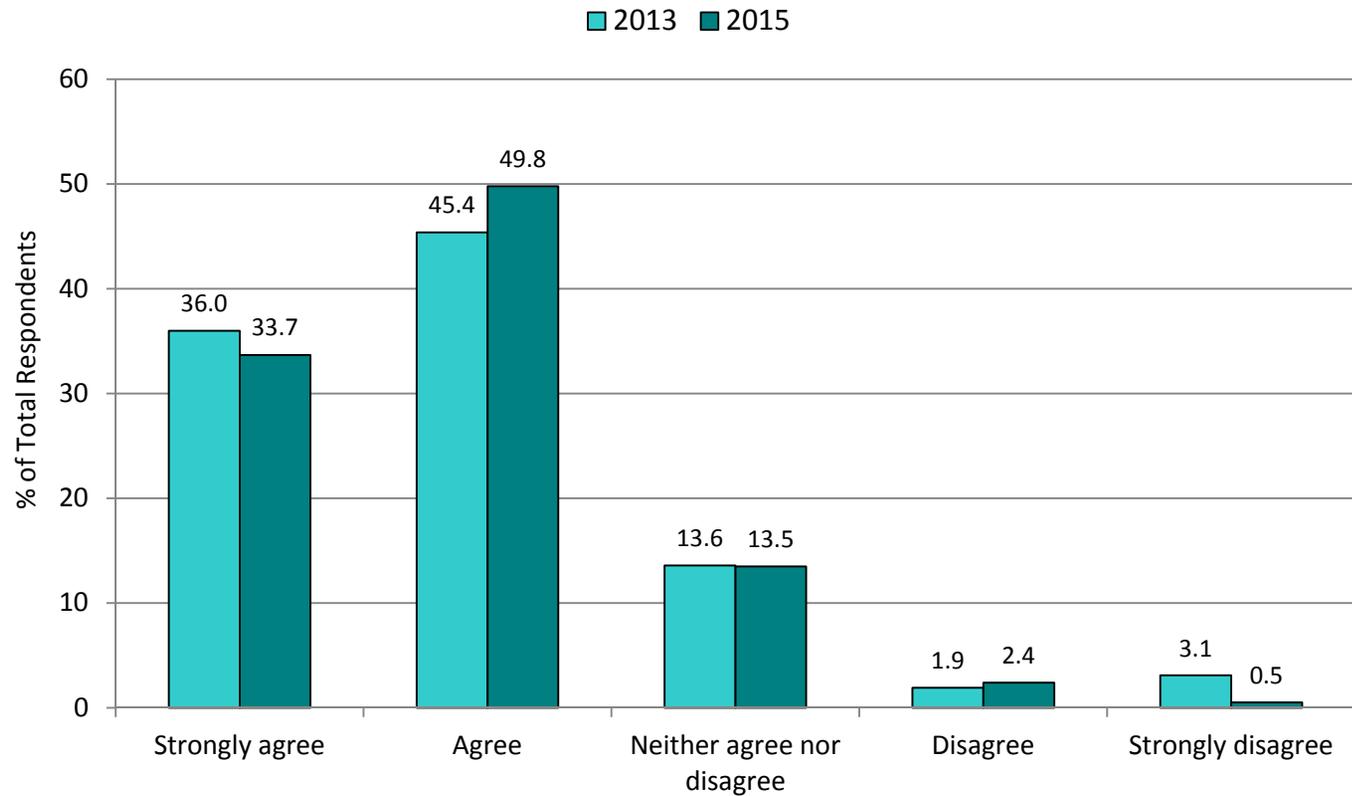
I am personally responsible for reducing rainwater runoff pollution and sewer system overflow.



- Overall, the proportion of respondents that agree / strongly agree about being personally responsible increased significantly from 2013 (58.3%) to 2015 (69.0%).
- This increase was driven by those 25 and under (100%), and residing in the East City (84.8%).

Q20(c) RESULTS – Water Quality & Health of River, Creeks and Ponds

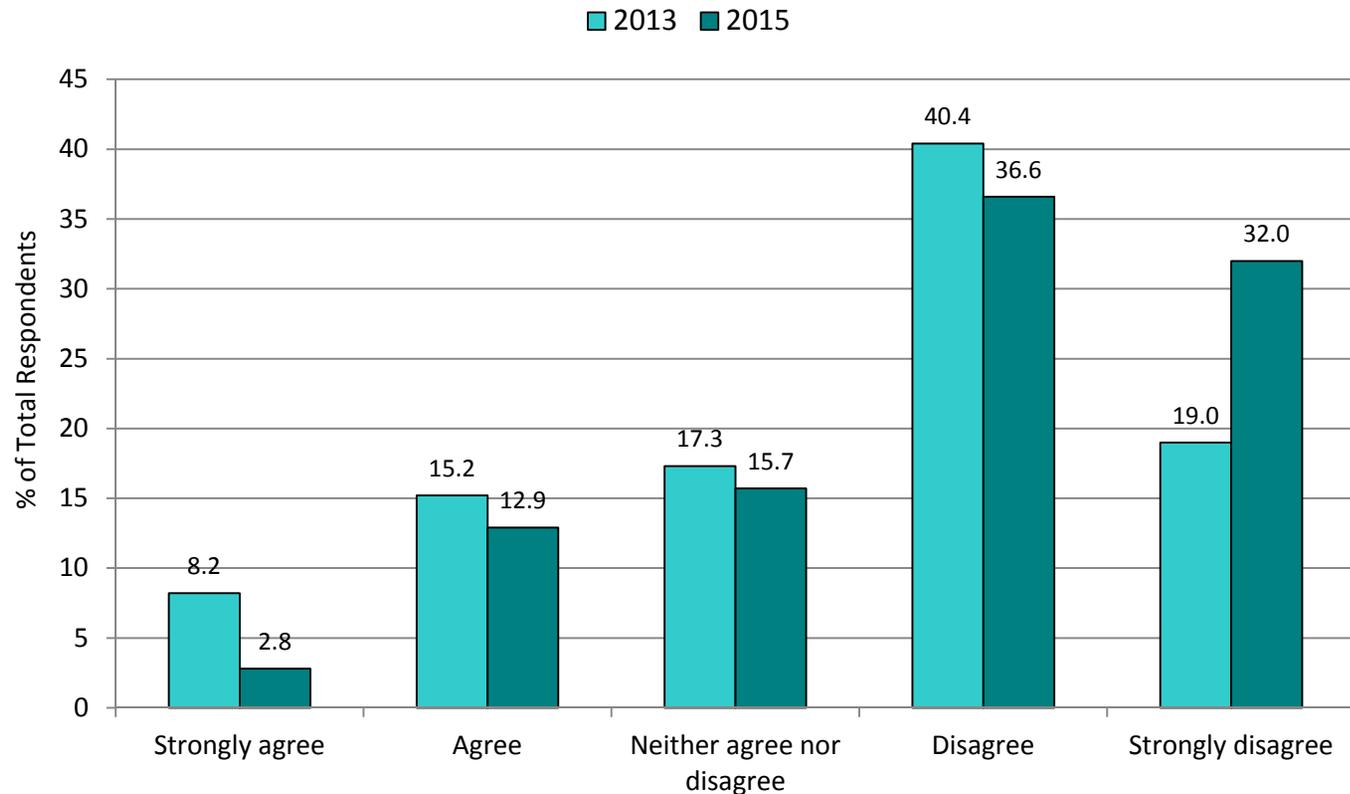
Local governments, businesses and industries are responsible for reducing rainwater runoff and sewer system overflow.



- Perception regarding commercial entities being responsible for reducing overflow has not changed significantly from 2013 to 2015.

Q20(d) RESULTS – Water Quality & Health of River, Creeks and Ponds

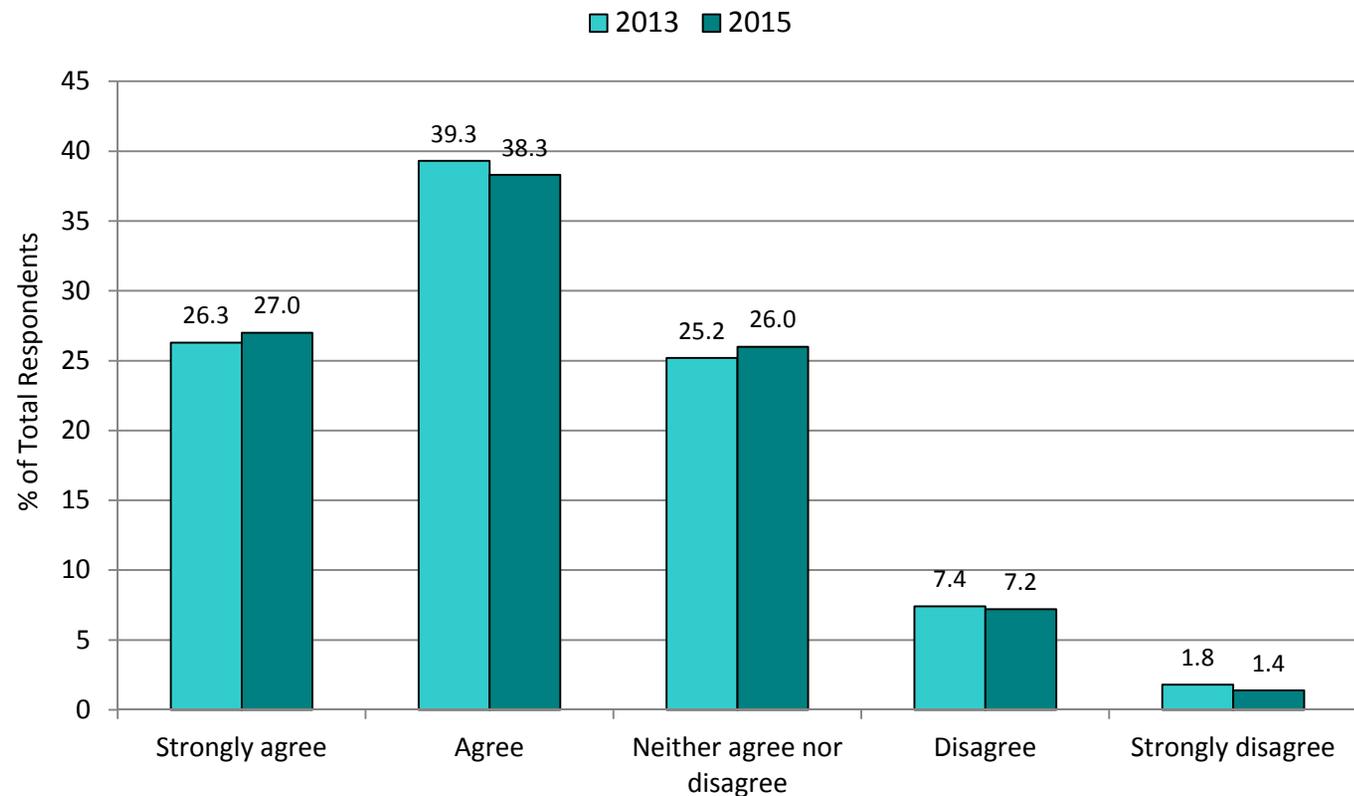
I would only do my part to reduce water pollution if everyone else did as well.



- Sentiment has changed significantly about respondents doing their part to reduce pollution. They are willing to make the effort regardless of others.
- College and Post Grads are most likely (77.0%) to do their part independently of other people.

Q20(e) RESULTS – Water Quality & Health of River, Creeks and Ponds

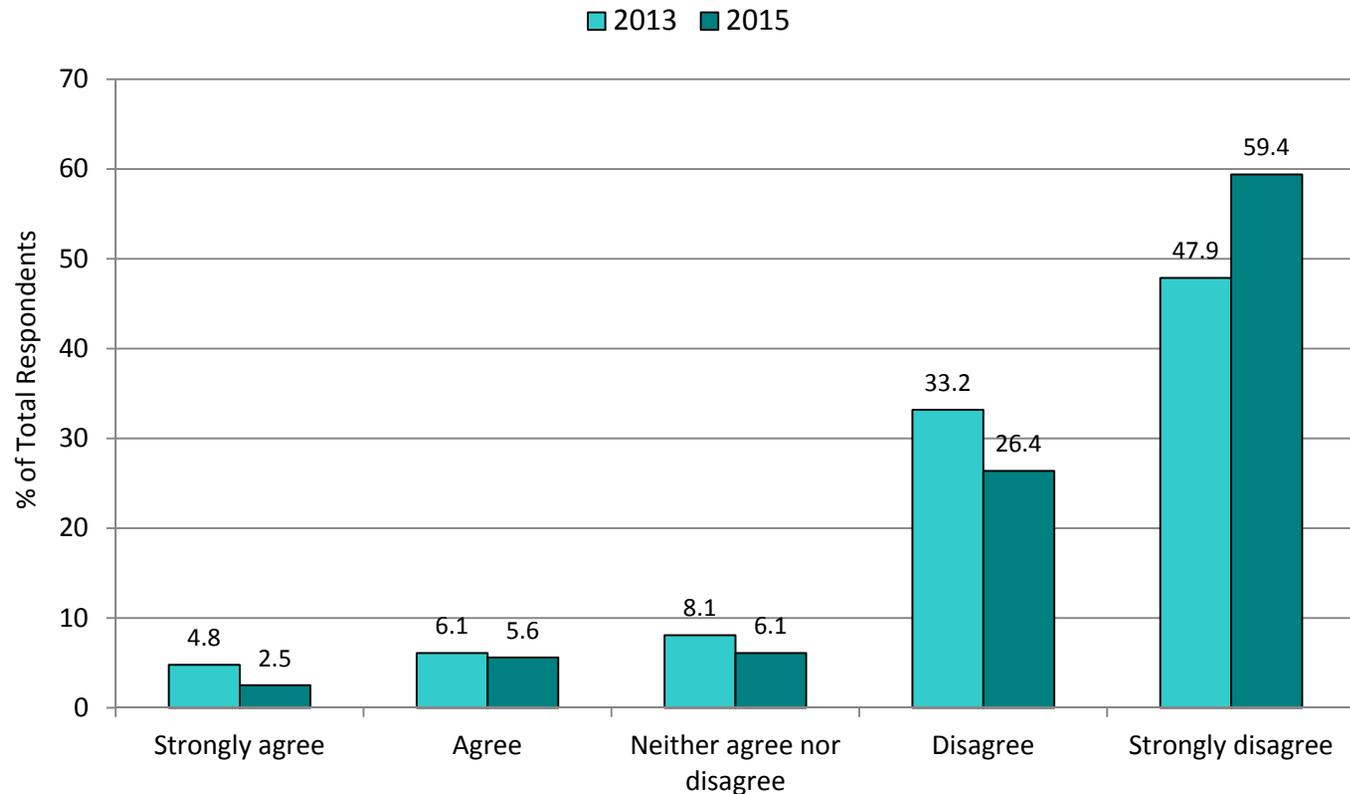
The utility company should provide incentives for people to reduce water pollution.



- Incentives continue to more strongly appeal to residents under 25 (42.8% strongly agree) and households with young (under 6) children (41.1% strongly agree).
- Northeast County (40.3%) strongly agreed with this statement, most of any area.

Q20(f) RESULTS – Water Quality & Health of River, Creeks and Ponds

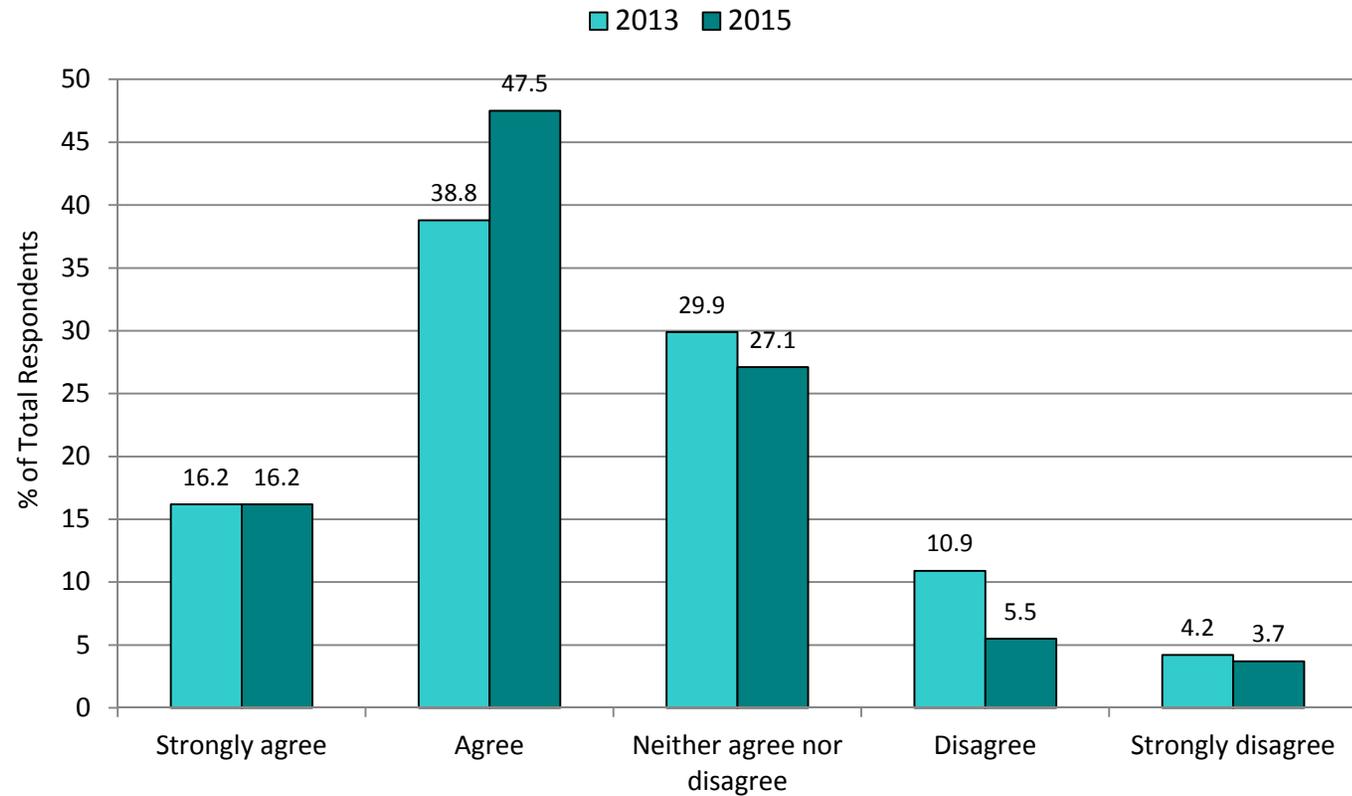
Human activities have no significant impact on the water quality of river, creeks and ponds.



- There was a significant shift towards human activities having an impact on waterway quality. This shift was driven by those under 25 (74.0%) and East City residents (76.3%). Low (less than \$40k) income (41.1%) and South County (43.6%) disagreed the least.

Q20(g) RESULTS – Water Quality & Health of River, Creeks and Ponds

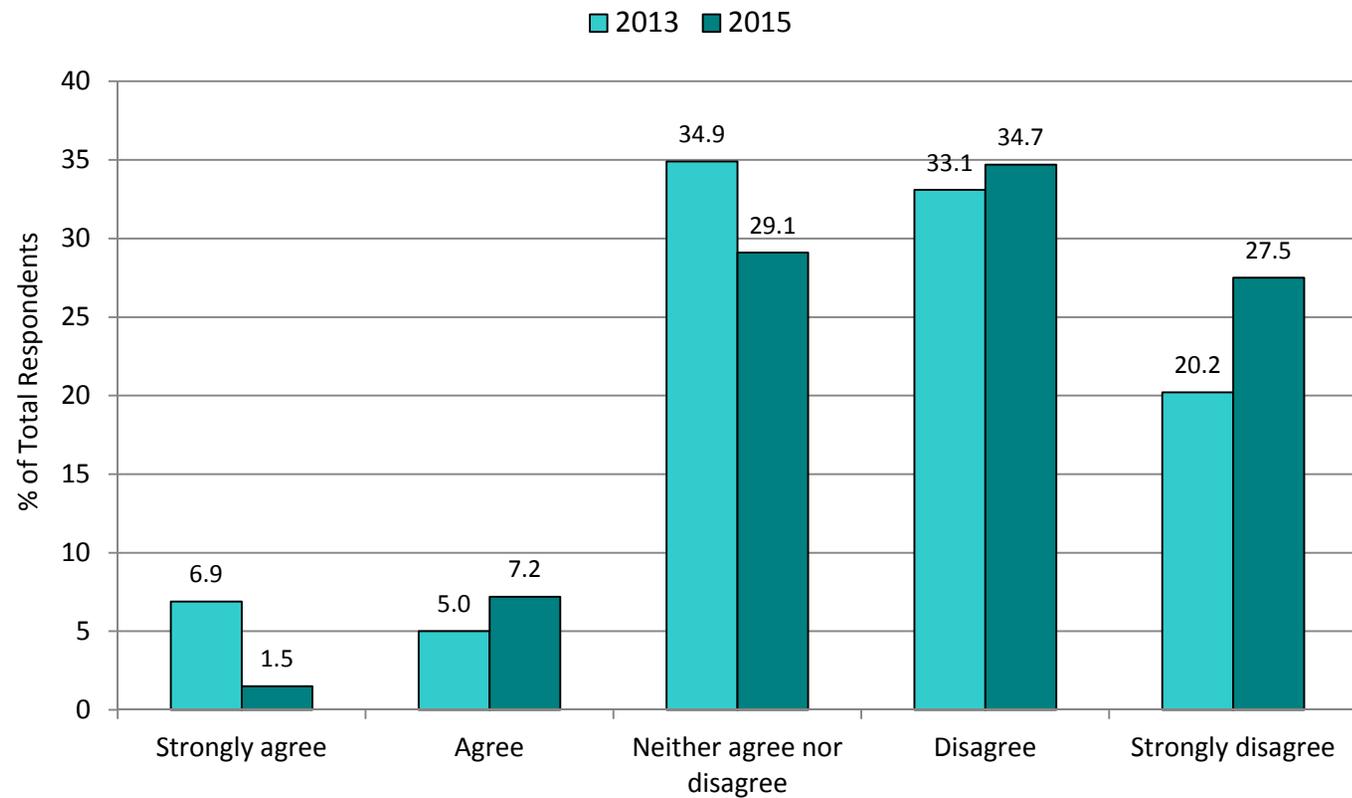
Water pollution of river, creeks and ponds frightens me.



- Younger respondents under 25 are more likely (80.0%) to be frightened of water pollution than those 65 or over (51.6%).
- East County residents were most likely to strongly disagree (18.3%) about being frightened.

Q20(h) RESULTS – Water Quality & Health of River, Creeks and Ponds

The evidence for water pollution of river, creeks and ponds is unreliable or insufficient.



- Respondents agreeing that reliable evidence exists has increased over the past 2 years.
- This trend (strongly disagree) is driven by those with high (\$90k+) incomes (42.2%), under age 25 (41.0%), males (39.4%) and East County residents (38.7%).

Q21 RESULTS – Willingness of Action

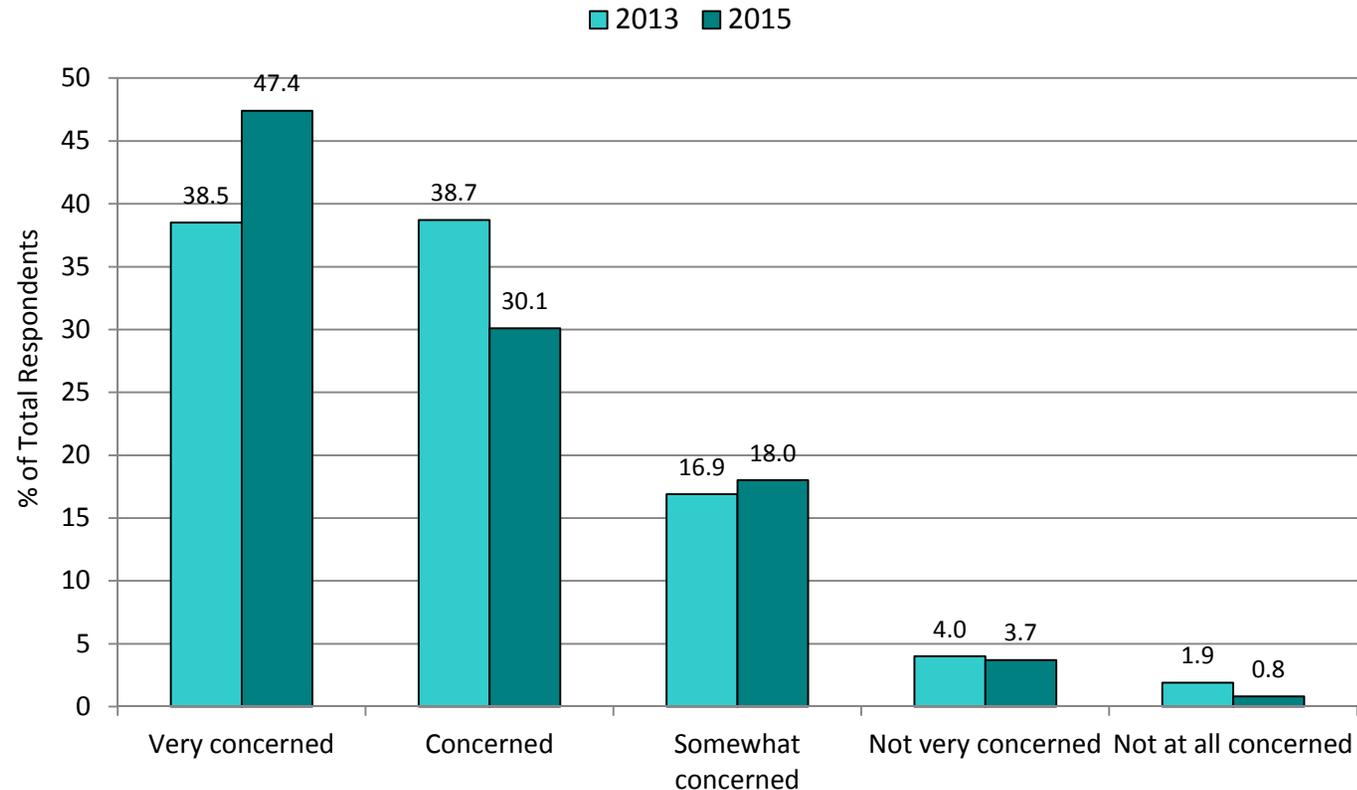
I personally would be willing to take the following actions to reduce the amount of water pollution in river, creeks and streams. (Select all that apply)	2013 (%)	2015 (%)
Putting fats, oils, grease and food particles in the trash can rather than down the sink drain.	87.0	85.6
Putting baby wipes, personal wipes and other wet wipes in the trash can rather than down the toilet.	82.6	85.4
Disposing of household hazardous wastes by taking them to a collection center.	81.1	88.2
Picking up trash that is in the gutter on and/or around where I live.	80.9	84.9
Recycling my used motor oil.	77.6	84.6
Using environmentally friendly lawn products.	76.3	84.5
Washing my car at the carwash or on a lawn.	72.5	74.4
Picking up pet waste in my yard.	60.2	63.7
Waiting to run the dishwasher or washing machine 24-48 hours after the rain subsides and the sewers aren't full.	60.0	52.9
Picking up pet waste in public spaces.	39.7	42.7
Installing a rain barrel to catch rainwater from my downspouts.	35.9	47.8
Creating a rain garden on my property or in my neighborhood	33.9	30.1

Q21 RESULTS – Willingness of Action

I personally would be willing to take the following actions to reduce the amount of water pollution in river, creeks and streams. (Select all that apply)	Percent who are age 45 – 54	Percent Female	Geographic area(s)
Install a rain barrel	17.7	59.3	East City / South County
Create a rain garden	22.6	56.5	Downtown / West City / South County
Environmentally friendly lawn	17.3	52.2	East City / Northeast County

Q22 RESULTS – Pollution Concern

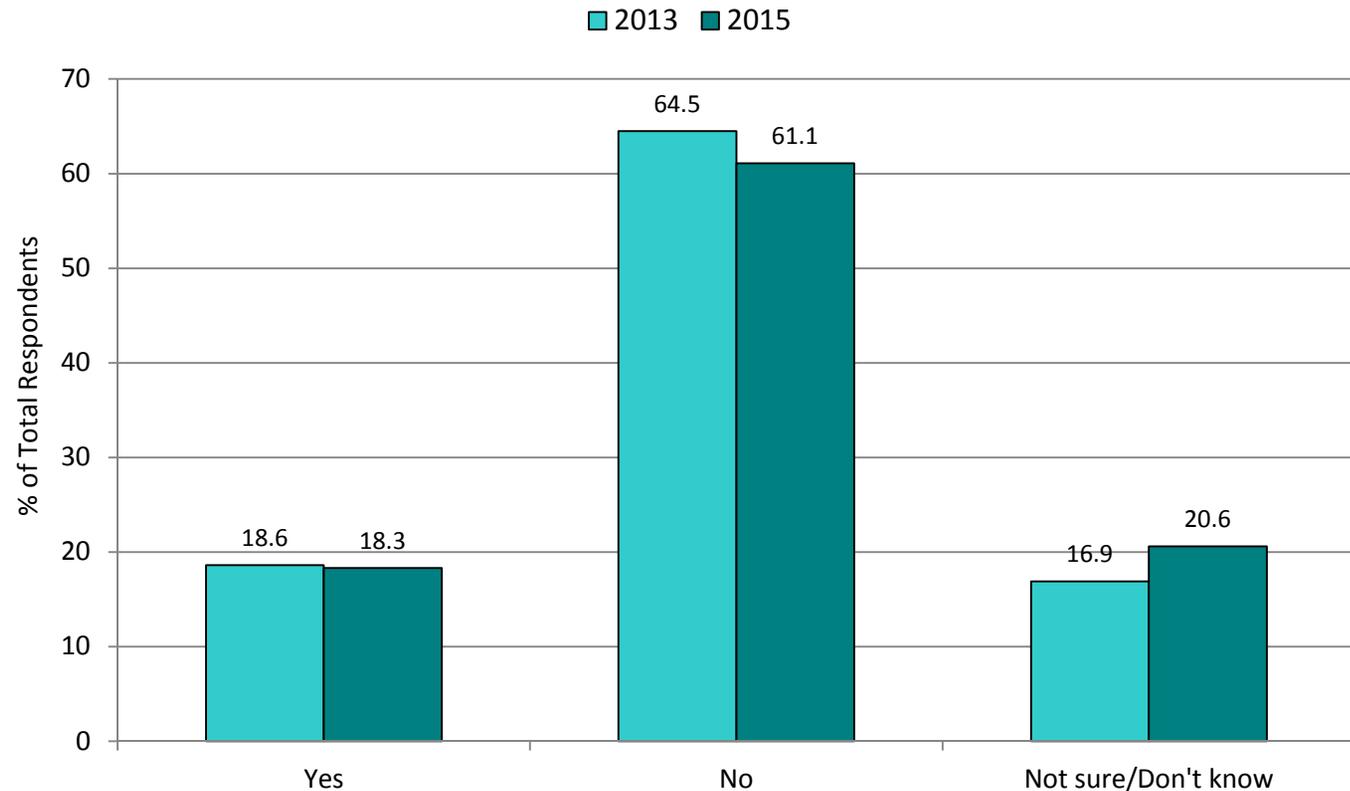
How concerned are you that water pollution will cause the river, creeks and ponds to become un-fishable and un-swimmable for the next generation if actions are not taken now?



- The proportion of people who are very concerned has increased from 2013 to 2015.
- Those under 25 (80.5%) and households with children under 18 (58.3%) are very concerned if actions are not taken now.

Q23 RESULTS – Awareness of Pollution Impact & Prevention

In the past 12 months have you heard anything about the impact of rainwater runoff pollution and sewer system overflow and ways that residents can prevent it?



- Males (25.6%) are significantly more likely than females (11.7%) to have heard about the impact.
- Older (65+) residents have the highest incidence (36.3%) of hearing about the impact, where renters are least likely (9.9%) to hear.

Q24 RESULTS – Source of Pollution Information

Where did you see or hear about rainwater runoff pollution and sewer system overflow? (Select all that apply; only asked if “yes” to Q23)	Percentage of those who heard something in the past 12 months
Television	52.8
Newspaper	40.0
Brochure	26.6
Radio	20.2
Website	19.2
Facebook	18.8
Other source	15.0
Posting near river, creek or pond	12.2
Not sure	6.3
Neighborhood meeting	5.8
Sign/billboard	4.6
Email	4.3
Twitter	1.7
Poster	0.7

Q25 RESULTS – Source of Pollution Information

What do you remember about the information that you saw or heard? Be as detailed as possible. (Open-response; only asked if “yes” to Q23)	Percent of those who heard something in the past 12 months	
	2013	2015
Conserve water	0.0	21.0
Redirecting rain water/gutters to yard	3.3	10.3
Don't add to the problem	1.3	10.2
Sewer overflow issues	14.5	9.9
Tips/info to help water pollution	9.6	9.2
Being more aware	0.4	8.4
Not to flush wipes / diapers	2.6	7.3
Don't wash clothes/use dishwasher during rain	4.2	6.3
Careful about what I pour into ground/down drain/dispose	11.4	6.0
Rain barrels	0.2	6.0
Rain garden	0.9	5.7
By not littering/polluting/using trash cans	3.5	5.4

Q26 RESULTS – Methods of Information

Which of the following kinds of information would get you personally to pay attention to rainwater runoff pollution and sewer system overflow to help improve the water quality or health of river, creeks, and ponds after a storm? (Select all that apply)	2013 (%)	2015 (%)
General Education	75.5	80.3
Financial reward	50.8	63.1
Environmental report	50.0	60.8
Statistical data	50.6	49.5
Campaign with emotional/dramatic impact	31.4	41.6
Financial consequences	36.6	35.5

- Attention to financial rewards, environmental reports and emotional campaigns all increased significantly from 2013 to 2015.
- Residents under 25 (60.6%) are more likely to respond to a campaign with an emotional/dramatic impact. East City residents most frequently (53.0%) indicated that they would prefer an emotionally-charged campaign. Women (56.4%) will most likely take action as a result of being exposed to a campaign with emotional/dramatic impact.
- Statistical data appealed to younger respondents under age 25 (80.0%) and East City residents (70.7%).

Q27 RESULTS – Methods of Information

What types of messages would you need to hear that would make you want to take action to reduce rainwater pollution and sewage system overflow? (Open-response)	2013 (%)	2015 (%)
Cause & effect/consequences/impact	21.1	29.3
Prevention methods/ways to help	22.1	16.6
Education in schools	1.3	13.4
Statistical data/stats	9.5	12.4
I already do this/already take action	5.2	9.8
TV/News coverage	6.9	9.3
Rewards/incentives	4.6	9.0
Fact/truth/what's really happening	8.7	8.1
How it effects my kids / future generations	2.7	4.8
General information	17.1	4.7
Don't know	11.4	4.5

- Respondents are more sure about the specific types of messages that would make them want to take action, especially education in schools.

Q27 RESULTS – Methods of Information

What types of messages would you need to hear that would make you want to take action to reduce rainwater pollution and sewage system overflow? (Open-response)	Age	Education	Gender	Geography	Income	Rent /Own
Cause & effect/consequences/impact	35-44 28.7%	Coll Grad 50.7%	Female 58.1%	East City / South County 50.7%	<\$60k 68.7%	Own 57.4%
Prevention methods/ways to help	65+ 33.8%	Coll Grad 41.6%	Female 53.2%	East City 32.5%	N/A	Own 70.1%
Education in schools	<25 43.5%	Coll Grad 67.7%	Male 62.9%	Northeast County 51.6%	\$60k and above 72.6%	Own 71.0%
Statistical data	<25 47.4%	Coll Grad 70.2%	Male 68.4%	Northeast County 54.4%	\$60k and above 78.9%	Own 73.4%

Q28 RESULTS – Source Rankings: Emergency Situation

People get their information from many different sources. Rank the sources that you would most prefer to hear from in an <u>emergency situation</u> (such as a weather alert). Please select at most 4 answers.	% ranked 1 st	% ranked 2 nd	% ranked 3 rd	% ranked 4 th	% ranked top 4
Television	40.8	24.8	8.9	11.9	83.3
Radio	15.6	25.9	20.5	11.0	69.1
Email	13.9	14.3	13.3	21.9	58.6
Social Media	12.1	16.4	13.7	13.7	52.2
Internet	8.1	8.5	22.2	15.3	49.9
Direct Mail	6.0	2.7	11.0	10.8	27.9
Postings at river, creek, or pond	2.0	2.1	2.2	5.1	15.5
Signs/billboards	1.2	2.9	5.6	7.4	10.4
Neighborhood meeting	0.4	2.4	2.7	2.9	7.8

- Residents prefer to receive alerts via traditional broadcast channels.
- Of those age 65+, 52.4% ranked television first – with 91.9% rating it as one of their top 4.

Q29 RESULTS – Source Rankings: Community News

People get their information from many different sources. Rank the sources that you would most prefer to hear from for <u>community news</u> (such as a river walk clean-up). Please select at most 4 answers.	% ranked 1 st	% ranked 2 nd	% ranked 3 rd	% ranked 4 th	% ranked top 4
Television	32.8	21.5	12.9	5.3	69.6
Email	18.8	14.1	18.8	12.6	59.8
Radio	17.7	20.8	12.6	14.2	60.8
Social Media	17.3	22.1	13.2	11.2	59.9
Internet	4.7	8.9	13.5	16.0	38.7
Direct Mail	4.4	6.5	14.3	14.9	35.9
Signs/billboards	1.7	2.9	6.7	11.6	20.2
Neighborhood meeting	1.7	1.5	3.2	5.3	10.5
Postings at river, creek, or pond	1.0	1.7	4.6	8.9	14.2

- Residents have significantly increased their preference of social media (9.6% in 2013 to 17.3% in 2015) for receiving community news.
- Television remains the preferred information source.
- Of respondents age 65+, 36.8% ranked email first.

Q30 RESULTS – Source Rankings: “How To” Information

People get their information from many different sources. Rank the sources that you would most prefer to hear from for “How To” information (such as how to install a rain barrel). Please select at most 4 answers.	% ranked 1 st	% ranked 2 nd	% ranked 3 rd	% ranked 4 th	% ranked top 4
Television	22.8	13.2	18.3	10.0	59.2
Email	20.8	23.1	13.5	10.2	62.5
Social Media	18.5	12.7	12.6	12.4	51.4
Direct Mail	15.8	11.8	16.6	14.0	52.6
Internet	11.3	22.7	15.9	21.3	63.4
Radio	5.9	9.4	5.0	5.1	23.2
Neighborhood meeting	2.7	3.7	4.9	5.3	14.7
Signs/billboards	1.2	1.8	8.4	6.6	15.5
Postings at river, creek, or pond	0.9	1.5	4.8	15.1	18.5

- The internet and email are top preferences for receiving “How To” information.
- The percentage rating social media as their first choice for “How To” information has increased significantly from 7.0% in 2013 to 18.5% in 2015. The top 4 percentage also had a significant increase from 33.6% in 2013 to 51.4% in 2015.
- Among social media users, most are likely to be 44 or under (71.8%).

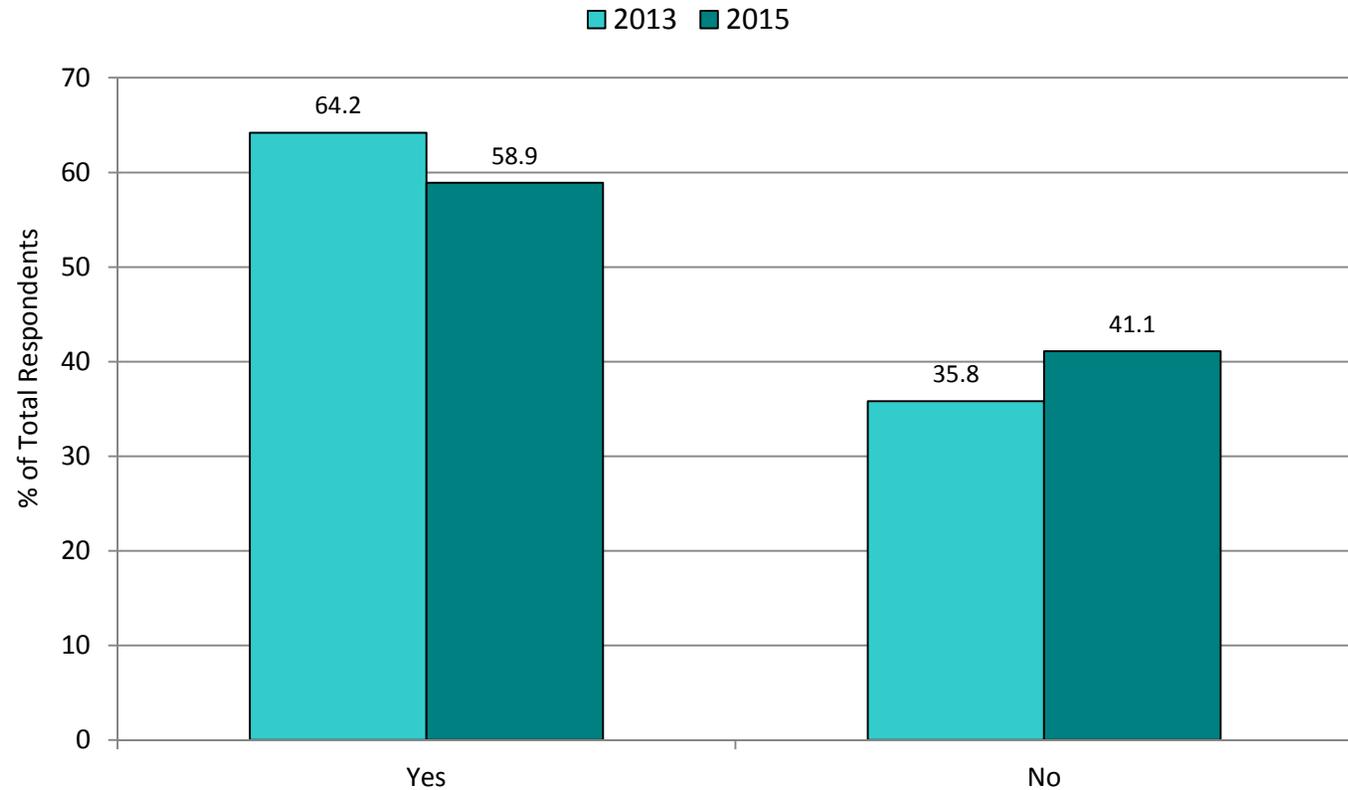
Q31 RESULTS – Source Rankings: Notices/Upcoming Dates

People get their information from many different sources. Rank the sources that you would most prefer to hear from for <u>notices</u> (such as upcoming dates for recycling hazardous chemicals). Please select at most 4 answers.	% ranked 1 st	% ranked 2 nd	% ranked 3 rd	% ranked 4 th	% ranked top 4
Television	25.4	15.4	15.4	12.3	64.2
Email	23.6	21.4	16.5	7.9	65.6
Direct mail	17.8	12.3	9.5	18.8	53.5
Radio	10.8	18.6	10.8	12.6	48.7
Social media	10.5	11.2	12.9	9.3	40.6
Signs/billboards	5.8	2.5	6.8	9.7	22.4
Internet	4.5	9.0	15.7	16.5	40.9
Neighborhood meeting	1.1	1.3	9.4	4.6	14.7
Postings at river, creek, or pond	0.6	2.5	3.0	8.3	17.9

- Email is a preferred channel for important but non-urgent information such as notices.
- Respondents age 45+ rated Email most often (68.5%) as one of their top 4 choices.

Q32 RESULTS – Newsletter

Do you read newsletters that are included in your monthly bills?



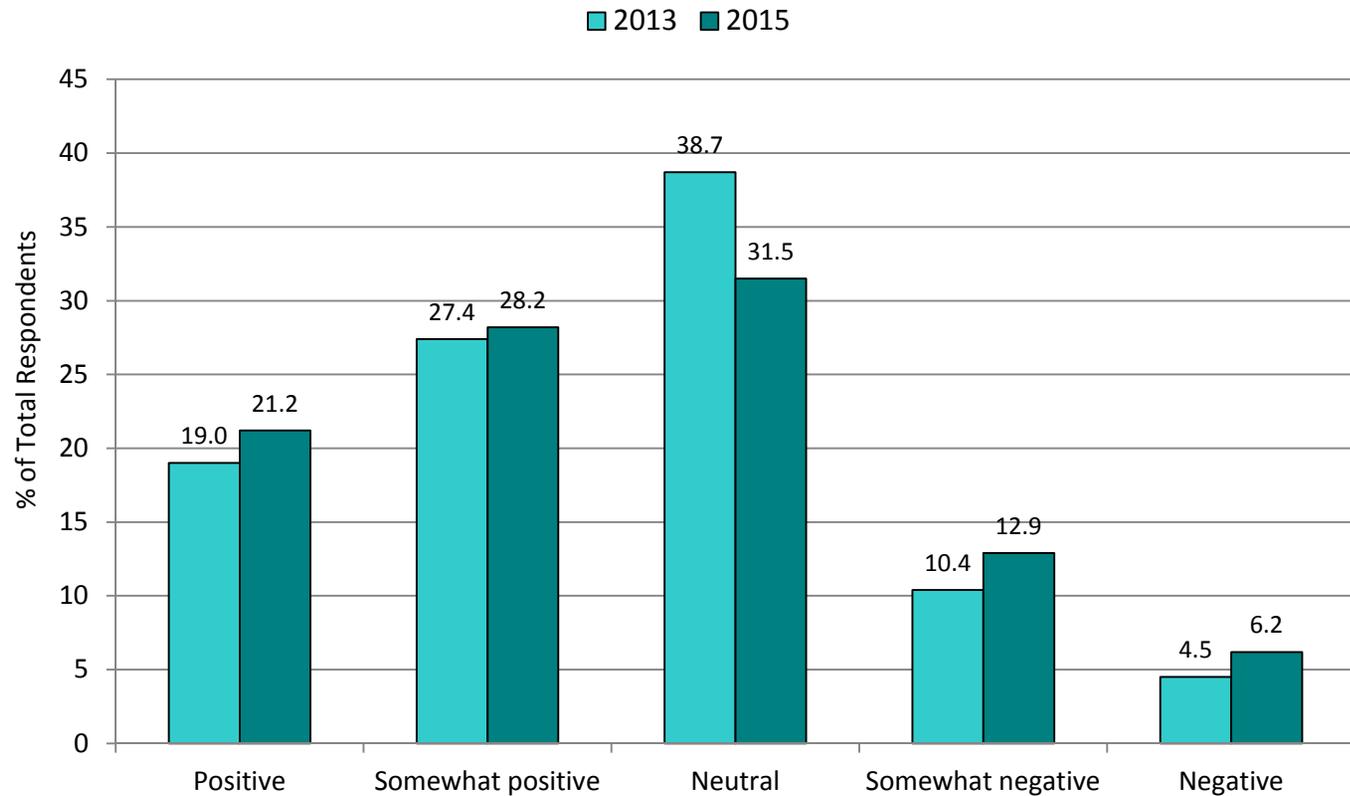
- Those reading the newsletter inserts has dropped from 2013 to 2015.
- Residents under 25 (60.5%) and East City residents (55.2%) are least likely to read the newsletter inserts. Residents 65+ (73.4%) and South County residents (70.9%) are most likely to read the newsletter inserts.

Q33 RESULTS – MSD & Your Community

What does the Metropolitan Sewer District (MSD) do for your community? (Open-response)	2013 (%)	2015 (%)
Install/handle/maintain sewers/waste water	25.7	23.5
Cleans the water/purifies/filters	6.3	15.9
Clean sewers/ditches	6.3	15.7
Provide drainage/runoff control	8.7	14.4
Prevent flooding	5.5	11.4
Treat waste water	3.9	7.1
Corrupt / inadequate	0.3	6.6
Charge too much	5.3	6.4
Repair pipes/infrastructure	4.0	6.0
Continue to raise prices	2.9	4.4
Prevents pollution	0.5	4.3
Nothing	3.7	4.3
Don't know	16.2	12.7

Q34 RESULTS – Opinion of MSD

What is your opinion of MSD?

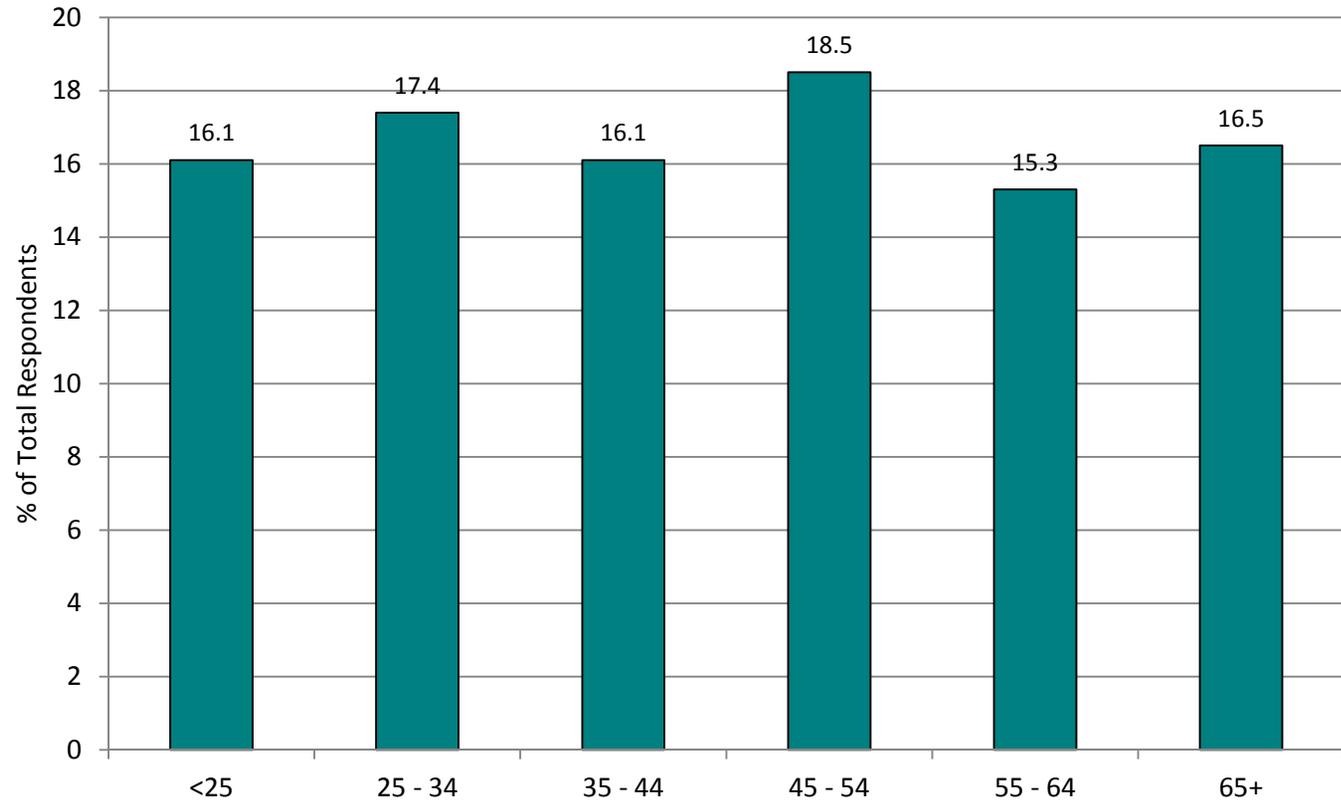


- There was no significant change of MSDs perception from 2013 to 2015.
- Younger (under 25) respondents (80.1%) have a positive / somewhat positive opinion of MSD. Downtown / West City residents have the lowest positive / somewhat positive opinion at 33.5%.

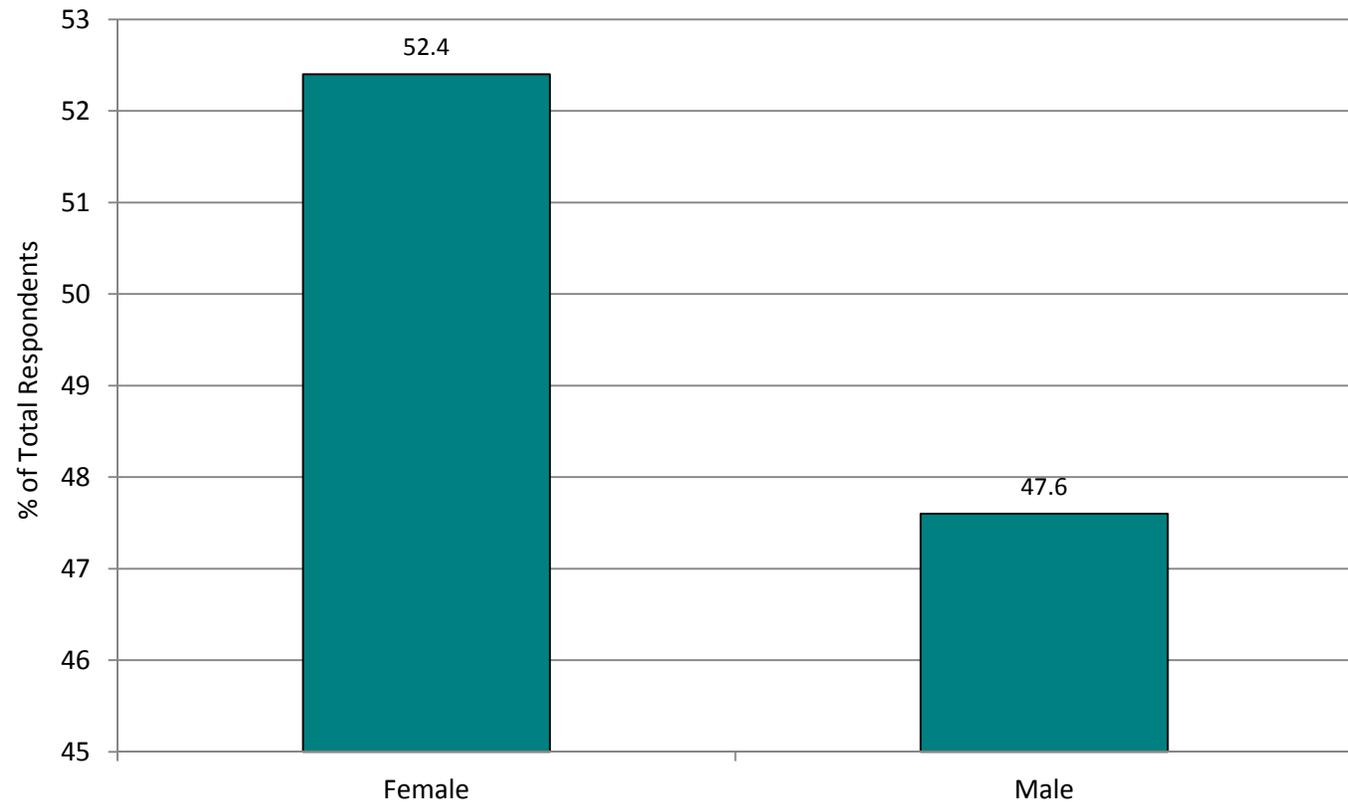
Q35 RESULTS – MSD & Your Community

MSD helps your community manage its sewer system and protect the health of the river, creeks and ponds. What role do you think MSD should take in helping residents reduce the household causes of waterway pollution? (Open response)	2013 (%)	2015 (%)
Educate	28.8	30.4
Provide more information / awareness	24.3	25.1
Provide incentives / rewards	6.3	9.5
Inform public of ways to help	10.0	8.5
Manage their resources better	0.4	6.5
Major role / a big role	3.1	5.8
Newsletters / inserts	3.2	3.8
Clean out drains / sewers	2.2	3.7
Financial incentives on water bill	2.7	3.4
Don't know	8.3	8.8

Q36 RESULTS – Age

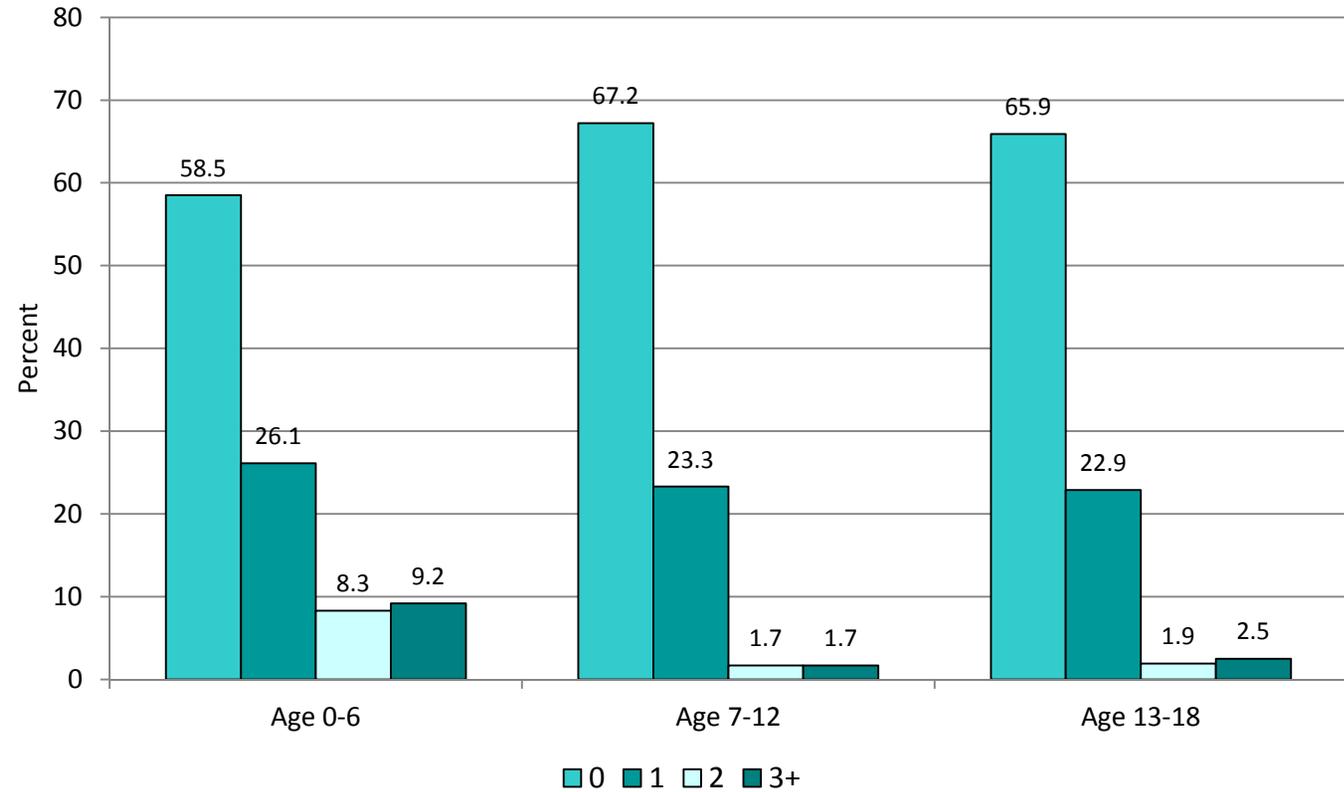


Q37 RESULTS – Gender

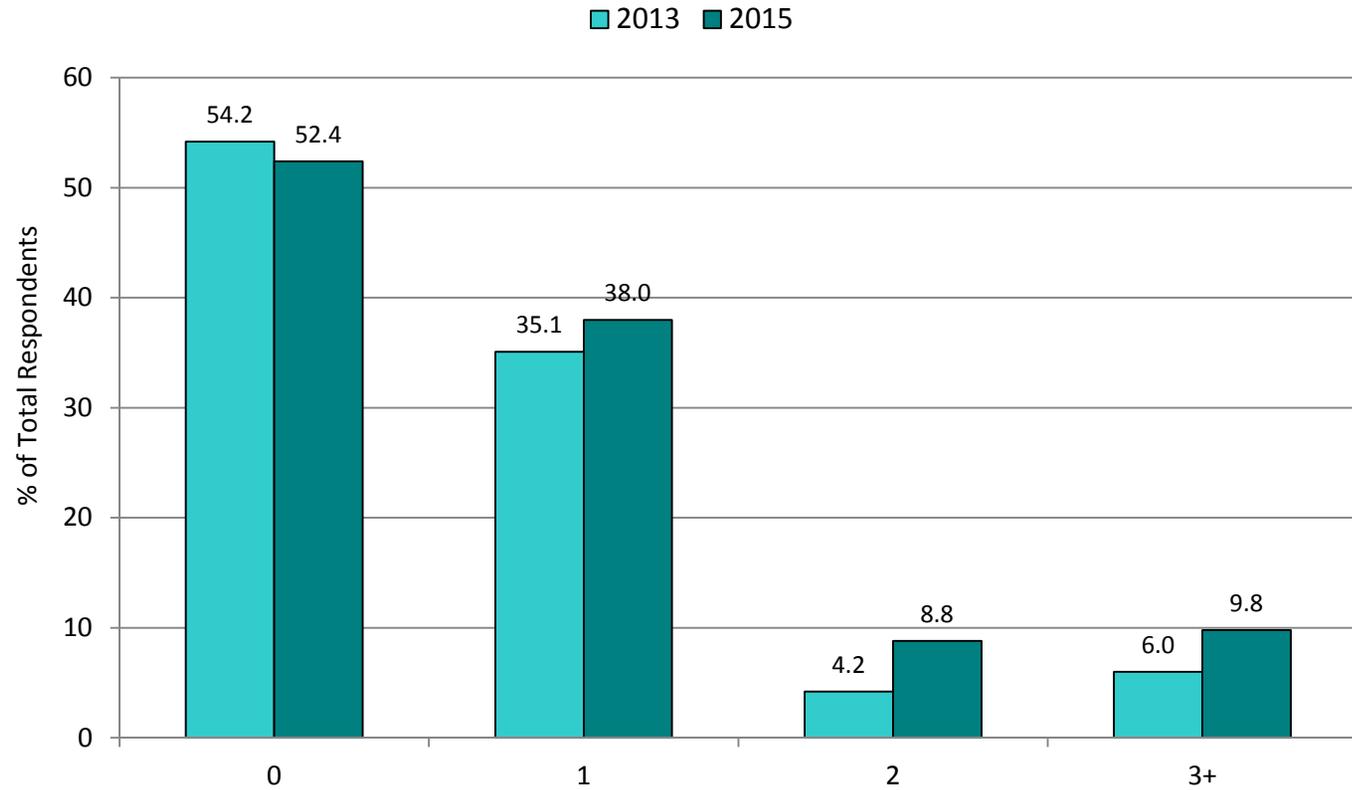


- Females tend to reside Downtown (75.5%), versus males who are more likely to live in the Northeast County (75.8%).

Q38 RESULTS – Number of Children by Age in Household



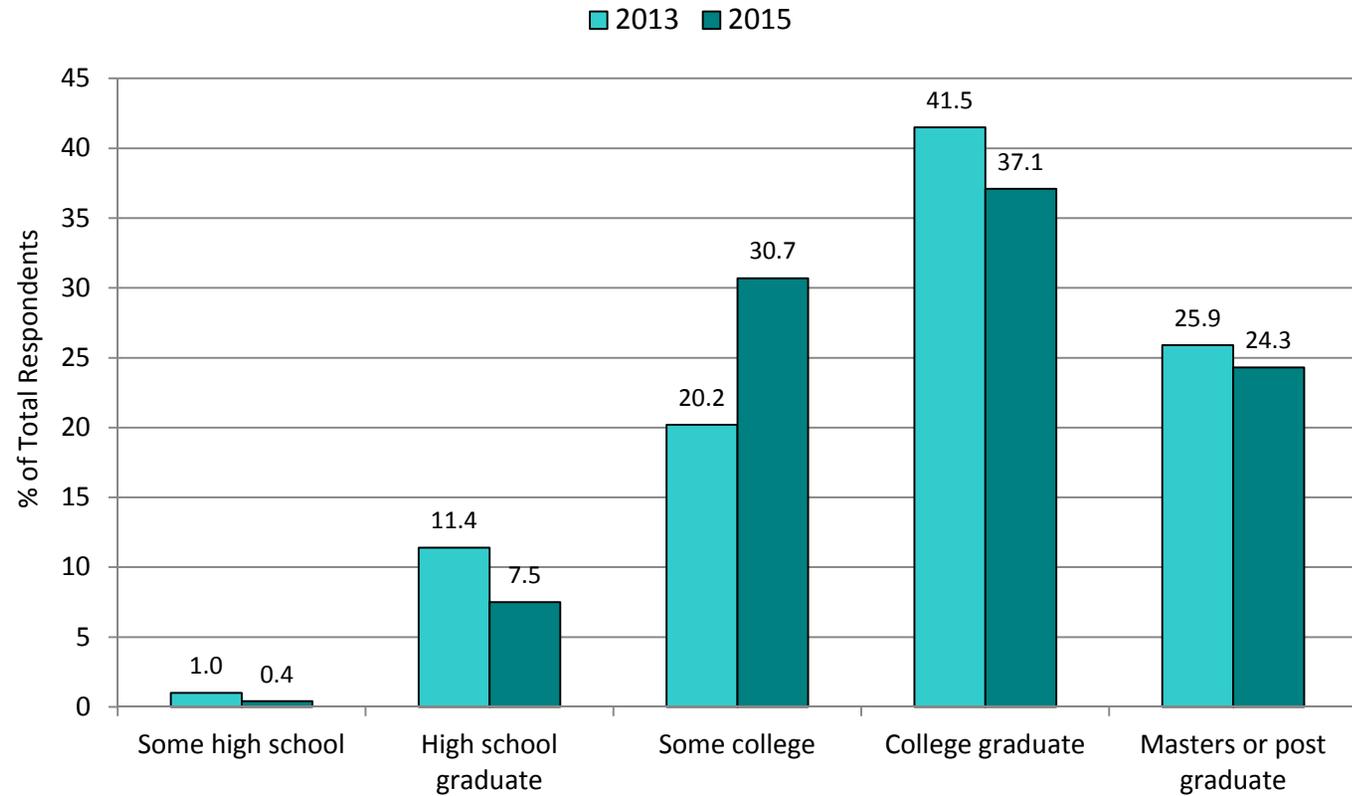
Q38 RESULTS – Total Number of Children in Household



- Southwest residents tend to have small families (53.9% with only one child). The largest families (3+ children) reside in the Northeast County (30.6%).

Q39 RESULTS – Education

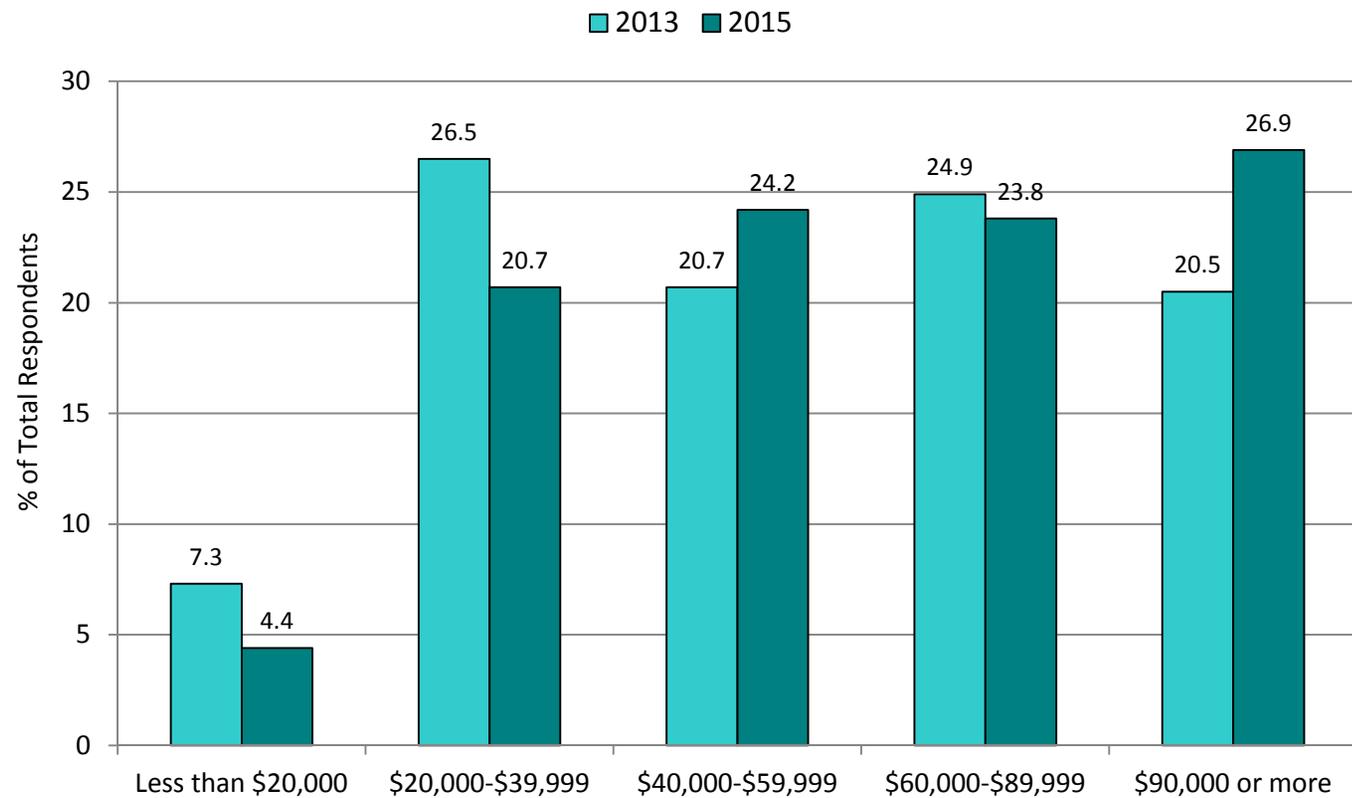
What is your highest level of education?



- The East County has the highest proportion of post grads (37.8%).

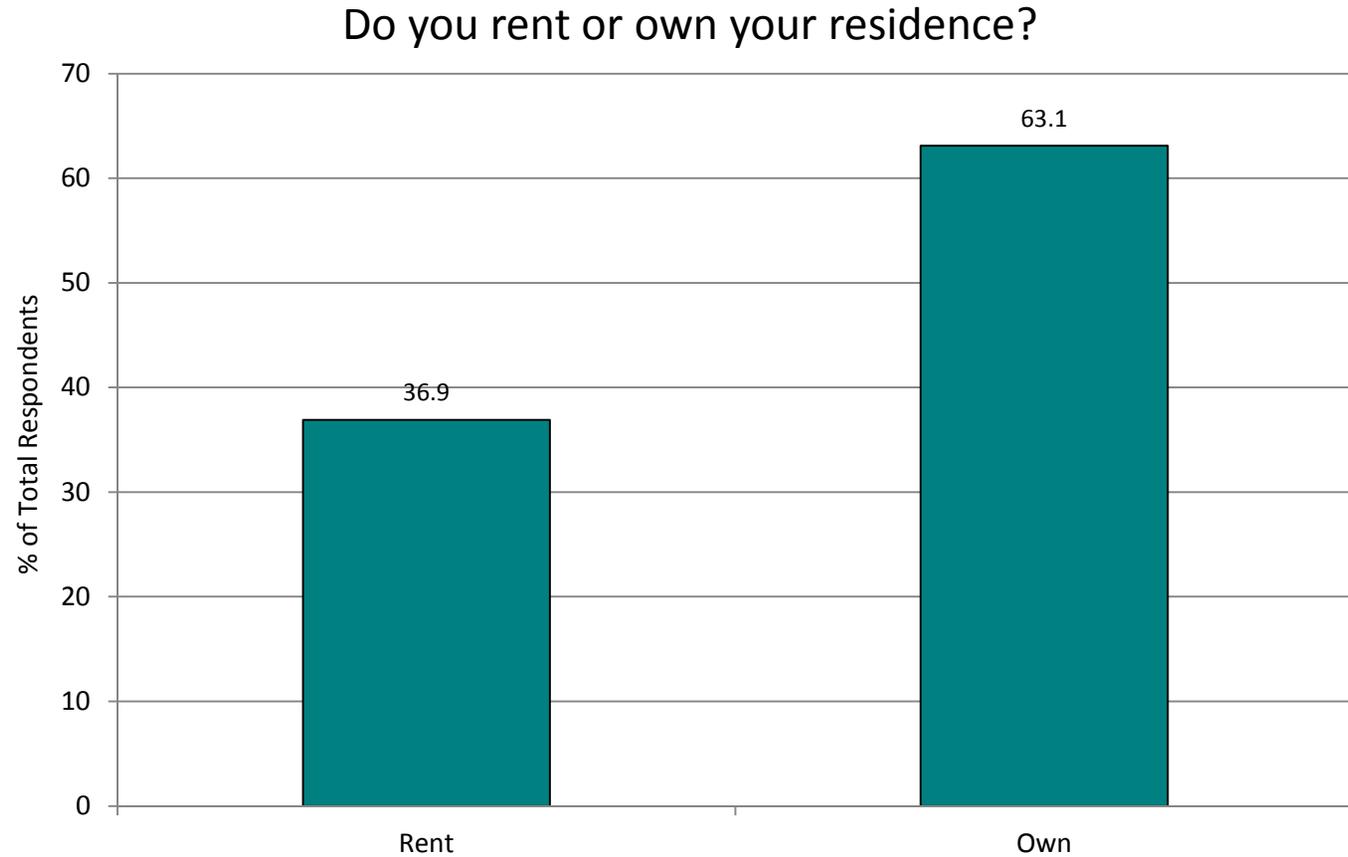
Q40 RESULTS – Annual Household Income

What is your household income?



- In general, income levels did vary as expected with ZIP code geography.

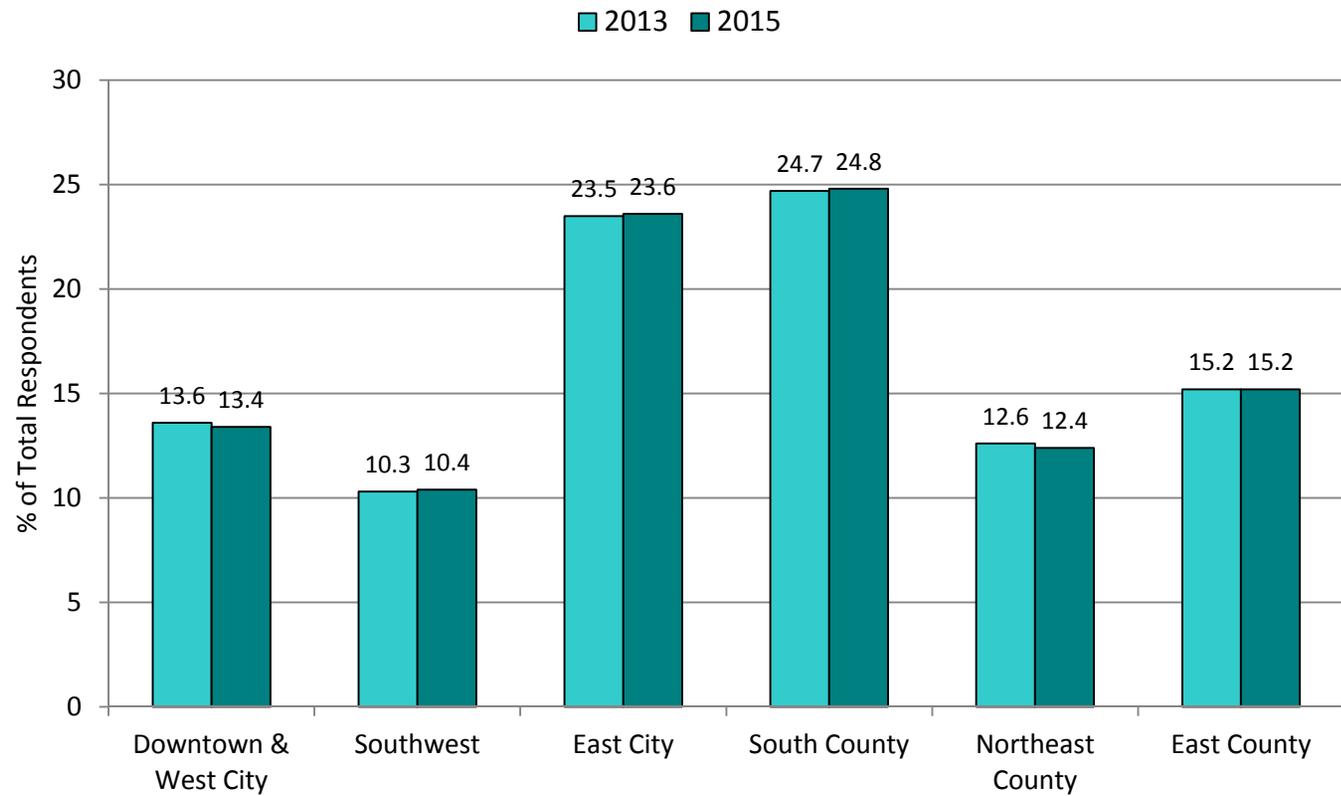
Q41 RESULTS – Rent vs. Own



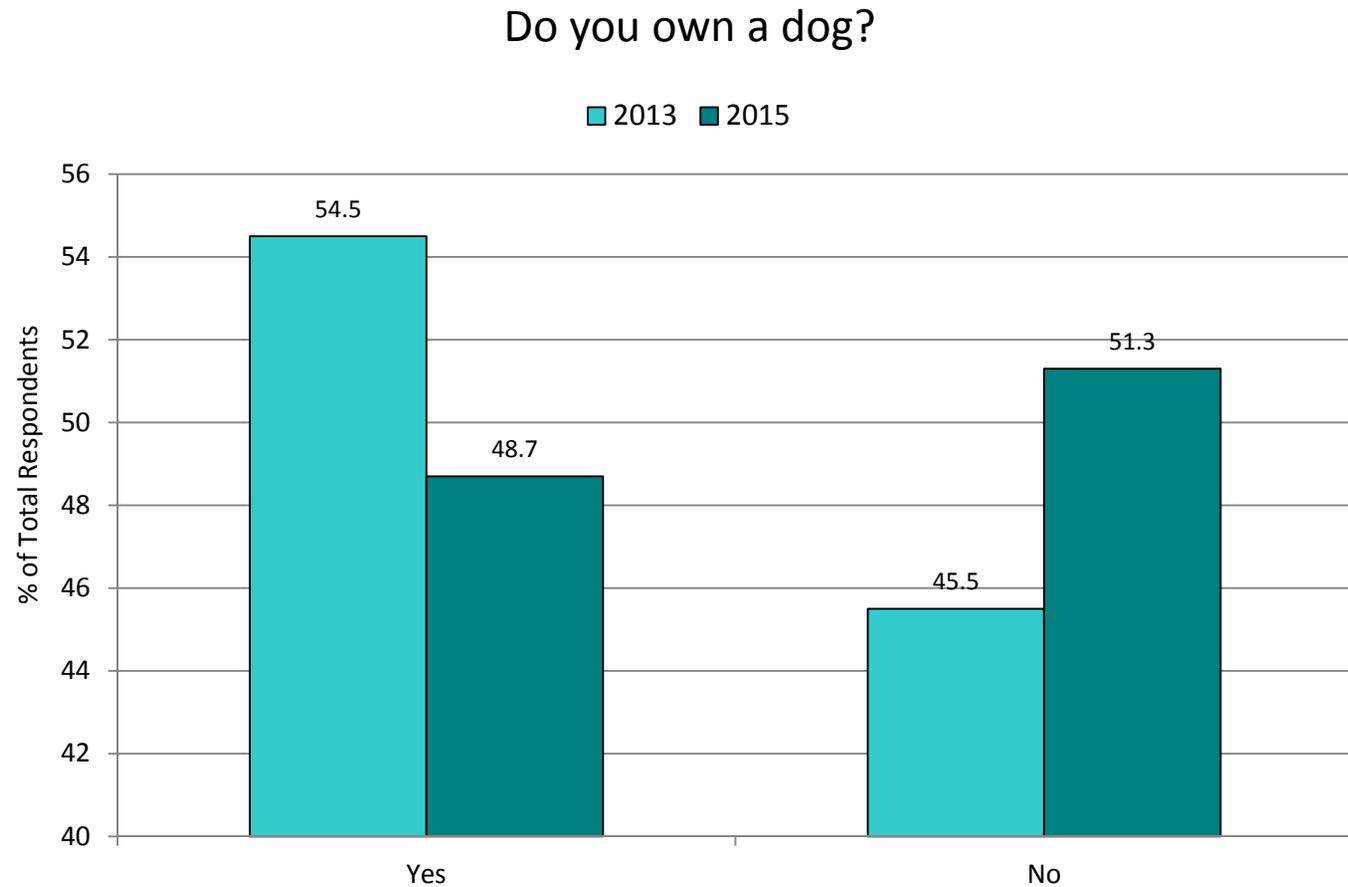
- Renters are most prevalent Downtown (62.9%), as where owners are more likely to reside in Northeast County (80.0%) and South County (71.9%).

Q42 RESULTS – ZIP Code

What is your ZIP code?

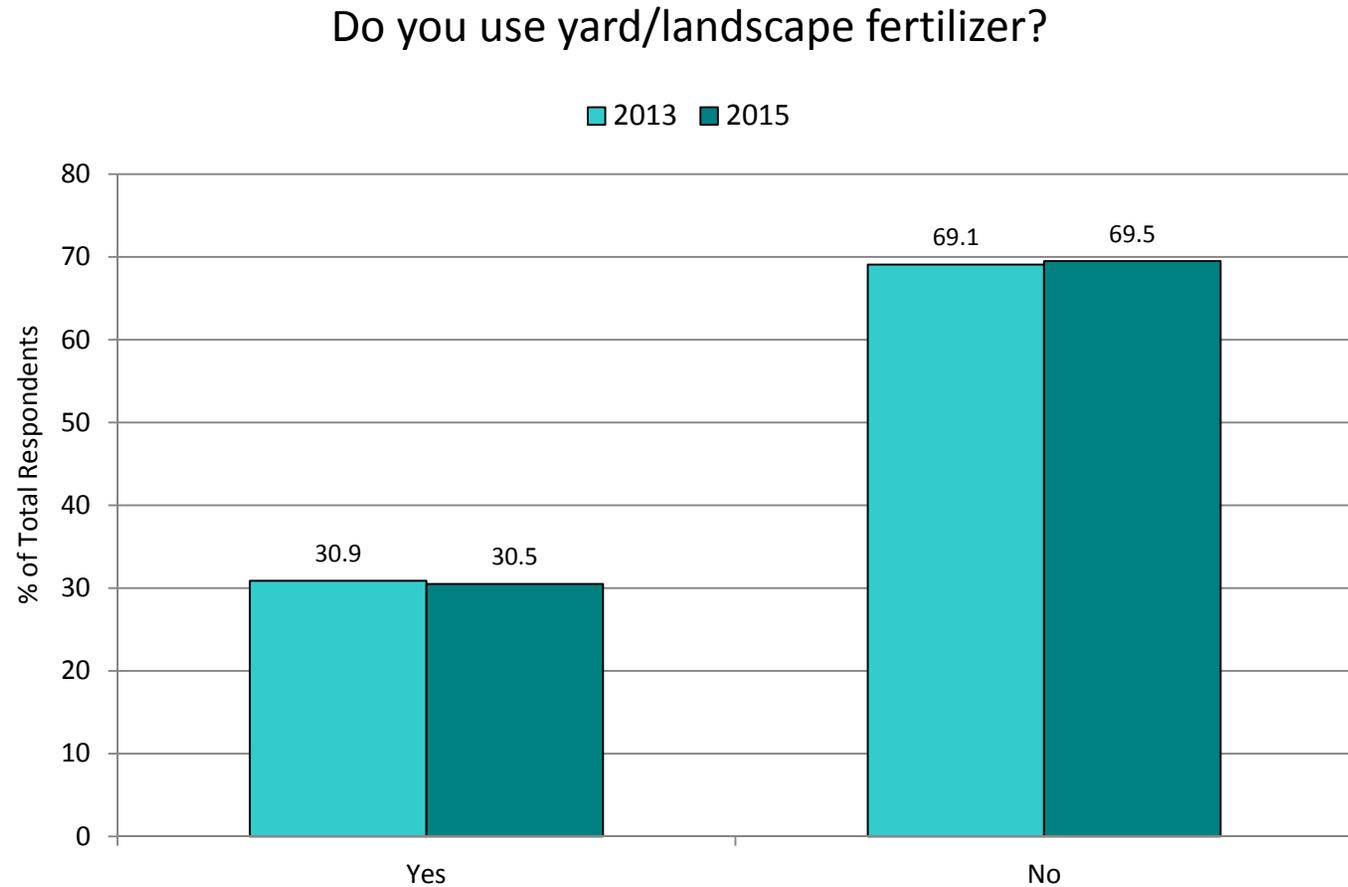


Q43 RESULTS – Dog Owner



- Dog ownership declined from 2013 to 2015.
- Owners tend to be under 25 (59.0%) and reside in the South County (65.0%).

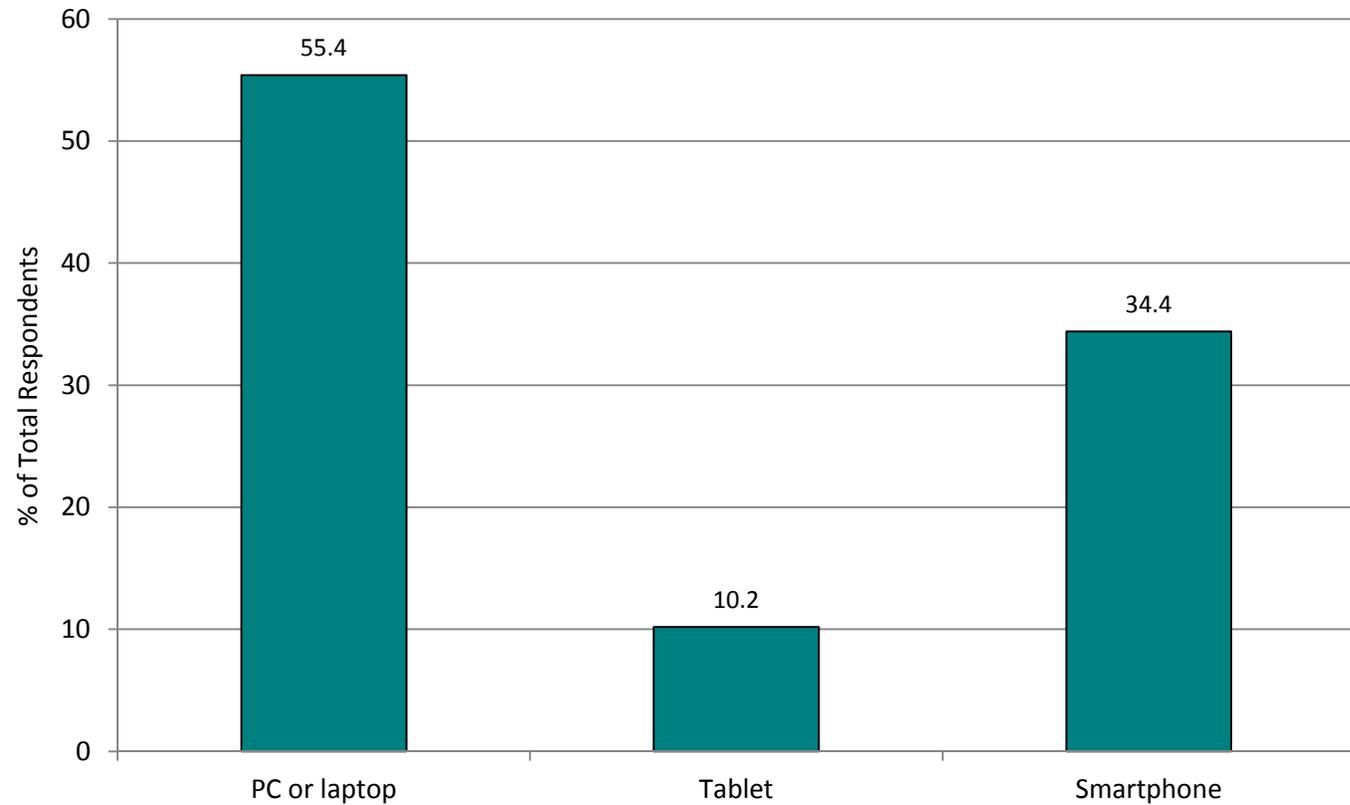
Q44 RESULTS – Use of Yard/Landscape Fertilizer



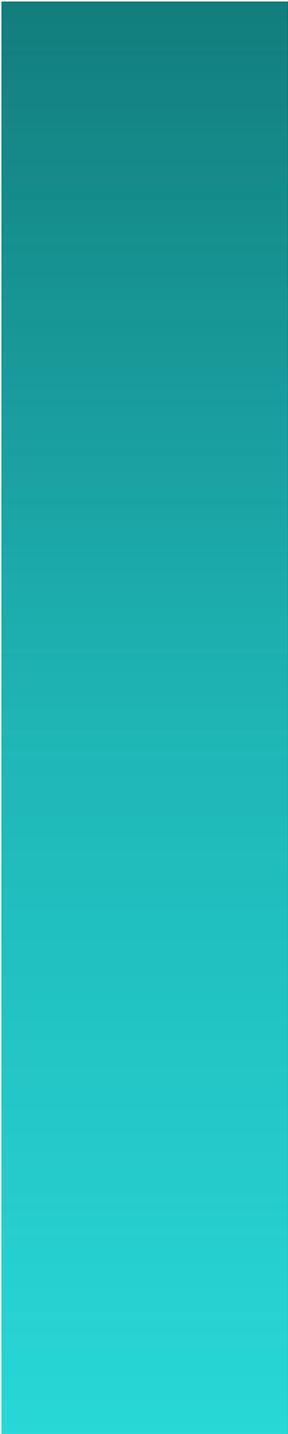
- Older (65+) respondents tend to use fertilizer more (52.0%), along with East County residents (64.8%).

Q45 RESULTS – Survey Usage Device

What device are you using to take this survey?



- Males tend to use a PC or laptop (65.0%), while females prefer smartphones (41.8%).
- Those 65 and older use PCs or laptops most often (77.9%) to complete the survey.



APPENDIX A

Online Survey

2015 Jefferson County Environmental Impact Survey

1. Do you live in Jefferson County, Kentucky?
 - Yes
 - No

If no, the participant is not allowed to proceed.

2. Please indicate if you or anyone in your household work in any of the following industries:
 - Advertising or Marketing
 - Marketing Research
 - TV or Radio Station
 - Public Utility
 - Nobody in my household works in these industries

If any of the first 4 are selected, the participant is not allowed to proceed.

3. For each of the following environmental issues, indicate how important you feel the issue is to you.
 - a) Increasing tree canopy
 - b) Protecting our waterways (river, creeks and ponds) from pollution
 - c) Preserving open spaces
 - d) Reducing global warming
 - e) Conserving energy resources
 - Extremely important
 - Very important
 - Somewhat important
 - Not very important
 - Not at all important

4. Do you use the river, creeks and ponds for recreational purposes in Jefferson County, Kentucky?
 - Yes
 - No

If no, ask #5

5. Why don't you use river, creeks and ponds for recreational purposes? Be as specific as possible.
(Open response)
6. How would you rate the overall water quality or health of the river, creeks, and ponds in Jefferson County, Kentucky?
 - Excellent
 - Very Good
 - Good
 - Fair
 - Poor
7. Why do you give that rating? (Open response)
8. How important is it to you that your community has clean rivers, creeks and ponds?
 - Extremely important
 - Very important
 - Important
 - Somewhat important
 - Not at all important
9. How does rain affect the water quality or health of our river, creeks and ponds? Please select one.
 - Restores vital nutrients
 - Washes away pollution
 - Adds pollutants to the water
 - Don't know
 - Other [Please specify]:
10. After it rains, you should not use the local area river, creeks and ponds because they have become unsafe with increased levels of pollution and bacteria.
 - True
 - False
 - Not sure

11. What do you think would cause the river, creeks and ponds to become polluted after a rain?
(Open response)
12. Please indicate how much you agree with the following statements.
 - a) Water that flows through street gutters and storm drains goes through a treatment facility before being released in our waterways.
 - b) Rainwater runoff is a leading cause of water pollution in my area.
 - c) Sewer system overflow occurs frequently in my community.
 - Strongly agree
 - Agree
 - Neither agree nor disagree
 - Disagree
 - Strongly disagree
13. How informed do you feel about the causes of rainwater runoff pollution in your area?
 - Very informed
 - Informed
 - Somewhat informed
 - Not very informed
 - Not at all informed
14. How informed do you feel about the causes of sewer system overflow in your area?
 - Very informed
 - Informed
 - Somewhat informed
 - Not very informed
 - Not at all informed
15. Do you think there are actions you can take to reduce water pollution in the river, creeks and ponds?
 - Yes
 - No

16. Rainwater runoff and sewer system overflow contribute to water pollution. Do you currently take actions to reduce water pollution?
- Yes
 - No
- If yes, ask #17
17. What actions do you currently take to reduce water pollution? (Open response)
18. Do you think any of these actions would increase the amount of pollution from rainwater runoff?
(Select all that apply)
- Putting trash in the street gutter
 - Improperly disposing hazardous waste, such as paint and motor oil
 - Using non environmentally friendly lawn chemicals
 - Leaving pet waste on the ground
 - Allowing fluids to leak from cars and trucks
 - Washing your car in the driveway or street
 - Other [Please specify]:
19. Do you think any of these actions cause sewer system overflow? (Select all that apply)
- Pouring fats, oils, greases and food particles down the sink
 - Flushing diaper wipes and other wet wipes down the toilet
 - Flushing dental floss down the toilet
 - Flushing hair down the toilet
 - Using water-using appliances, such as a dishwasher or clothes washer, when it is raining
 - Connecting the groundwater sump pump to the basement sewer connection
 - Putting lawn grass clippings and leaves in the street gutter
 - Other [Please specify]:

20. Please indicate how much you agree or disagree with the following statements about the water quality or health of the river, creeks, and ponds in Jefferson County, KY.
- a) We can all do our part to reduce the effects of water pollution.
 - b) I am personally responsible for reducing rainwater runoff pollution and sewer system overflow.
 - c) Local governments, businesses and industries are responsible for reducing rainwater runoff and sewer system overflow.
 - d) I would only do my part to reduce water pollution if everyone else did as well.
 - e) The utility company should provide incentives for people to reduce water pollution.
 - f) Human activities have no significant impact on the water quality of river, creeks and ponds.
 - g) Water pollution of river, creeks and ponds frightens me.
 - h) The evidence for water pollution of river, creeks and ponds is unreliable or insufficient.
 - o Strongly agree
 - o Agree
 - o Neither agree nor disagree
 - o Disagree
 - o Strongly disagree
21. I personally would be willing to take the following actions to reduce the amount of water pollution in river, creeks and streams. (Select all that apply)
- o Picking up trash that is in the gutter on and/or around where I live.
 - o Disposing of household hazardous wastes by taking them to a collection center.
 - o Installing a rain barrel to catch rainwater from my downspouts.
 - o Creating a rain garden on my property or in my neighborhood.
 - o Using environmentally friendly lawn products.
 - o Picking up pet waste in public spaces.
 - o Picking up pet waste in my yard.
 - o Recycling my used motor oil.
 - o Washing my car at the carwash or on a lawn.
 - o Putting fats, oils, grease and food particles in the trash can rather than down the sink drain.
 - o Putting baby wipes, personal wipes and other wet wipes in the trash can rather than down the toilet.
 - o Waiting to run the dishwasher or washing machine 24-48 hours after the rain subsides and the sewers aren't full.

22. How concerned are you that water pollution will cause the river, creeks and ponds to become un-fishable and un-swimmable for the next generation if actions are not taken now?
- Very concerned
 - Concerned
 - Somewhat concerned
 - Not very concerned
 - Not at all concerned
23. In the past 12 months have you heard anything about the impact of rainwater runoff pollution and sewer system overflow and ways that residents can prevent it?
- Yes
 - No
 - Not sure/don't know
- If yes, ask #24 & #25
24. Where did you see or hear about rainwater runoff pollution and sewer system overflow? (Select all that apply)
- Television
 - Radio
 - Newspaper
 - Email
 - Website [Please specify]:
 - Brochure
 - Neighborhood meeting
 - Poster
 - Facebook
 - Twitter
 - Sign/billboard
 - Posting near river, creek, or pond
 - Other source [Please specify]:
 - Not sure

25. What do you remember about the information that you saw or heard? Be as detailed as possible.
(Open response)
26. Which of the following kinds of information would get you personally to pay attention to rainwater runoff pollution and sewer system overflow to help improve the water quality or health of river, creeks, and ponds after a storm? (Select all that apply)
- General education
 - Campaign with emotional/dramatic impact
 - Financial reward
 - Financial consequences
 - Statistical data
 - Environmental report
27. What types of messages would you need to hear that would make you want to take action to reduce rainwater pollution and sewage system overflow? (Open response)
28. People get information from many different sources. Rank the sources that you would most prefer to hear from in an emergency (such as a weather alert). Please select at most 4 answers.
- Radio
 - Television
 - Email
 - Social Media
 - Direct Mail
 - Internet
 - Neighborhood Meeting
 - Signs/Billboards
 - Postings at river, creek or pond

29. People get information from many different sources. Rank the sources that you would most prefer to hear from for community news (such as a river walk clean-up). Please select at most 4 answers.
- Radio
 - Television
 - Email
 - Social Media
 - Direct Mail
 - Internet
 - Neighborhood Meeting
 - Signs/Billboards
 - Postings at river, creek or pond
30. People get information from many different sources. Rank the sources that you would most prefer to hear from for "How To" information (such as how to install a rain barrel). Please select at most 4 answers.
- Radio
 - Television
 - Email
 - Social Media
 - Direct Mail
 - Internet
 - Neighborhood Meeting
 - Signs/Billboards
 - Postings at river, creek or pond
31. People get information from many different sources. Rank the sources that you would most prefer to hear from for notices (such as upcoming dates for recycling hazardous chemicals). Please select at most 4 answers.
- Radio
 - Television
 - Email
 - Social Media
 - Direct Mail
 - Internet
 - Neighborhood Meeting
 - Signs/Billboards
 - Postings at river, creek or pond

32. Do you read newsletters that are included in your monthly bills?
- Yes
 - No
33. What does the Metropolitan Sewer District (MSD) do for your community? (Open response)
34. What is your opinion of MSD?
- Positive
 - Somewhat positive
 - Neutral
 - Somewhat negative
 - Negative
35. MSD helps your community manage its sewer system and protect the health of the river, creeks and ponds. What role do you think MSD should take in helping residents reduce the household causes of waterway pollution? (Open response)
36. What was your age on your last birthday?
37. Are you:
- Female
 - Male
38. How many children do you have in your household:
- a) Age 0-6:
 - b) Age 7-12:
 - c) Age 13-18:
39. What is your highest level of education?
- Some high school
 - High school graduate
 - Some college
 - College graduate
 - Masters or post graduate

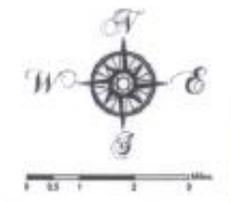
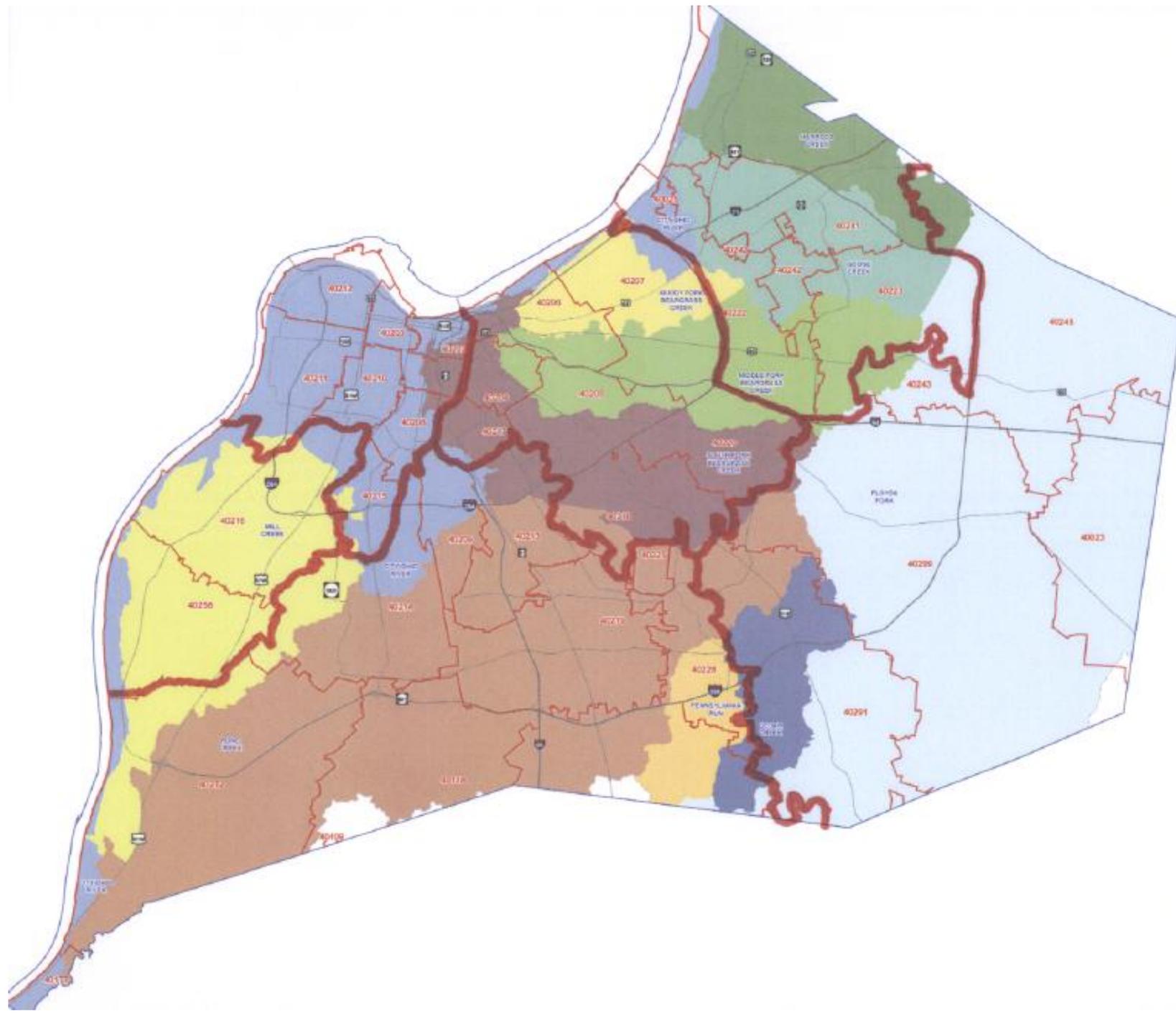
40. What is your household income?
- Less than \$20,000 per year
 - \$20,000 to \$39,999 per year
 - \$40,000 to \$59,999 per year
 - \$60,000 to \$89,999 per year
 - \$90,000 or more per year
41. Do you rent or own your residence?
- Rent
 - Own
42. What is your ZIP code?
43. Do you own a dog?
- Yes
 - No
44. Do you use yard/landscape fertilizer?
- Yes
 - No
45. If you would like to be entered into a drawing for a prize, please provide your name, email address, and phone number so that we may contact the winners.
- a) Name:
 - b) Email:
 - c) Phone Number:
46. What device are you using to take this survey?
- PC or laptop
 - Tablet
 - Smartphone

Appendix B – Zip Code Segmentation Maps

Watersheds By Zip Codes

Jefferson County, Kentucky

- Legend**
- Major Roads**
- Interstate
 - Major Arterial
 - Minor Arterial
- ZIP Codes**
- Watersheds**
- CEDAR CREEK
 - CITY/HIO RIVER
 - FLOYDS FORK
 - GOOSE CREEK
 - HARPODS CREEK
 - MIDDLE FORK BEARGRASS CREEK
 - MILL CREEK
 - MUDDY FORK BEARGRASS CREEK
 - PENNSYLVANIA RUN
 - POND CREEK
 - SOUTH FORK BEARGRASS CREEK



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