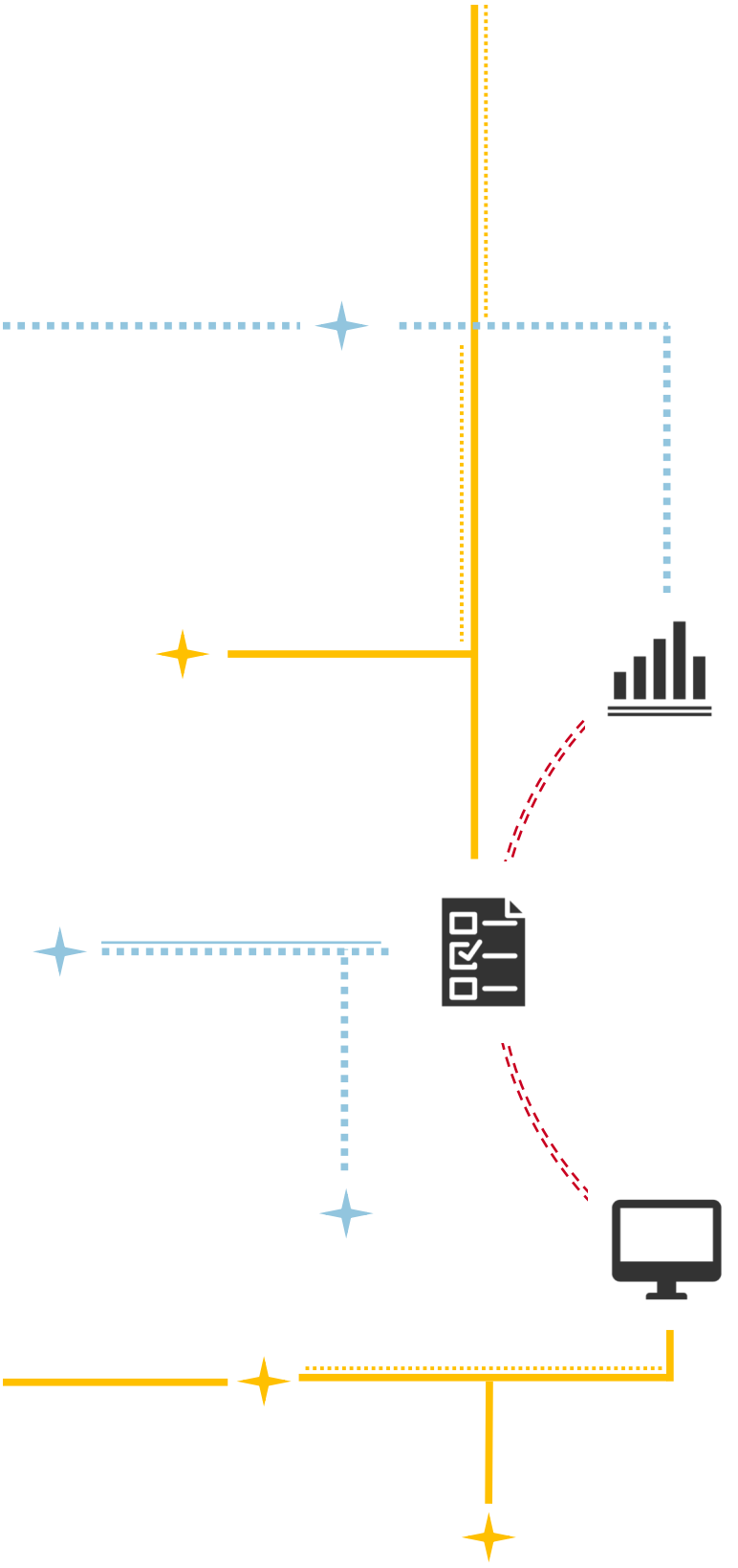


2018 Madison Area Municipal Storm Water Partnership Survey

Perceptions, Actions and Concerns around Water Quality in Area Lakes, Rivers and Streams

An survey conducted by UW-Madison
Natural Resources Institute Evaluation Unit

Extension
UNIVERSITY OF WISCONSIN–MADISON

Acknowledgement

This report was successfully created by a number of highly talented staff and students in the Evaluation Unit at the Natural Resources Institute (NRI) in the Division of Extension at the University of Wisconsin-Madison. We would like to thank Feiran Chen, Amber Saylor Mase, Anders Shropshire, Ke Chen, Laura Livingston, and Samuel Pratsch. We gratefully acknowledge their hard work and dedication. We would also like to thank Christal Campbell, Storm Water Education Coordinator with Dane County Land and Water Resources Department for her assistance. Finally, we thank the Dane County area residents who took the time to complete the survey and share their thoughts and perspectives with us.

Table of content

Executive summary

This summary will introduce the purpose of the survey, the survey recipients, and how the survey was distributed. It will also present the main findings of each survey question and some brief cross-tabulation salient findings. Note that this summary is not a exhaustive list of survey results.

Purpose

To provide data to help evaluate past education efforts and identify potential future education outreach activities aimed at improving the water quality of area lakes, rivers, and streams.

Respondents and distribution

Residents from 20 municipalities in Dane County were randomly selected. A mail survey was sent to the selected residents using the Dillman method.

Your Perceptions of Local Water Resources

49% of respondents know they live in a watershed.

54% of respondents thought water quality in lakes is poor.

71% of respondents thought thought that rain or snow melt ended up going into a storm drain .

65% of respondents thought stormwater runoff went to a creek stream, river or lake.

43% - 60% consider the following sources as contributing **a lot** to pollution in lakes/river/streams:

- *Agricultural fertilizers and pesticides*
- *Manure from farm animals*
- *Stormwater runoff from streets & highways*
- *Salt applied to roads/sidewalks in winter*
- *Lawn/urban fertilizers and pesticides*.

Actions, Concerns, and Efforts

49% think activities are taking place, but they don't know much about them.

74% support the efforts and would like to see more of them, even if they cost more.

63% consider restoring wetlands as a very effective effort to improve the water quality in lakes/rivers/ streams.

58% are very willing to *report spills into storm drains* and **33%** are very willing to *adopt a storm drain* in order to reduce pollution to area lakes, rivers and streams. **75% - 77%** already:

- *Leave grass clippings on your lawn after mowing*
- *Direct gutter downspouts to lawn/natural area instead of your driveway*

51% - 63% are motivated to reduce water pollution by:

- *Belief that you are helping to protect or improve local waters*
- *Information on how specific actions can protect or improve local waters*

Information sources

51% of respondents would know who to contact when they notice a large amount of dirty water entering storm drains .

45% - 48% have learned about effects of stormwater runoff from local newspapers or television/radio.

99% had **not** visited Ripple Effects website.
81% had **not** visited Dane County LWRD website.

70% had **not** heard of any of the campaigns/brands listed on the survey.

For respondents who have heard of any campaigns, **35%** were motivated to make a change.

Information about you and your residences

72% of respondents make decisions about how their lawn is maintained.

23% are a member of an environmental, conservation, or watershed organization.

75% - 77% used water resources for scenic appreciation and walking/jogging.

62% are **not** retired.

57% male
39% female.

38% are over 65 years old. The average age is 57.3

75% have a college degree or higher

55% have an annual household income that is higher than $90,000

Cross-tabulation salient findings*

Respondents who know they live in a watershed, and those who do recreational activities in the water	more likely	to think water quality in lakes is **poor** or **very poor**.
Respondents with a college degree and with an annual household income higher than $90,000	more likely	to be motivated to reduce pollution to area lakes/rivers/streams.
Respondents who have heard of any campaigns from displays at meetings, public meeting, community newsletter, internet, and family and friends.	more likely	to be motivated to make a change.
Respondents who are older than 55 or between 55 and 64	More likely	to learn about the effects of stormwater runoff from local newspaper or tv/radio.
Respondents without a college degree	More likely	to support the efforts to improve water quality ***at the current expenditure level*.**

Note This is a very brief summary, for specific findings, please refer to the results section.

Introduction

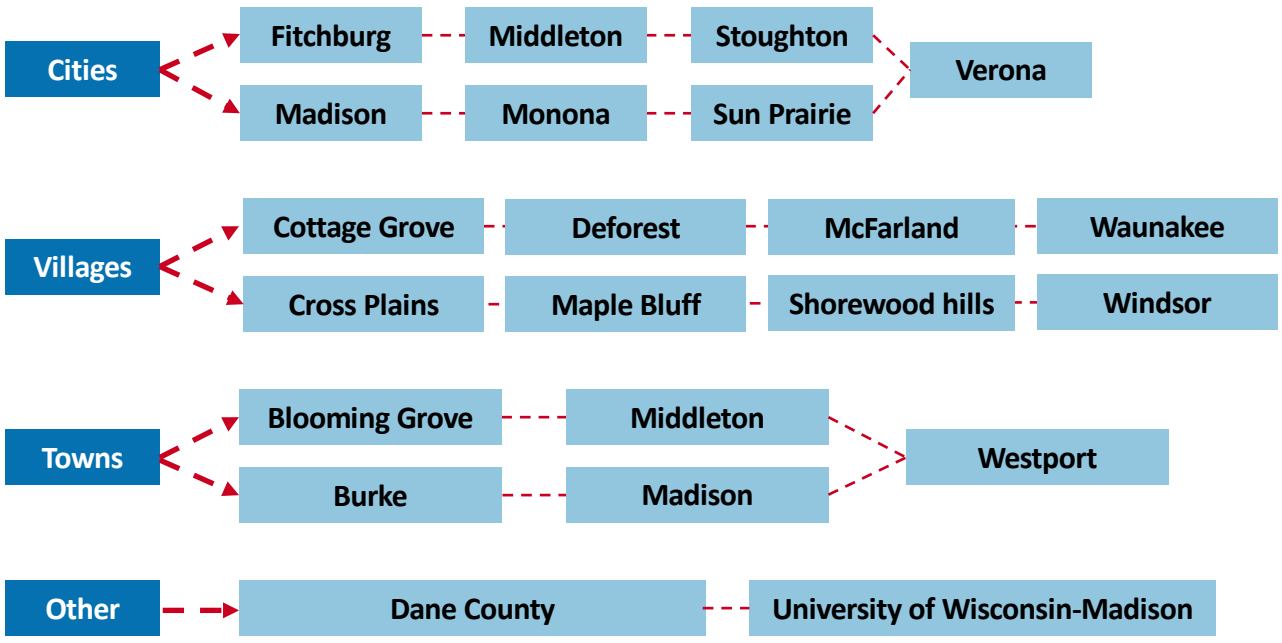
This introduction contains an overview of the report and a program description. These two sections will provide the background information of this project and the scope of the report.

Overview

This report presents findings of a survey commissioned by the Madison Area Municipal Storm Water Partnership (MAMSWaP) to measure perceptions, actions and concerns around local water quality. MAMSWaP is a coalition of municipalities and organizations in Dane County united to promote practices that reduce and improve stormwater runoff into lakes, rivers, and streams. MAMSWaP's Information and Education Committee is reviewing implementation of its 2014-2018 education plan. **This survey and report is intended to provide data to help evaluate past education efforts and identify potential future education outreach activities aimed at improving the water quality of area lakes, rivers, and streams.**

Program description

MAMSWaP consists of 20 municipalities, Dane County and the University of Wisconsin – Madison. Members are the cities of Fitchburg, Madison, Monona, Middleton, Stoughton, Sun Prairie and Verona; the villages of Cottage Grove, Cross Plains, DeForest, Maple Bluff, McFarland, Shorewood Hills, Waunakee and Windsor; and the towns of Blooming Grove, Burke, Madison, Middleton, and Westport. All partners except for City of Stoughton and the Village of Cross Plains jointly apply for and implement a Group Municipal Storm Water Discharge Permit from the Wisconsin Department of Natural Resources. The goal of the permit program is the reduction of negative impacts on water quality in lakes and streams from urban sources of stormwater runoff. The permit also requires a stormwater outreach and education plan. All MAMSWaP members listed above adopt and help with implementation of the Information and Education Plan.



Focus and Scope of Survey

This section contains the purpose of the MAMSWaP survey, the scope of the survey, stakeholder engagement, evaluation team efforts, prior surveys, and survey questions. This section will provide background information of the survey process.

Purpose

The purpose of the survey is **to gather information to support Madison Area Municipal Storm Water Partnership (MAMSWaP) in their efforts to improve area lakes and streams**. Results from the survey will inform programs for protecting and improving water resources in Dane County. Findings from the 2019 survey will be compared to 2013 and 2008 survey results to ascertain longitudinal changes in perceptions, concerns, knowledge and barriers to implementing stormwater practices of Dane County citizens.

Scope

The survey includes **20** area municipalities, Dane County, and the University of Wisconsin, Madison. Involved municipalities are the cities of Monona, Fitchburg, Stoughton, Verona, Sun Prairie, Middleton and Madison; the villages of Cross Plains, Cottage Grove, McFarland, Deforest, Windsor, Waunakee, Maple Bluff, and Shorewood Hills; and towns of Blooming Grove, Burke, Madison, Middleton, and Westport shown below in figure 1

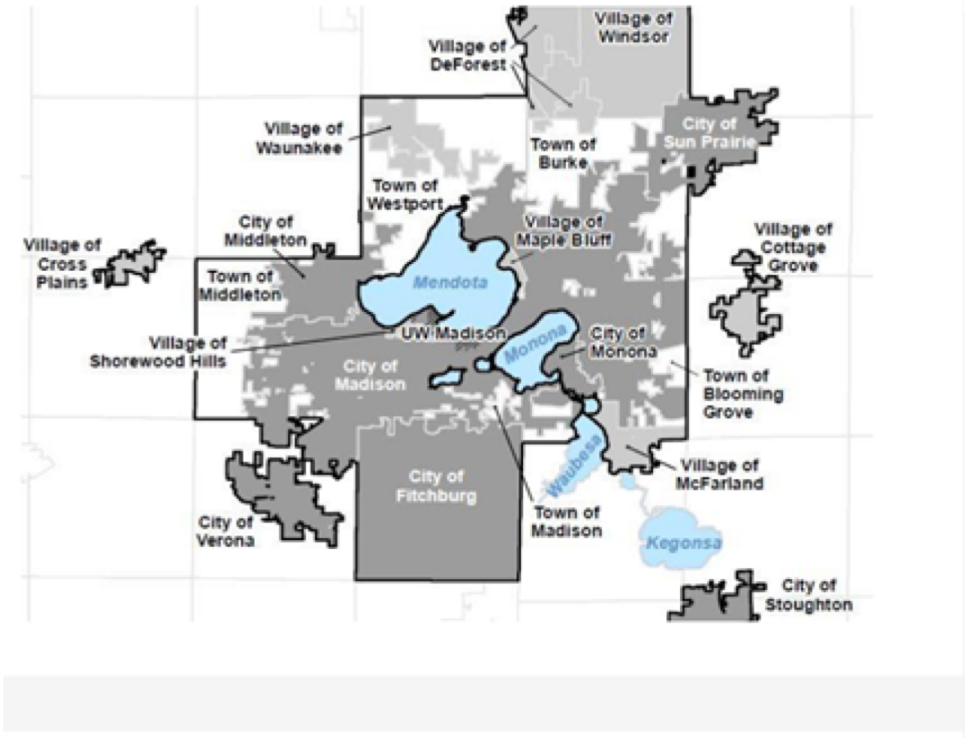


Figure 1. Twenty area municipalities in Dane County were surveyed for the 2019 survey.

Stakeholder engagement

The **NRI Evaluation Unit** repeatedly and frequently engaged with **Christal Campbell**, Stormwater Education Coordinator and her **MAMSWaP Information and Education Committee** throughout the entire survey. Christal and her steering committee helped design the survey instrument, determine the sampling procedures, and interpret results.

Evaluation team

The UW-Extension Natural Resources Institute's Evaluation Unit were contracted to conduct this survey. **Dr. Samuel Pratsch** led the unit's efforts and he was greatly assisted by two evaluation specialist: **Amber Mase** and **Feiran Chen** as well as a number of evaluation student assistants including Evelyn Hammond, Anders Shropshire, Ke Chen, and Laura Livingston.

Prior surveys

The 2019 survey instrument was an adaptation of one first created by University of Wisconsin Cooperative Extension Environmental Resources Center in 2003 for a study commissioned by MAMSWaP. The primary author was Tom Syring, with assistance from **Joel Carey** and **Molly Lepeska**. MAMSWaP also commissioned a follow-up study in 2009. The Survey Research Center (SRC) at the University of Wisconsin River Falls, MAMSWaP and the Rock River Stormwater Group (RRSG) were involved in the design, revision, and review of the 2013 survey questionnaire.

Survey questions

Evaluation questions in this survey were asked as follows:

- What are people's perceptions of water quality in area lakes, rivers, and stream?
- What are the concerns that people may have about stormwater runoff?
- What stormwater reduction and improvement initiatives to do residents know about?
- What initiatives are they currently implementing?
- What motivators or tools can be provided to increase use of practices?

Survey methods

This section will introduce the source of data, selection process, sample size, collection procedures, a description of the instrument, and the timeline of the process. These sections will provide the information of survey implementation and data collection process.

Data source and selection process

The number of households in each municipality in the study area was obtained from Wisconsin HomeTownLocator (https://wisconsin.hometownlocator.com), an online database which provides geographically localized information.

Sample size and description

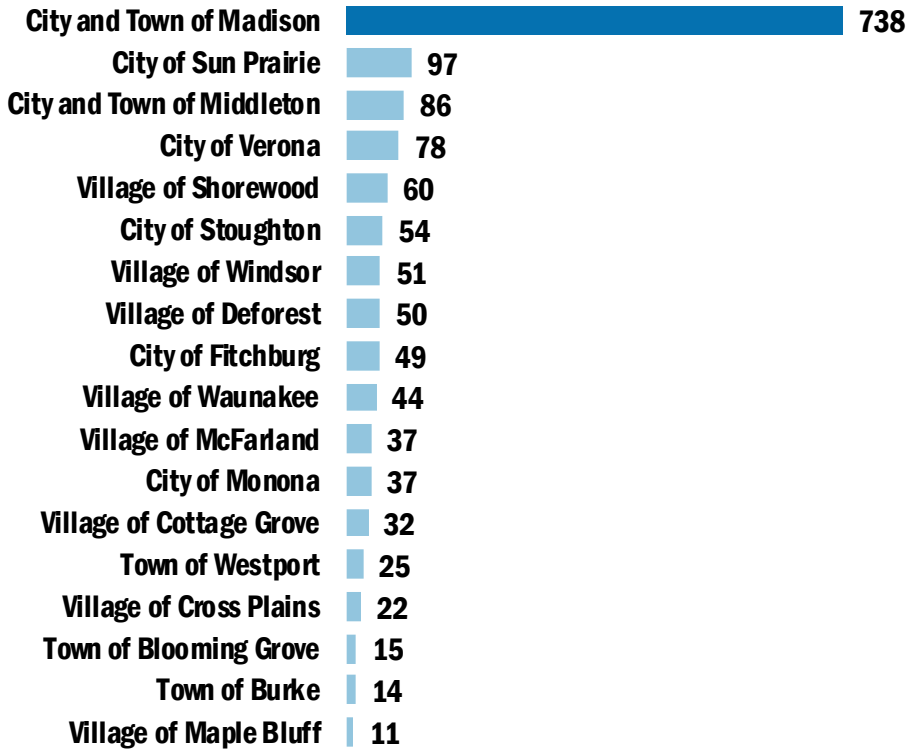
Sample sizes were calculated using an online software Qualtrics (https://www.qualtrics.com/blog/calculating-sample-size/) which determines the ideal sample size based on the confidence level, population size, and margin of error. **Proportions of households in each municipality relative to the total number of households in the study area were also calculated**. Based on calculated sample sizes, the various proportions were extrapolated to obtain a total sample size of 1500. Sample sizes were adjusted taking by into consideration geographical locations of the municipality and the number of deliverable addresses obtained. **To ensure a reasonable sample size for data analysis, larger municipalities (City of Madison, City of Sun Prairie, etc.) were under-sampled and smaller municipalities were oversampled**.

Addresses of residents in the study area were obtained from land tax records. Addresses were verified with the National Change of Address (NCOA) database by staff of the Bulk Mail Center of the University of Wisconsin - Madison. This process aimed to ensure that all the surveys were deliverable. Addresses of residents who had moved, bad addresses and duplicates were deleted from the mailing list.

The municipalities that make up MAMSWaP are not a one to one match with the place names found on postal mailing addresses. Thus, the survey mailing addresses were created by first randomly sampling all the municipalities in MAMSWaP and then combining some of the smaller municipalities into the larger municipalities so that they would match the postal mailing addresses. The town of Blooming Grove, Town of Burke, Town of Westport, and Village of Maple Bluff were the municipalities that needed to be lumped into the larger municipalities place names.

In this report we disaggregated this data in places to show the number of surveys sent to and returned from the MAMSWaP municipalities (see charts on page 10 and page 47). In other sections of the report we had to aggregate the smaller municipalities into some of the larger ones based on the postal mailing addresses in order to run comparative statistical analysis on the data (see charts on page 50).

See next page for the chart that shows the municipalities with their adjusted sample sizes →



Data collection methods and procedures

The primary data collection instrument was a **paper survey** which was delivered via mail using an adopted version of the Dillman Total Design Survey Method. In addition to the mail survey, there was also an option for respondents to fill out an **online survey** if they preferred that over the paper survey.

Description of instrument

The survey instrument was created by starting with the previous survey instruments and adapting them to be relevant to the current education programs and campaigns. When applicable, the evaluation team took great efforts not to change questions from previous surveys in order to maintain comparability of the data across years. If a question was added or changed, the evaluation team changed it in a way to still allow for comparison of previous survey results.

Timeline

- **September through December 2018**: Designed survey
- **December 2018**: Sent out introductory postcard mailings and first round of the paper survey mailings
- **January 2019**: Sent out 1st postcard reminder mailings which included a link to an online survey option
- **February 2019**: Sent out 2nd paper survey mailings which included a link to an online survey option
- **March 2019**: Sent out 2nd postcard reminder mailings which included a link to an online survey option
- **April 2019**: Conducted preliminary descriptive analysis (420+) and presentation; Closed mail surveys
- **April 2019**: Second phase data analysis; Meeting with SE Coordinator to go through findings
- **May 2019**: Finalized second presentation, data analysis and written report

Analysis and interpretation

This section will introduce data management procedures, the analysis plans, and decisions on how the data is analyzed and how it should be interpreted in terms of cross-tabulation analysis and comparisons with prior survey data.

Data management

After the mail surveys were received by the NRI evaluation unit, the student evaluators began entering the data into an excel file for analysis. The mails surveys were then placed in a box in the lead evaluation specialist's office. The envelopes were separated from the actual surveys. No identifiable information can be found on the surveys.

Data analysis

There were three steps in the data analysis process. First, prior to the data analysis, a data sheet (excel) and a code book were created. The code book provides a framework for how survey items were coded for data analysis.

Second, after the raw data were entered into the data sheet, a student evaluator performed preliminary analysis through R, a free software program for statistical computing and graphics. The goal of the preliminary analysis was to explore the data, to get familiar with the respondents, and to identify in-depth analysis for the next phase.

Finally, together with the Stormwater Education Coordinator, more advanced analyses were identified based on the preliminary analysis results. Together with student evaluators, an evaluation specialist performed more descriptive analysis, recoded the data in order to perform cross-tabulation tests through SPSS ver. 23, a software package used for interactive or batched, statistical analysis. Additionally, the survey team analyzed the raw data from 2013 and 2014 to compare with the current data results.

Data interpretation

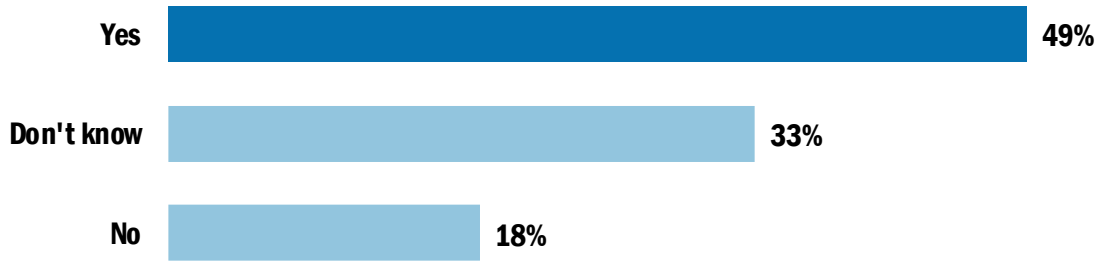
Although this project was started in 2018, the data collection and analysis processes took place in 2019. Therefore, the data that was used for descriptive analysis, cross-tabulation analysis, and comparisons will be referred to as 2019 data in this report. The survey team also analyzed the raw data from 2013 mail survey and 2014 online survey in order to compare the past trends with the current 2019 data. This combined dataset is referred to as 2014 data, and the results were referred to as 2014 responses when interpret the results. This dataset was used to make comparisons with the 2019 data on survey items that are not related to demographic information. In addition, when comparing the demographic findings, the 2019 data and 2013 data (not including the 2014 online survey data) were utilized. The reason why not to use the 2014 online survey data was because the online survey used a selection method that not was done at random, which may cause bias due to inability to determine the representativeness of respondents. Therefore, only the demographic information from 2013 paper survey was utilized in the the demographic findings comparison section. Moreover, only the items with a major change were presented when comparing the results between 2019 data and 2014 data in questions three, nine, and ten. In question three, a major change is defined as greater than 20%. In questions nine and ten, a major change is defined as greater than 15%. This is because the overall changes between 2019 and 2014 were more dramatic in question three than in questions nine and ten.

Your Perceptions of Local Water Resources

This section contains questions 1 to 6 on the survey. Descriptive information of the respondents, the comparisons of the current 2019 results and the 2014 results, and crosstabulation significant results on the survey items were presented. The title numbers are consistent with the item numbers on the survey.

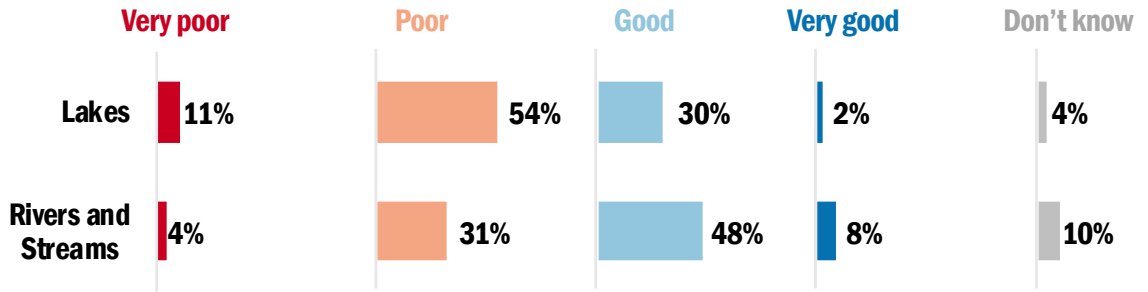
1. Do you live in a watershed?

The goal of this question was to examine if respondents have knowledge of their **watershed** and to see if they are aware that all of us live in a watershed. Ideally, 100% of the respondents should have selected "Yes" to this question. Yet, only **49%** of them selected the correct answer and the other **51%** either did not think they lived in a watershed or were not sure if they lived in a watershed. **The result of this question indicated that about half of the respondents did not have knowledge of their watershed**.

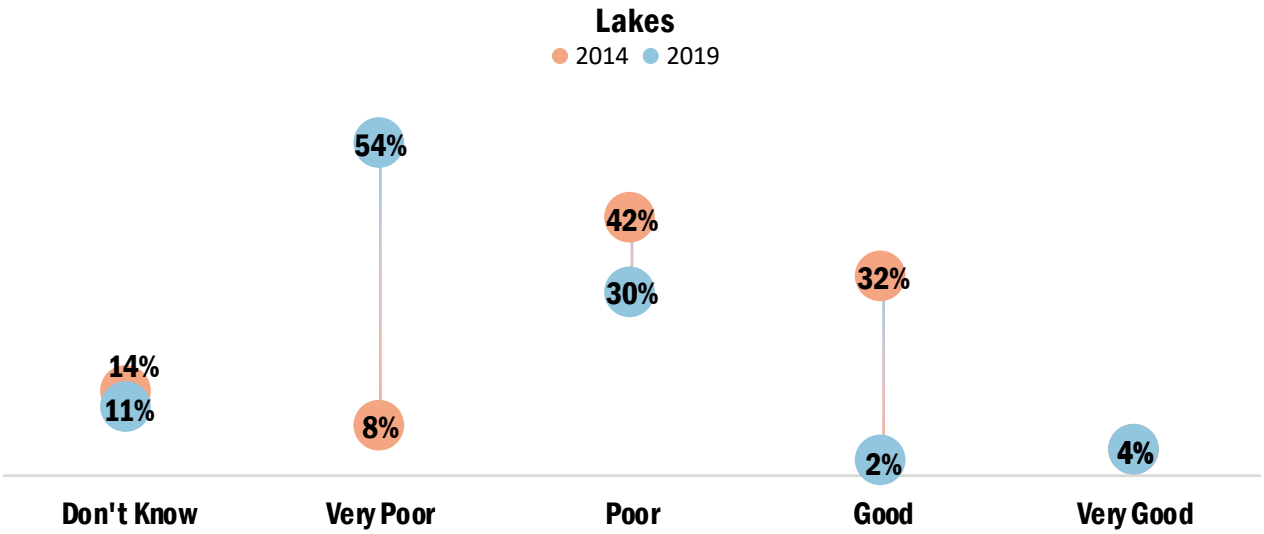


2. In general, how would you rate the water quality of the lakes, rivers, and streams located in Dane County?

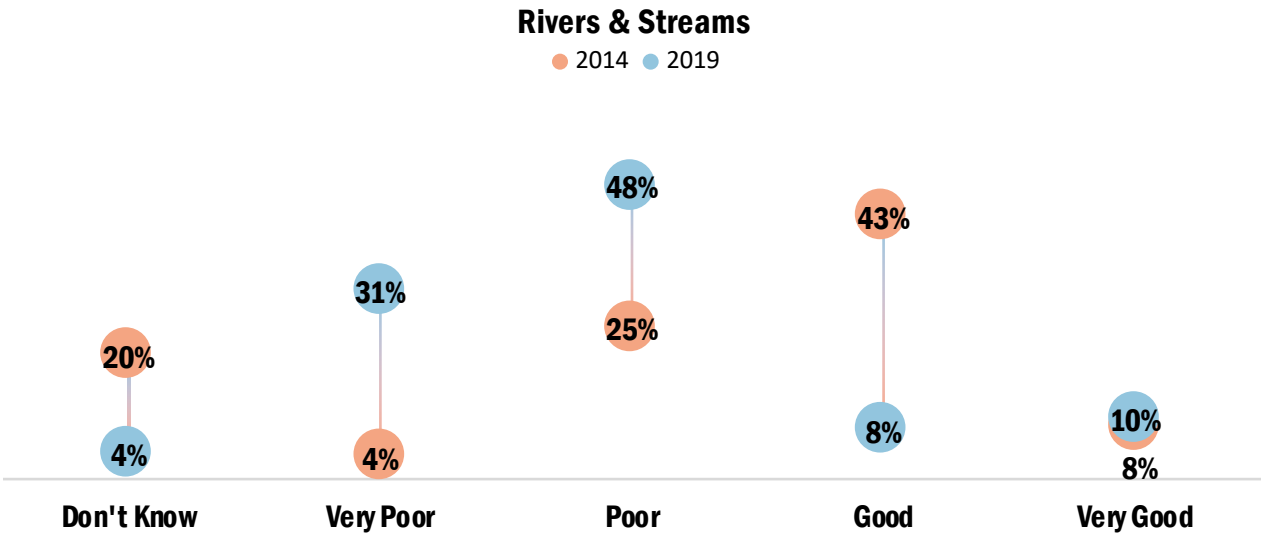
In general, **respondents rated the water quality of rivers and streams as better than the water quality in lakes**. Slightly over half (**56%**) of respondents rated the water quality of rivers and streams as *Good* or *Very good*, and only **32%** of them provided the same ratings for the water quality in lakes in their community. Regarding lake water quality, **54%** of respondents rated it as *Poor*, and **30%** rated lake water quality as *Good*. Regarding rivers and streams water quality, **31%** of them rated it as *Poor*, and **48%** rated it as *Good*.



Comparisons: Differences in respondents' perceptions between 2019 and 2014 on water quality in lakes, rivers and streams.



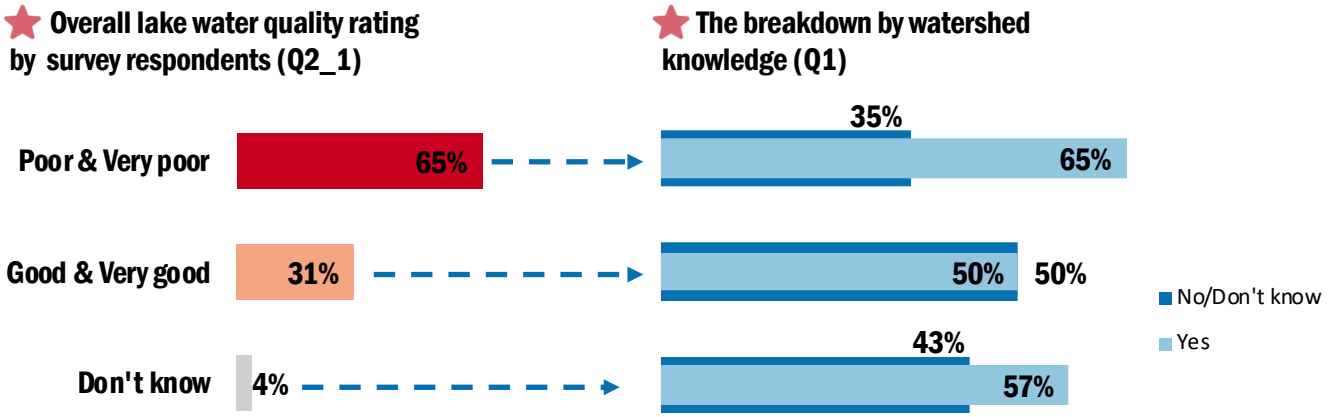
As shown in the graph, there is a major increase↑ (46%) in the percentage of respondents who think the water quality in lakes is *Very Poor* in 2019. As expected, there is also a 30% decrease↓ in the percentage of respondents who think the lake water quality in lakes is *Good* in 2019. One possible explanation for this change in perception could be the severe flooding that happened in this area in the summer of 2018, which was six months prior to the distribution of this survey.



Similar to the perceptions of water quality in lakes, there is a 27% increase↑ in the percentage of respondents who think the water quality in rivers and streams is *Very Poor* in 2019. Additionally, there is a 23% increase↑ in the percentage of respondents who think the water quality in rivers and streams is *Poor* in 2019. A big decrease↓ (35%) has found in the percentage of people who think the lake water quality in lakes is *Good* in 2019.

Cross-tabulation: How does the knowledge of watershed (Q1) influence the ratings of water quality in lakes, rivers, and streams located in Dane County (Q2)?

This analysis allows us to compare the **water quality ratings**. Respondents were divided into two categories: 1) those who know they live in a watershed and 2) those who think they don't live in a watershed or those who are not sure if they live in a watershed. The goal is to see if there is a statistically significant difference between the two groups of respondents in the water quality ratings.



The graph on the left shows the water quality rating of all the respondents. Within the **65%** of respondents who think water quality in lakes is *Poor* or *Very Poor*, **65%** of them know they live in a watershed. Within the **31%** of respondents who think water quality in lakes is *Good* or *Very Good*, **50%** of them know they live in a watershed. For the **4%** of respondents who *don't know* about the water quality in lakes, **57%** of them know they live in a watershed.

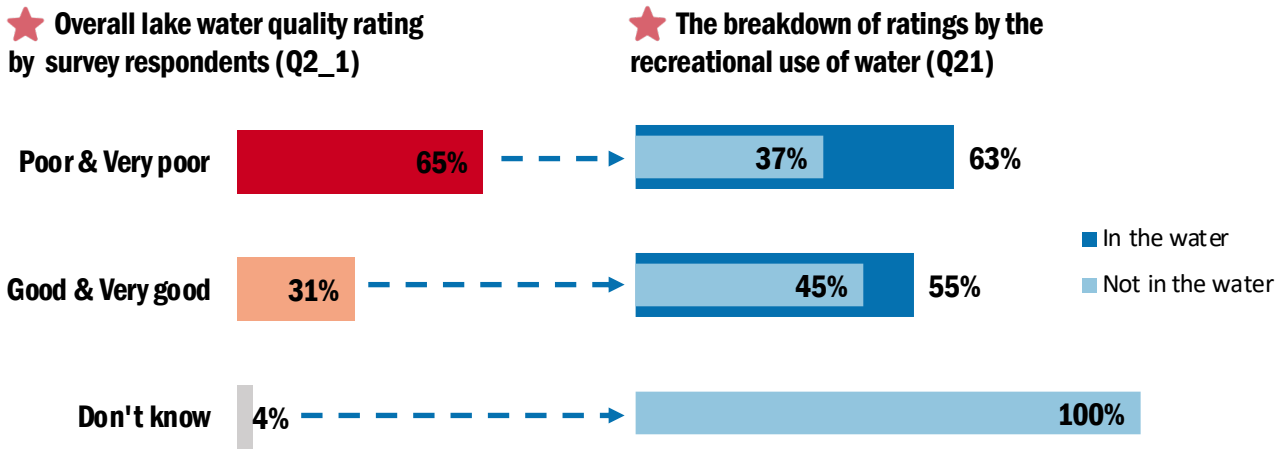
There is a **statistically significant relationship** (p = .014) between the knowledge of watershed and water quality ratings. For respondents who know they live in a watershed, they are more likely↑ than expected to consider the water quality in lakes is *Poor* or *Very Poor*, and less likely↓ than expected to consider the water quality is *Good or Very Good*. For those who think they do not live in a watershed or don't know if they live in a watershed, they are less likely↓ than expected to consider water quality is *Poor or Very Poor, and* more likely↑ than expected to consider the water quality in lakes is *Good* or *Very Good*.

Respondents who know they live in a watershed → **More likely↑** than expected to consider the water quality in lakes is ***Poor*** or ***Very Poor***. **Less likely↓** than expected to consider the water quality is ***Good*** or ***Very Good***.

Respondents who think they do not live in a watershed or do not know if they live in a watershed → **Less likely↓** than expected to consider the water quality is ***Poor*** or ***Very Poor***. **More likely↑** than expected to consider the water quality in lakes is ***Good*** or ***Very Good***.

Cross-tabulation : How does the way of using water recreationally (Q21) affect people's water quality rating (Q2)?

This analysis allows us to compare the **water quality ratings** in lakes, rivers, or streams. Respondents were divided into those who do recreational activities **in the water** and those who do **not** do recreational activities in the water. The goal is to see if there is a statistically significant difference between the two groups of respondents in the water quality ratings.



The graph on the left shows the water quality rating of all the respondents. Within the **65%** of respondents who think water quality in lakes is *Poor* or *Very Poor*, **63%** of them do recreational activities in the water. Within the **31%** of respondents who think water quality in lakes is *Good* or *Very Good*, **55%** of them do recreational activities in the water. For the **4%** of respondents who *Don't Know* about the water quality in lakes, **all of them** do not do recreational activities in the water.

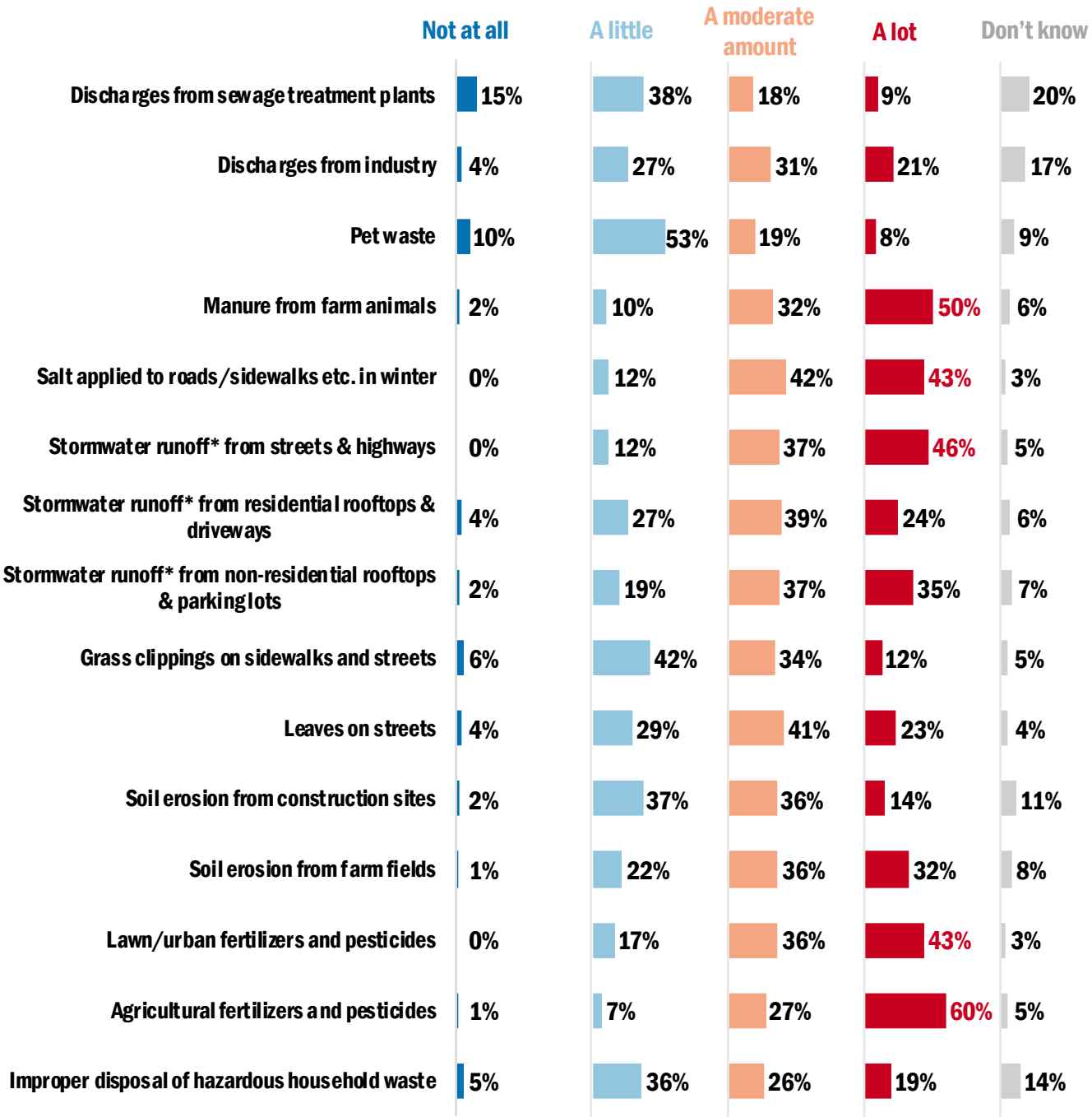
There is a **statistically significant relationship** ($p < .01$) between the way respondents use bodies of water recreationally and water quality rating. For respondents who do recreational activities **in** the water, they are more likely↑ than expected to consider the water quality in lakes is *Poor* or *Very Poor* and less likely↓ than expected to *Not Know* about the water quality. For respondents who do **not** do recreational activities in the water, they are less likely↓ than expected to consider the water quality in lakes is *Poor* or *Very Poor* and more likely↑ than expected to *Not Know* about the water quality.

Respondents who do recreational activities in the water → **More likely↑** than expected to consider the water quality in lakes is ***Poor*** or ***Very Poor***. **Less likely↓** than expected to *not know* about the water quality.

Respondents who do not do recreational activities in the water → **Less likely↓** than expected to consider the water quality in lakes is ***Poor*** or ***Very Poor***. **More likely↑** than expected to *not know* about the water quality.

3. The items below are sources of water pollution. In your opinion, how much do each of the items <u>contribute to pollution</u> in lakes, rivers, and streams <u>in and around your community?</u>

Respondents were asked to rate the amount of pollution to which differing sources contribute. **Five** sources were rated as contribute ***A lot*** to the pollution in lakes, rivers, and stream by at least **43%** of the respondents : *Agricultural fertilizers and pesticides, Manure from farm animals, Stormwater runoff from streets & highways, Salt applied to roads/sidewalks in winter, and Lawn/urban fertilizers and pesticides*.

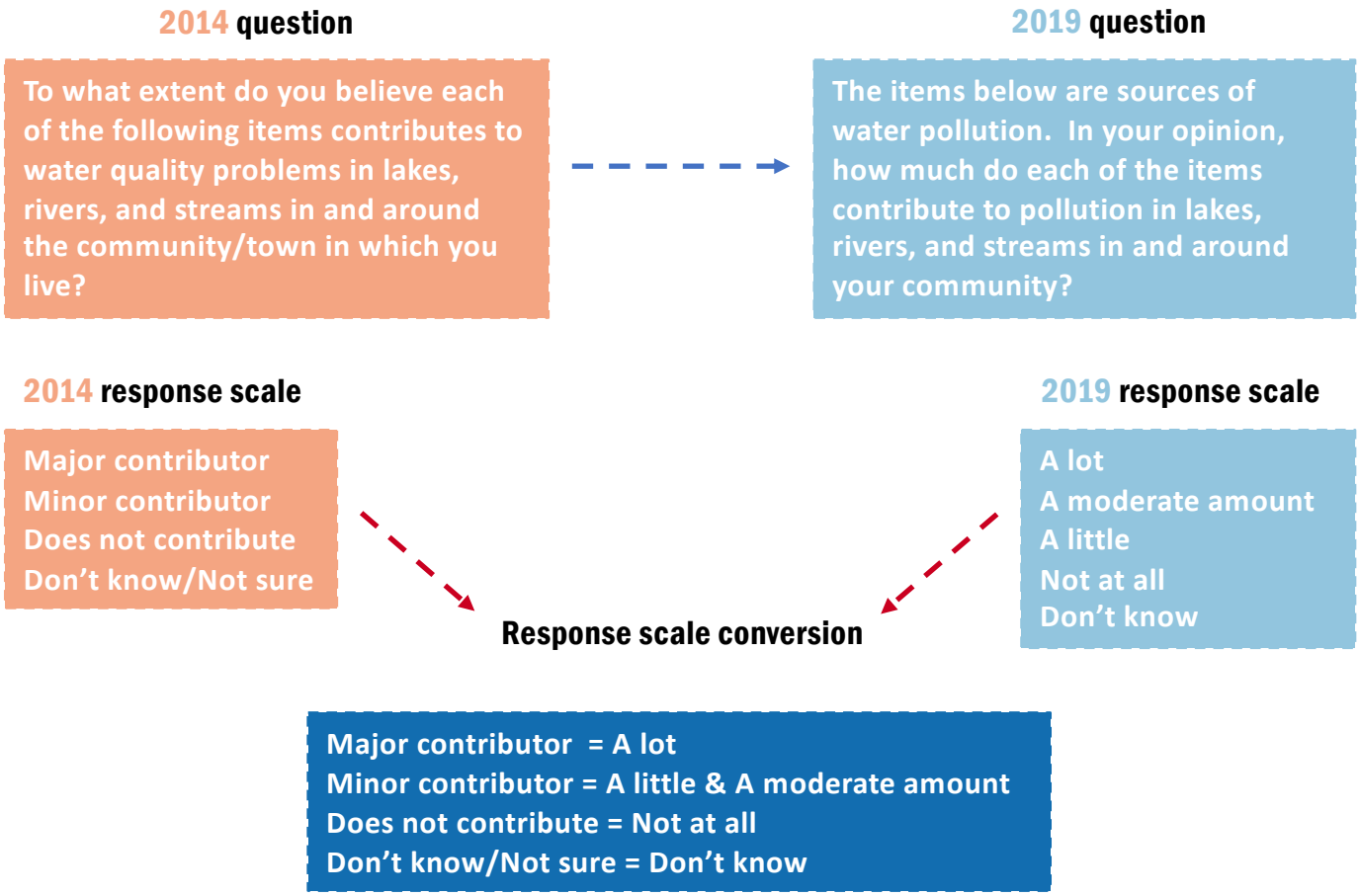


Comparisons: Differences in respondents' perceptions on water pollution contributors in lakes, rivers, and streams between 2019 and 2014.

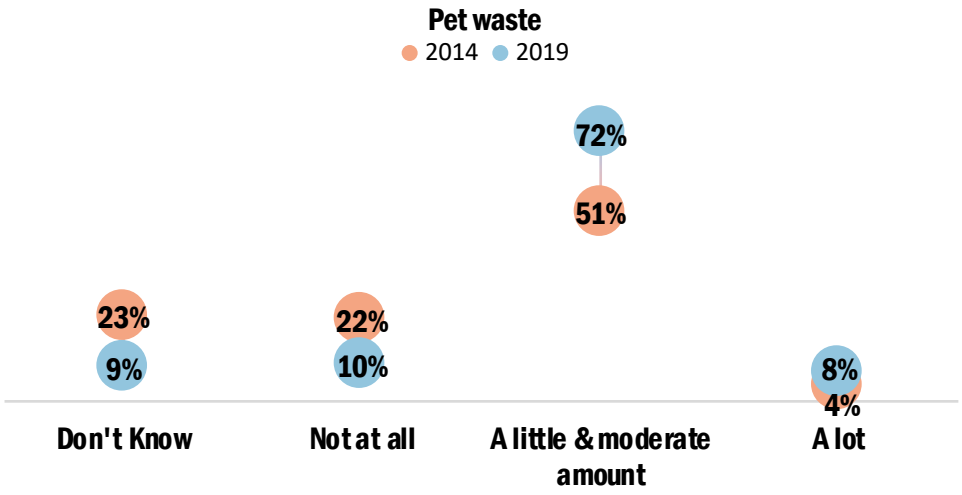
This wording of question (Q3) changed between the 2014 and the 2019 survey, and the response scale was also different. Even though both questions were examining respondents' perceptions on how much pollution each of the sources contribute to lakes, rivers, and streams, it is hard to make comparisons on the results with different response scales. Therefore, we converted the response scales to analyze the results across years.

Specifically, the responses of *A lot* were converted to *Major contributor*. The responses of *A little* and *A moderate amount* were converted to *Minor contributor*. The responses of *Not at all* were converted to *Does not contribute*. The responses of *Don't know* were converted to *Don't know/Not sure*. We did this conversion because the response scale in 2014 had four options, whereas in 2019 there are five options. Logically, we must use the smaller scale. Yet, as this is the 2019 report, we are using the 2019 response scale for the comparisons. With the conversions of response scales, we recommend readers to to use caution in interpreting the results.

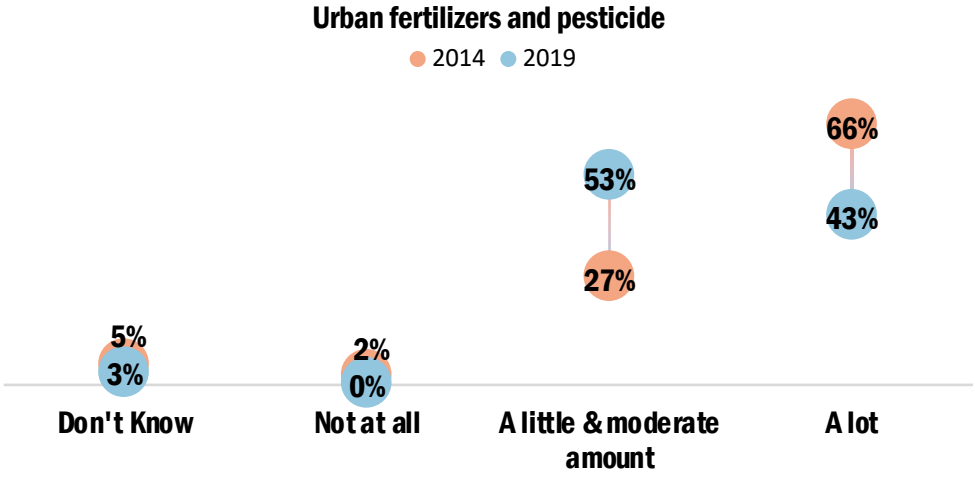
Note that the 2014 results were analyzed using the raw data. With the response conversions and possible different analysis styles, the results in this comparison may look different from what is on the 2014 report.



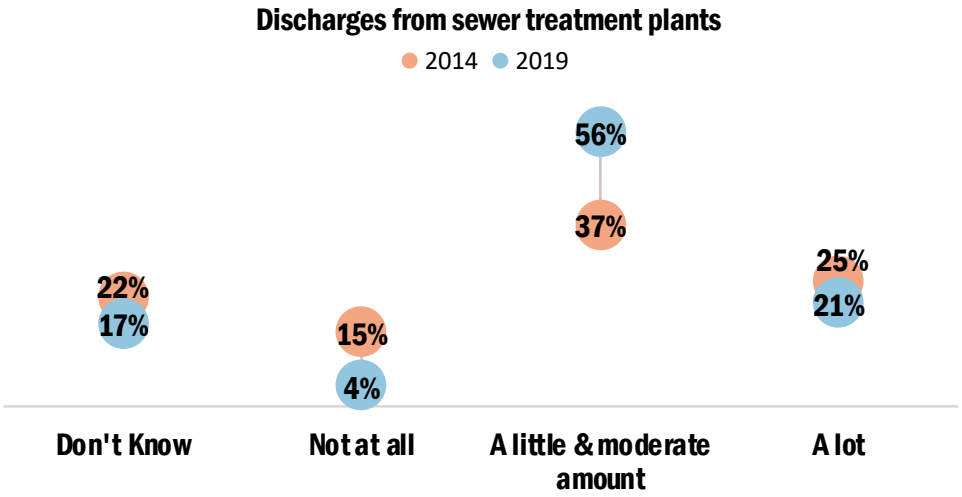
Comparisons: Differences in respondents' perceptions between 2019 and 2014 on water pollution contributors in lakes, rivers, and streams. The items with a major change (> 20%) are presented.



There is a **21% increase↑** in the percentage of respondents who think **Pet waste** contributes to pollution in lakes, rivers, or streams ***a little*** or a ***moderate amount***.

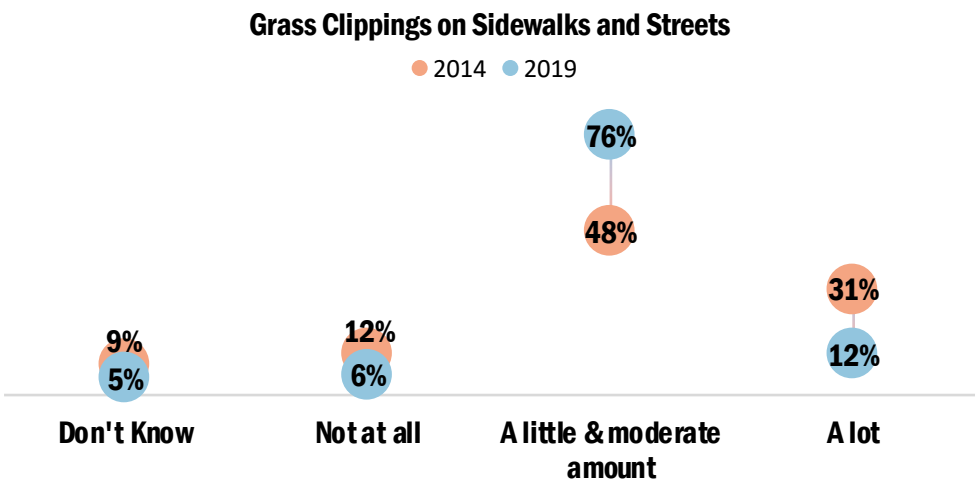


There is a **26% increase↑** in the percentage of respondents who think **Urban fertilizers and pesticide** contribute to pollution in lakes, rivers, or streams ***a little*** or ***a moderate amount***. There is also a **23% decrease↓** in the percentage of respondents who think it contribute ***a lot*** to pollution.

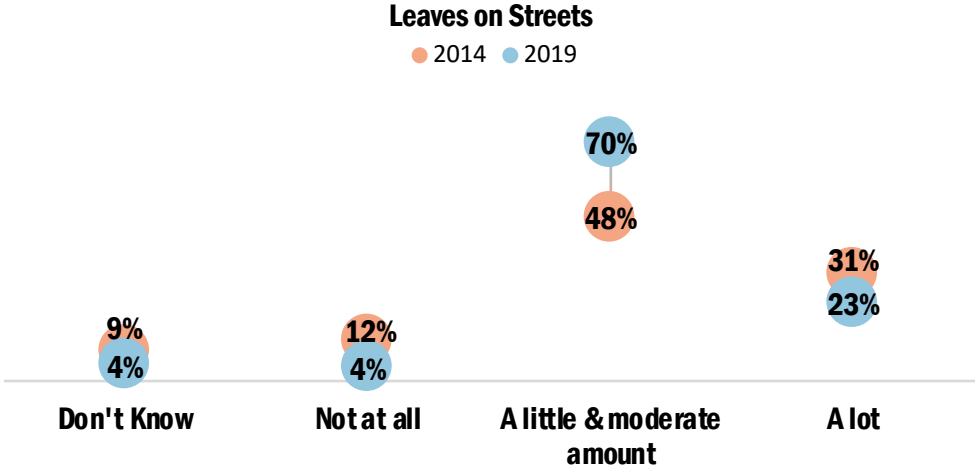


There is a **19% increase↑** in the percentage of respondents who think **Discharges from sewer treatment plants** contribute to pollution in lakes, rivers, or streams ***a little*** or ***a moderate amount***.

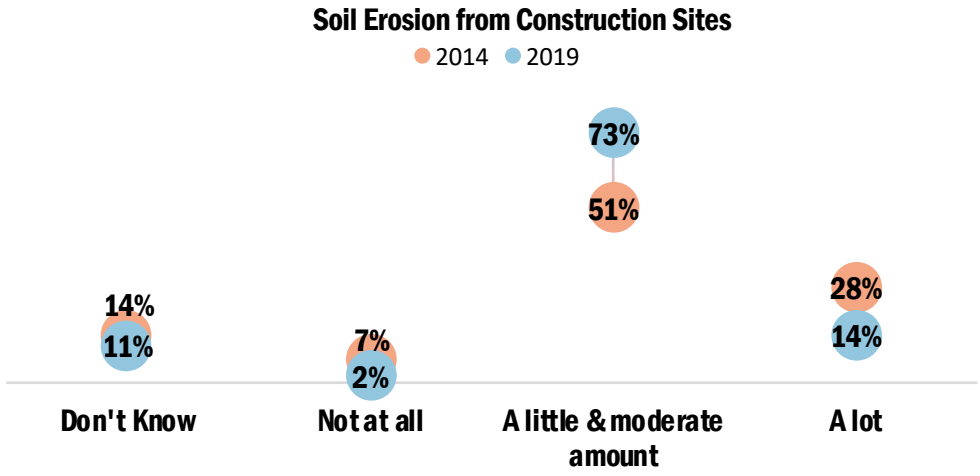
**Note* The change in this item is not 20% but is very close to the standard of a major change.



There is a **28% increase↑** in the percentage of respondents who think **Grass Clippings on Sidewalks and Streets** contribute to pollution in lakes, rivers, streams ***a little*** or ***a moderate amount***. There is also a **19% decrease↓** in the percentage of respondents who think it contribute ***a lot*** to pollution.



There is a **22% increase↑** in the percentage of respondents who think **Leaves on Streets** contribute to pollution in lakes, rivers, or streams ***a little*** or ***a moderate amount***.

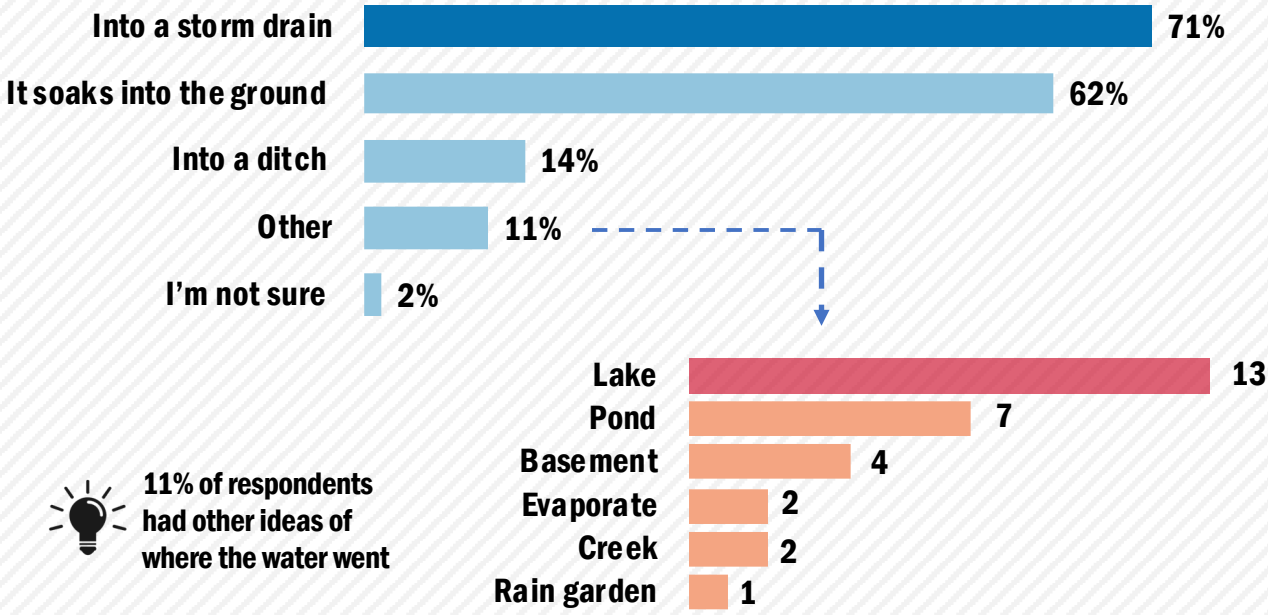


There is a **22% increase↑** in the percentage of respondents who think **Soil Erosion from Construction Sites** contribute to pollution in lakes, rivers, or streams ***a little*** or ***a moderate amount***.

4. When it rains or when snow melts on your property, where do you think the resulting water goes? (Please select all that apply)

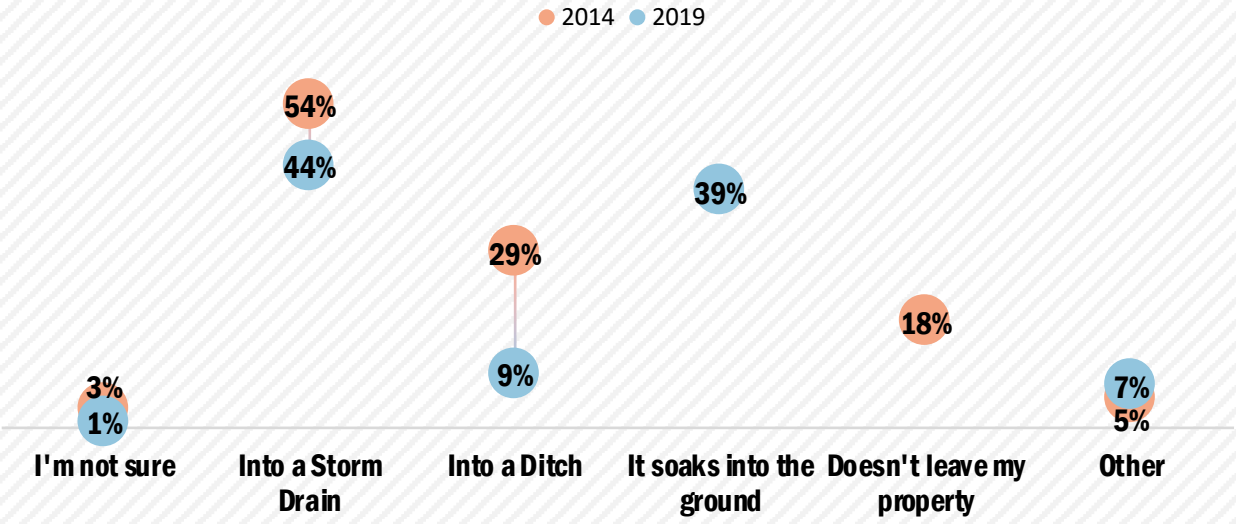
Seventy-one percent of respondents think the resulting water goes ***into a storm drain***, and **62%** of them think the water ***soaks in to the ground***.

**Note* This is a select all that apply question, the percentages will not add up to 100%.



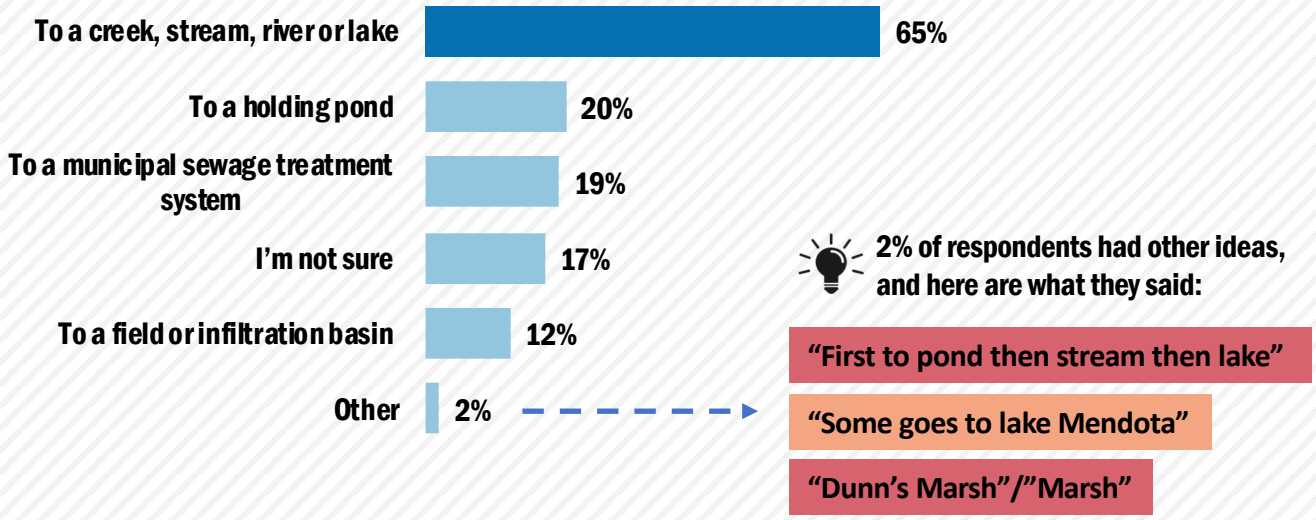
∗ Comparison of respondents' perceptions between 2019 and 2014 on where does the resulting water of rains or melted snow go.

There is a 20% decrease↓ in the response *Into a ditch* and a 10% decrease↓ in the response *Into a storm drain* on the 2019 survey. The percentages of other responses remain very similar. Note that, the 2019 survey did not have the option *Doesn't leave my property*, and the 2014 survey did not have the option *It soaks into the ground*. These differences in survey options explain why there are no comparisons of the two responses.



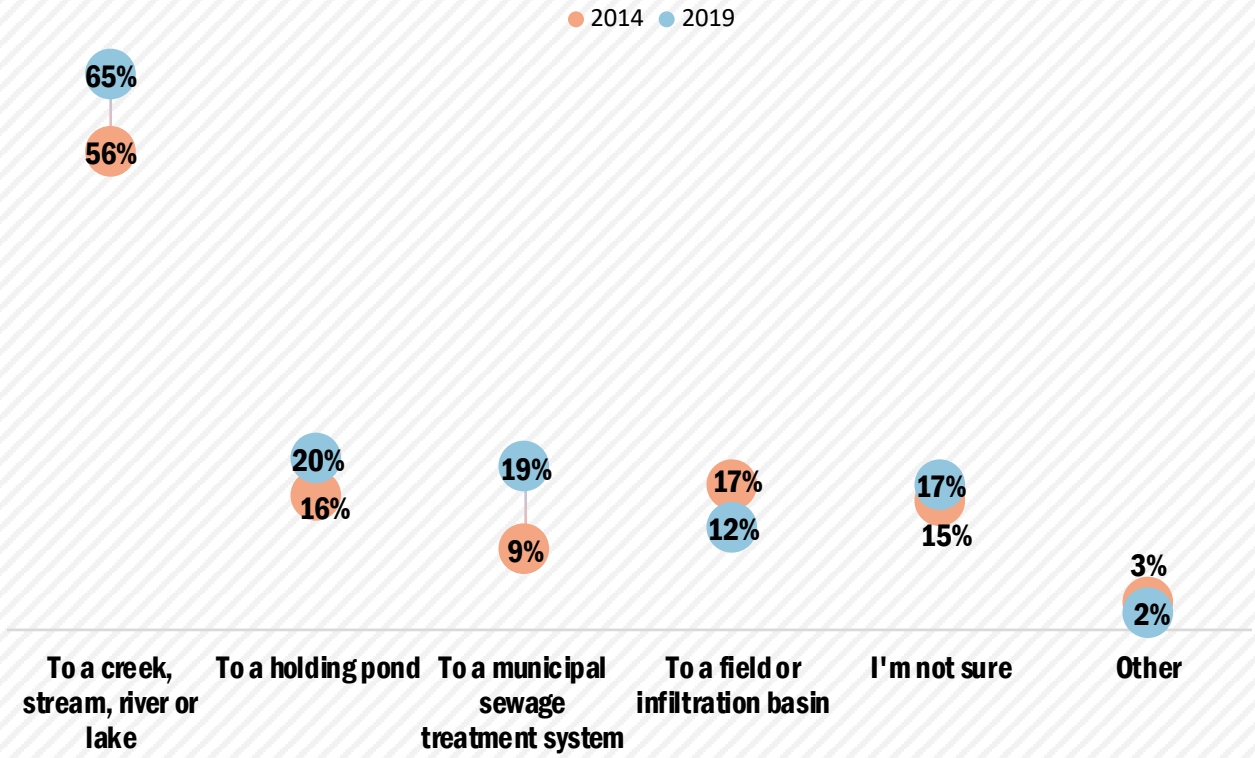
5. Where does stormwater runoff go once it leaves your neighborhood? (Please select all that apply)

Sixty-five percent of respondents think the stormwater runoff goes ***to a creek, stream, river or lake***.
**Note* This is a select all that apply question, the percentages will not add up to 100%.



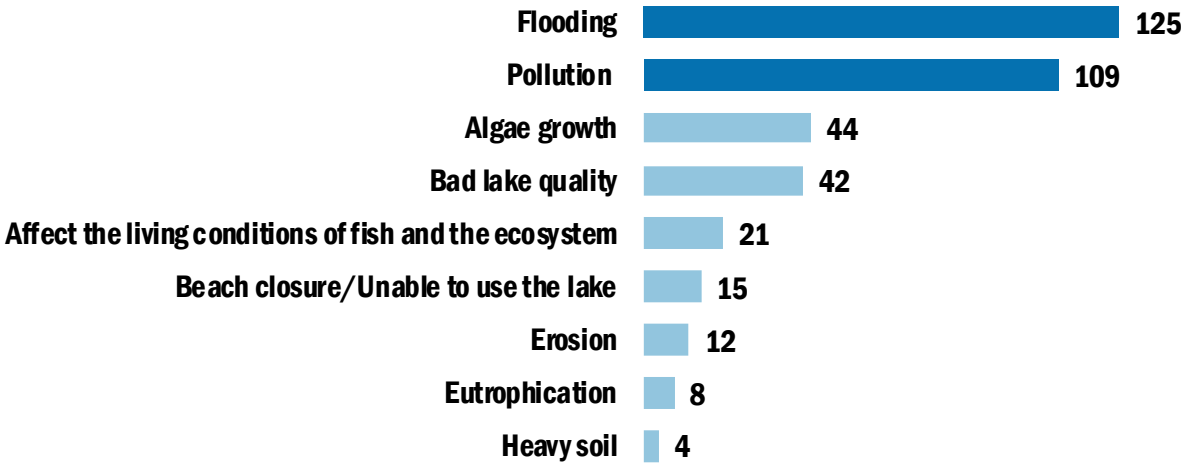
Comparisons: Differences in respondents' perceptions between 2019 and 2014 on where does stormwater runoff go once it leaves their neighborhoods.

The overall distribution of the 2019 responses is consistent with the 2014 responses, with *To a creek, stream, river or lake* being the most-selected item and all other items are much less likely to be selected. There is a 10% increase↑ in the percentage of people selecting *To a municipal sewage treatment system*, and a 9% increase↑ in the percentage of people selecting *To a creek, stream, river or lake*.



6. In your opinion, what are the main impacts that stormwater runoff has on your community?

This is an open-ended question, and respondents were asked to provide their opinions on the main impacts the stormwater runoff brings to their community. The response rate of this questions is **59.2%**. **Nine** main impacts were identified in their responses. Below is the impacts and the frequencies of the impacts.



As shown, **Flooding** is identified as the top impact that has been mentioned 125 times by different respondents. The following impact is **Pollution**, with being mentioned 109 times. Note that many of the respondents have provided more than one impact.

✱ Below are the direct quotes from the respondents on the impacts of stormwater runoff. We selected 1 quote for each impact to present here. Check appendix for full responses.

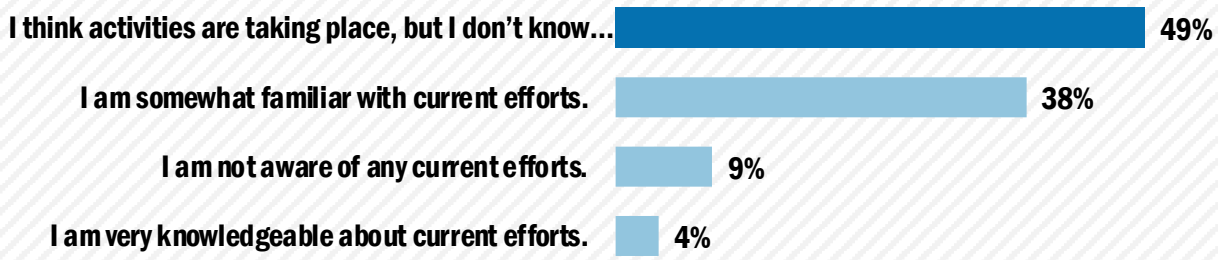
Flooding	**"In heavy rains it produces area flooding and river flooding."**
Pollution	**"Trash and chemicals getting into our streams, rivers, and then lakes."**
Algae growth	**"Increased incidence of toxic algae blooms."**
Bad lake quality	**"Poor water quality in streams and lakes."**
Affect the ecosystem	**"Affecting the quality and health of the ecosystems."**
Beach closure	**"Makes recreational use of waters (lakes, streams, rivers) less accessible."**
Erosion	**"Washes dirt and contaminants into lakes and streams can increase erosion"**
Eutrophication	**"Eutrophication in local watershed."**
Heavy soil	**"Heavy soil and poor drainage."**

Actions, Concerns, and Efforts

This section contains questions 7 to 11 on the survey. Descriptive information of the respondents, the comparisons of the current 2019 results and the 2014 results, and crosstabulation significant results on the survey items were presented. The title numbers are consistent with the item numbers on the survey.

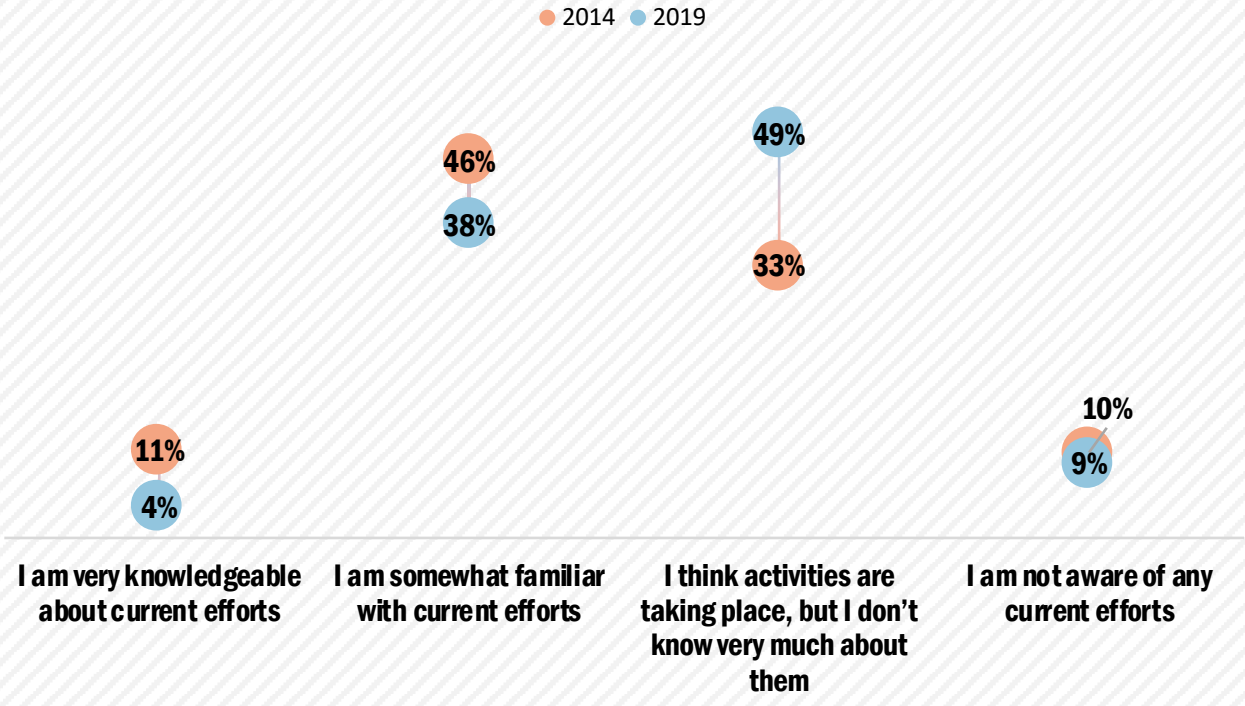
7. Which of the following statements best describes your level of awareness about current efforts your local government is involved with to improve water quality in your community?

Forty-nine percent of respondents indicated they ***are aware of*** activities taking place, but do not know the details about them. **Thirty-eight percent** of the them are ***somewhat familiar*** with the current efforts.



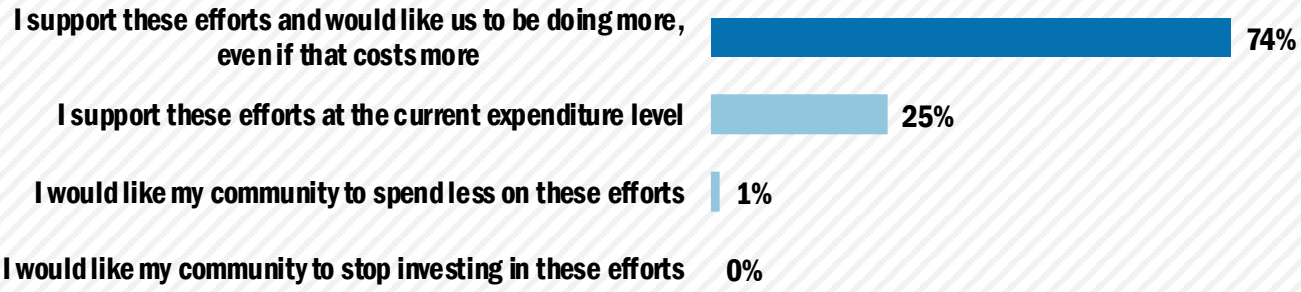
Comparisons: Differences in respondents' awareness between 2019 and 2014 on the current efforts of local government to improve water quality in their communities.

There is a 16% increase↑ in the percentage of people selecting *I think activities are taking place, but I don't know very much about them* on the 2019 survey. There is a 18% decrease↓ in the percentage of people selecting *I am somewhat familiar with current efforts*. A possible explanation is that the 2014 online survey did not utilize a random selection. Instead, it was sent out by MAMSWaP committee members to people they already knew. Thus, the respondents in 2014 were likely to be more aware of the local efforts in the first place.



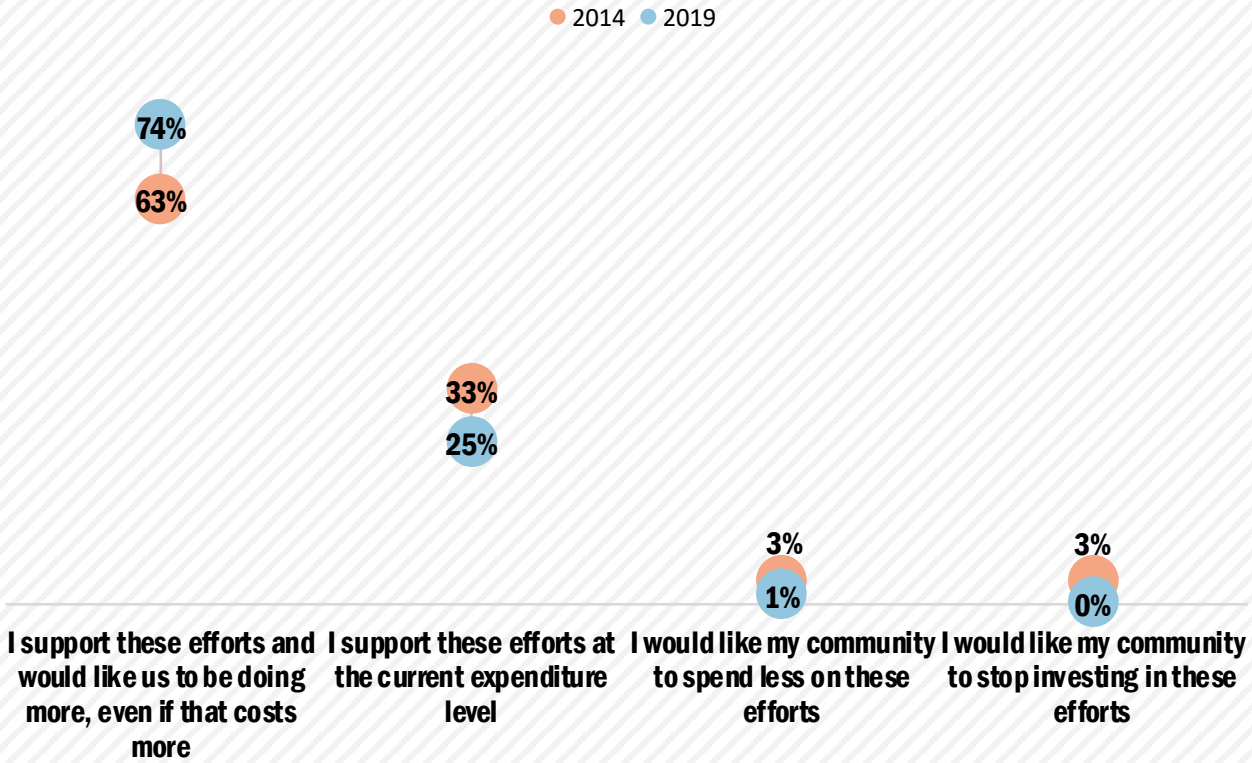
8. Your local government is actively working to improve the quality of local rivers, streams and lakes by reducing pollutants in stormwater runoff, and would like to know whether or not you support this investment in water quality.

Seventy-four percent of respondents indicated ***supporting*** the current local government efforts to improve water quality and they would like to see more efforts even if it costs more money. Exactly **25%** of respondents indicated ***supporting the efforts at the current expenditure level***. **Not a single respondent** indicated that they would like to see communities stop investing in these efforts.



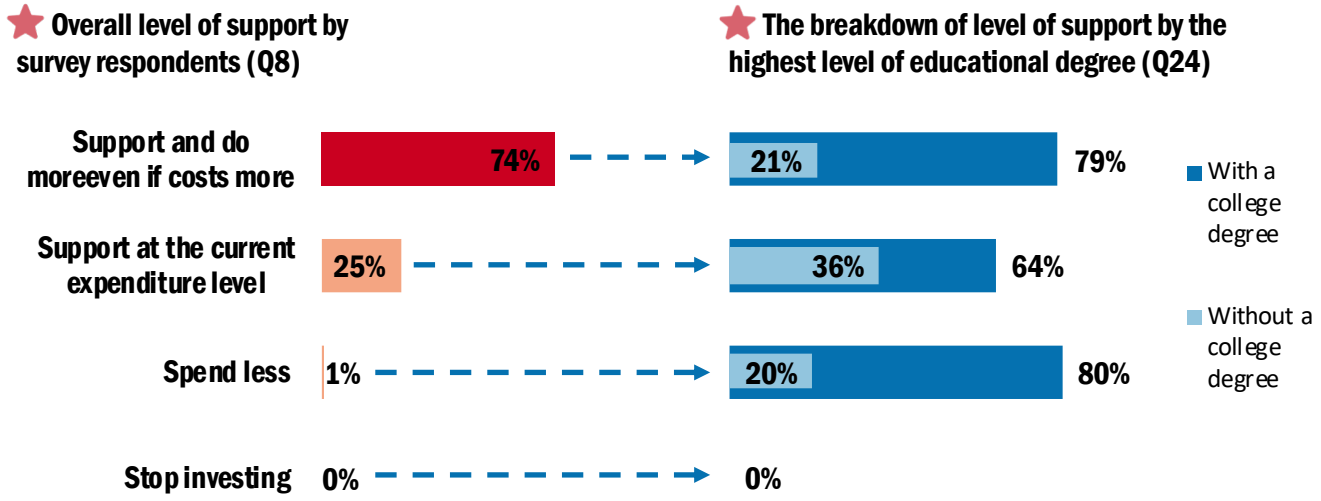
Comparisons: Differences in respondents' awareness between 2019 and 2014 on respondents' level of support in the effort to improve the quality of rivers, streams, and lakes.

The overall distribution of the 2019 responses is consistent with the 2014 responses. There is a 11% increase↑ in the percentage of people *supporting the efforts even if it costs more* and an 8% decrease↓ in the percentage of people *supporting the efforts at current expenditure level*.



Cross-tabulation: How does the highest level of educational degree (Q24) affect respondents' level of support in the effort to improve the quality of local rivers, streams, and lakes (Q8)?

This analysis allows us to compare **respondents' level of support** in the effort to improve the quality of rivers, streams, and lakes. Respondents were divided into those who with a college degree or higher* and those who who not have a college degree. The goal is to see if there is a statistically significant difference between the two groups of respondents in the level of support.



The graph on the left shows the level of support to improve the quality of local rivers of all the respondents. Within the **74%** of respondents who *support* the efforts *even if it costs more*, **79%** of them have a college degree or higher. Within the **25%** of respondents who *support* the efforts *at the current expenditure level*, **64%** of them have a college degree or higher. Within the **1%** of respondents who want the community to *spend less on the efforts*, **80%** of them have a college degree or higher.

There is a **statistically significant relationship** (p = .013) between the highest level of educational degree and the level of support in the effort to improve the quality of rivers, streams, and lakes**.** For respondents who have a college degree or higher, they are more likely↑ than expected to want the community *spend less*** on the effort and less likely↓ than expected to *support the efforts at the current expenditure level.* For respondents who do not have a college degree, they are less likely↓ than expected to *support and do more even if it costs more*, and they are more likely↑ than expected to *support the efforts at the current expenditure level*.

Respondents who have a college degree or higher → **More likely↑** than expected to want community to ***spend less***. **Less likely↓** than expected to support the efforts ***at the current expenditure level***.

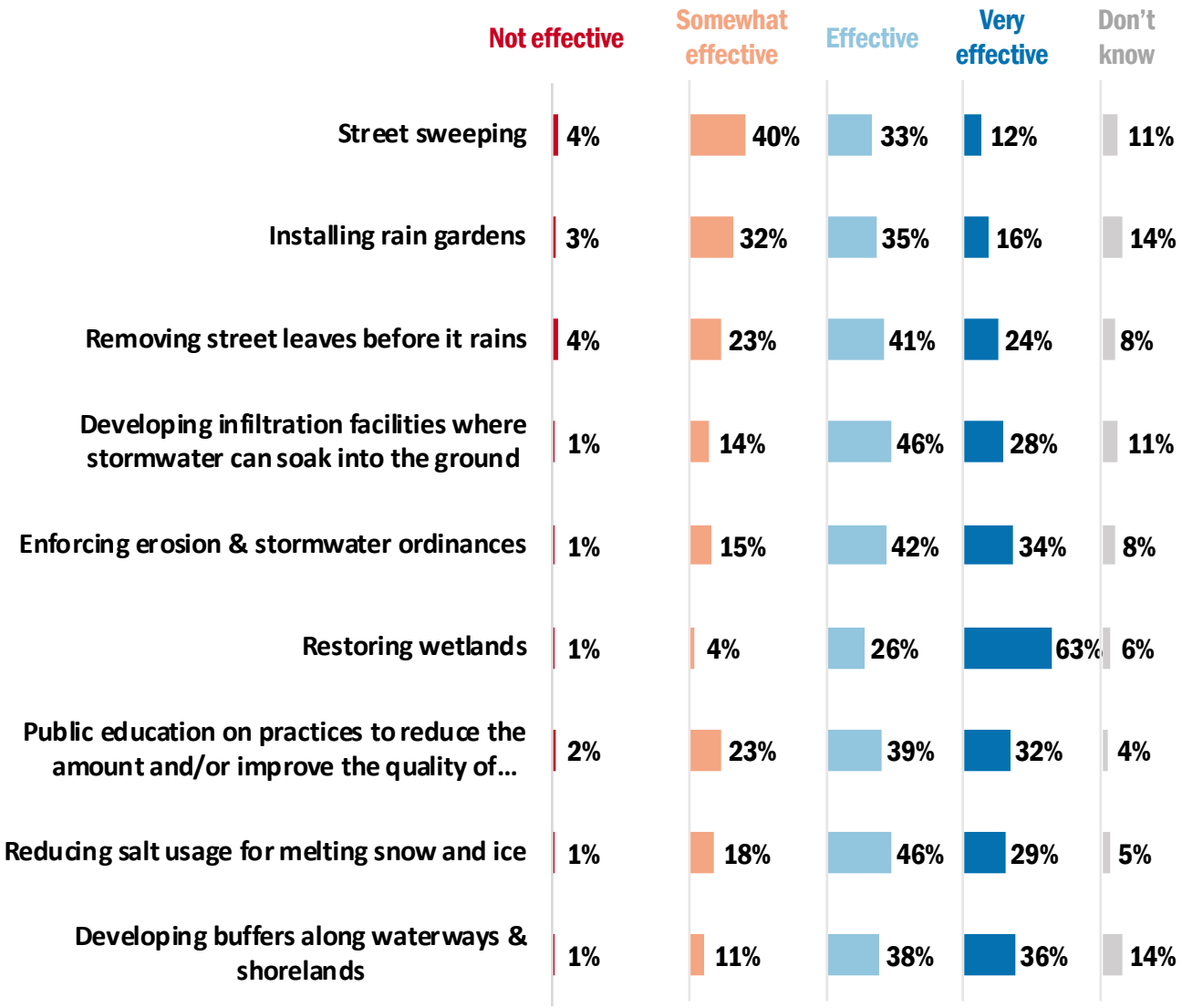
Respondents who do not have a college degree → **More likely↑** than expected to support the efforts ***at the current expenditure level***.

***Note** The sample was consisted of 75% of respondents who have a college degree or higher.

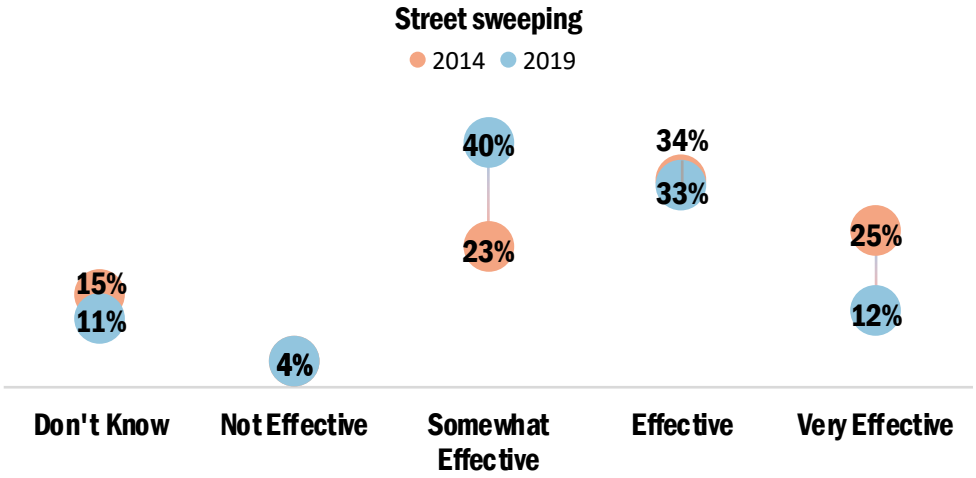
***Note** This significance only exist in the 1% of respondents who want to spend less, and it does not represent respondents with a college degree or higher.

9. In your opinion, how effective can the following efforts be for improving the water quality of lakes, rivers and streams in and around your community?

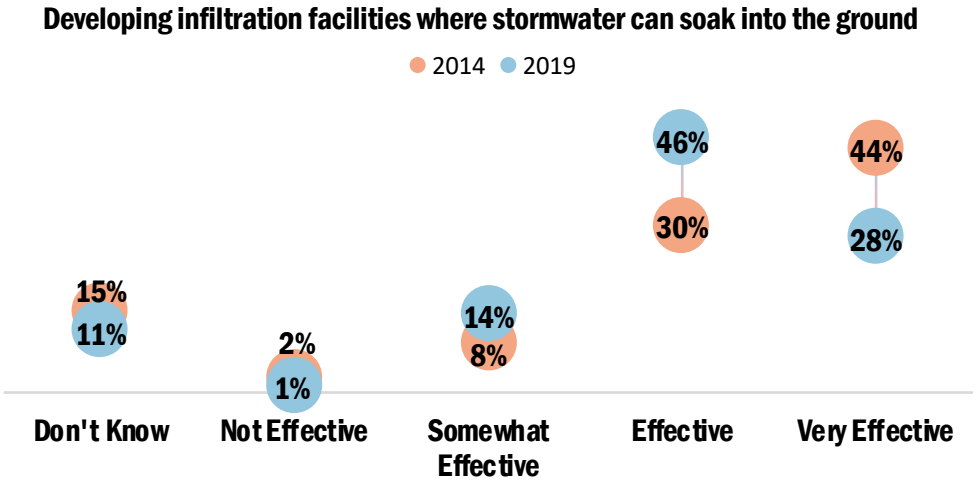
Respondents were asked to rate the effectiveness of the following water quality improvement efforts. In general, **45% to 89% of the respondents rated all the efforts as *Effective* or *Very effective***. Over **60%** of respondents rated Restoring wetlands as *Very effective* and only **12%** rated Street sweeping as *Very effective*. **Forty percent** of respondents rated Street sweeping and **32%** rated Installing rain gardens as *Somewhat effective*. **Less than 5% of respondents rated all the efforts as *Not effective***.



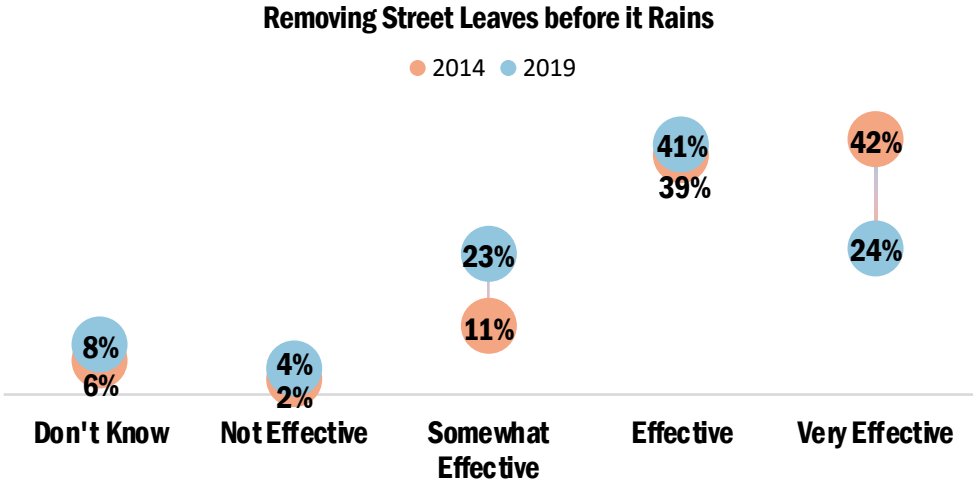
Comparisons: Differences in respondents' perceptions between 2019 and 2014 on the ratings of the effectiveness of the water quality improvement efforts. The items with a major change (>15%) are presented.



There is a **17% increase↑** in the percentage of respondents who think **Street sweeping** is ***somewhat effective*** to improve water quality. A **13% decrease↓** is found in the percentage of respondents who think street sweeping is ***very effective***.

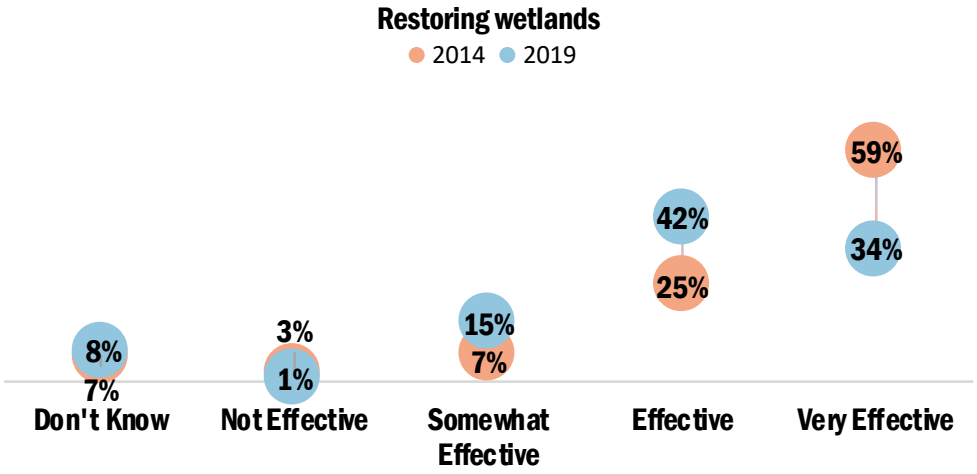


There is a **16% increase↑** in the percentage of respondents who think **Developing infiltration facilities** is ***effective***. There is also a **16% decrease↓** in the percentage of respondents who think it's ***very effective***.

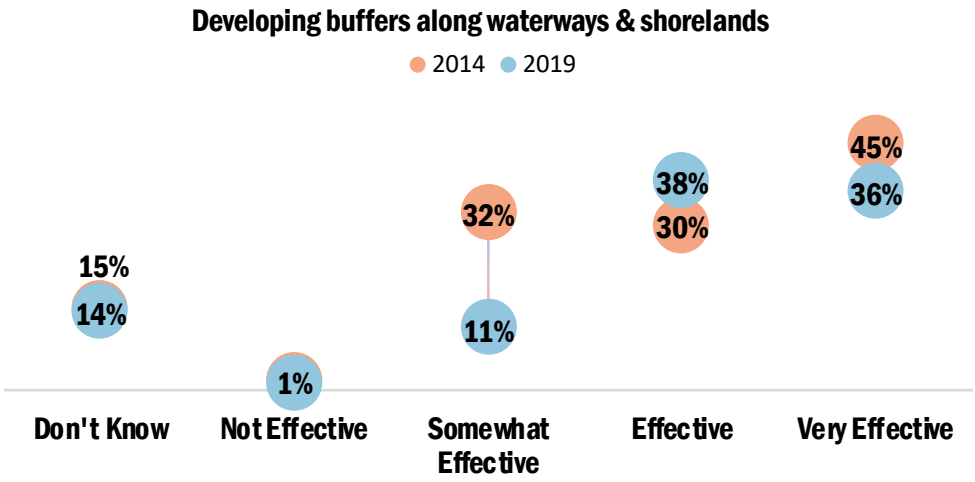


There is a **18% decrease↓** in the percentage of respondents who think **Removing Street Leaves before it Rains** is ***very effective***.

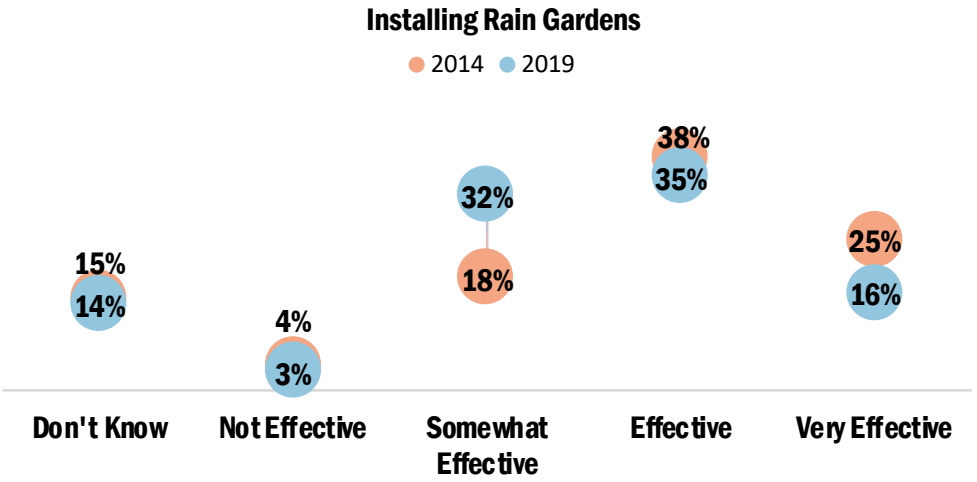
**Note* This item in 2014 was worded as "Leaf & yard-waste collection" on the report.



There is a **25% decrease↓** in the percentage of respondents who think **Restoring wetlands** is ***very effective***. A **17% increase↑** is found in the percentage of respondents who think restoring wetlands is ***effective***.



There is a **21% decrease↓** in the percentage of respondents who think **Developing buffers along waterways & shorelands** is ***somewhat effective***.

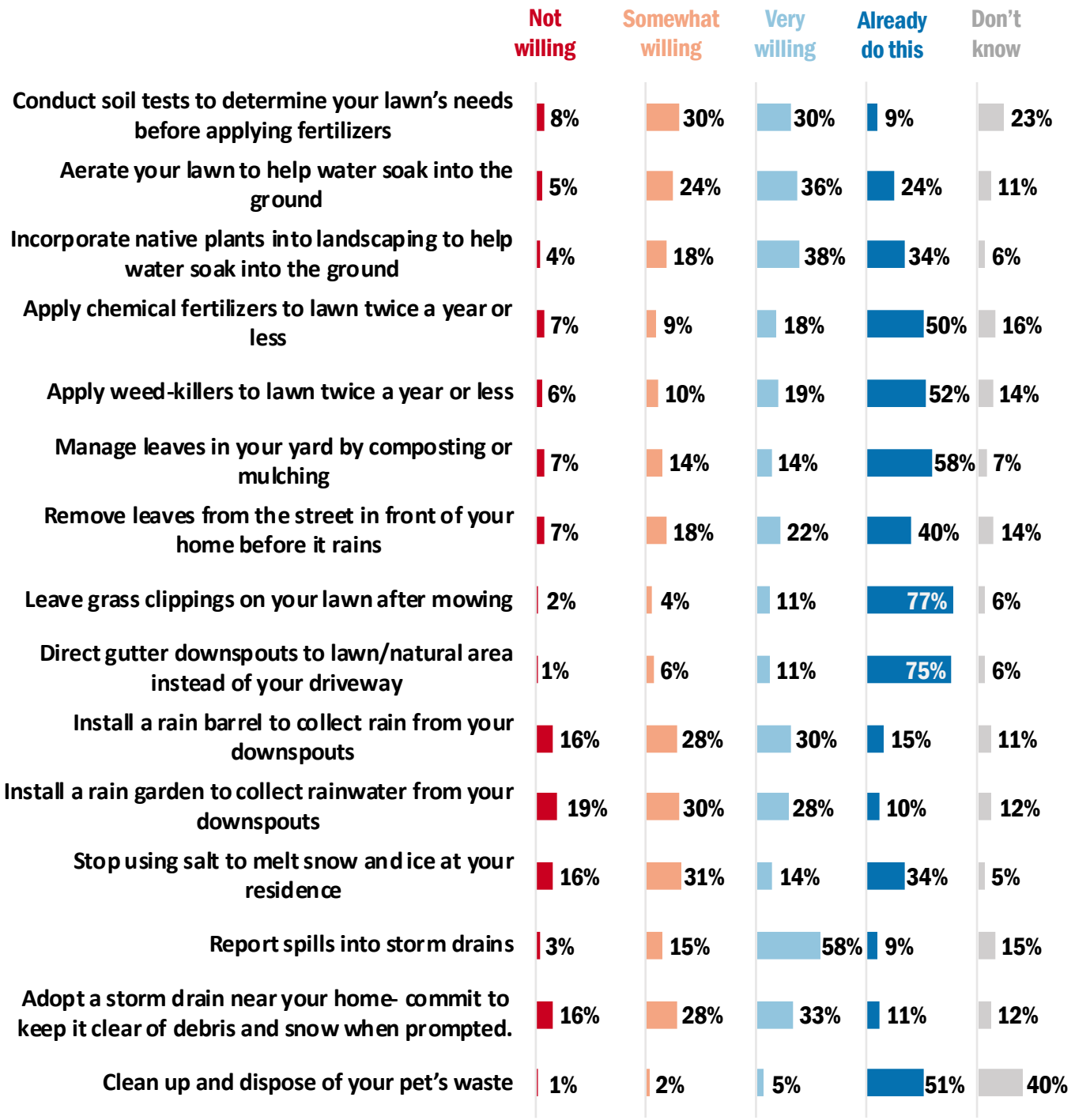


There is a **14% increase↑** in the percentage of respondents who think **Installing Rain Gardens** is ***somewhat effective***.

**Note* The change in this item is not 15% but is very close to the standard of a major change.

10. Which of the following actions would you be willing to do regularly to reduce pollution to area lakes, rivers and streams? Or, are you already doing any of these actions?

Respondents were asked to rate the willingness to perform following actions to reduce water pollution. In general, **there were more respondents who reported *Very willing* or *Already do this* than who reported Not willing or Somewhat willing**. **More than half** of them indicated they have *already done **six*** of the actions, with *Leave grass clippings on your lawn after mowing* and *Direct gutter downspouts to lawn/natural area instead of your driveway* being the most-selected items by at least **75%** of the respondents. **Less than 20% of respondents indicated *Not willing* to perform the actions**.

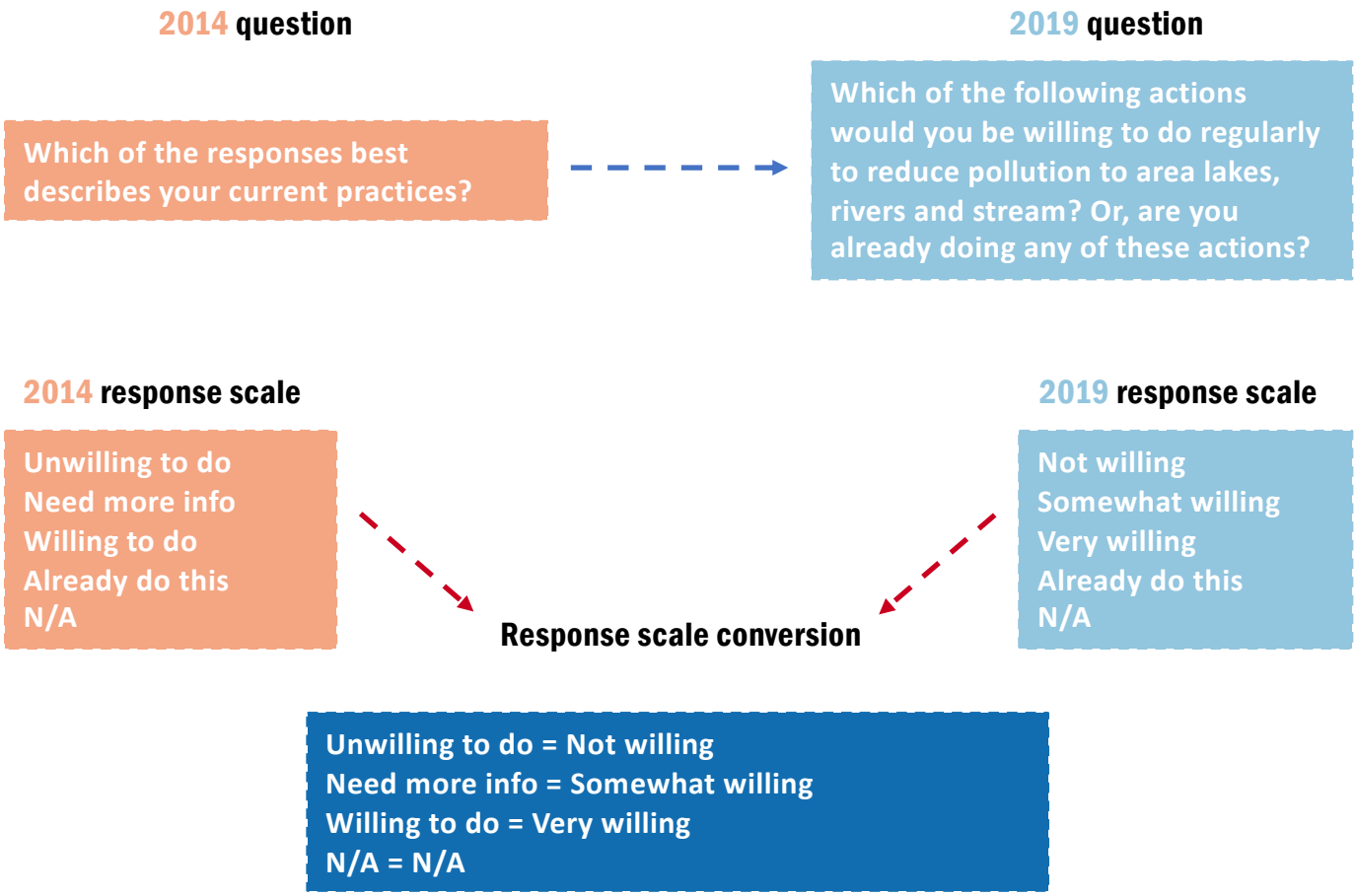


Comparisons: Differences in respondents' willingness to reduce pollution to area lakes, rivers, and streams between 2019 and 2014.

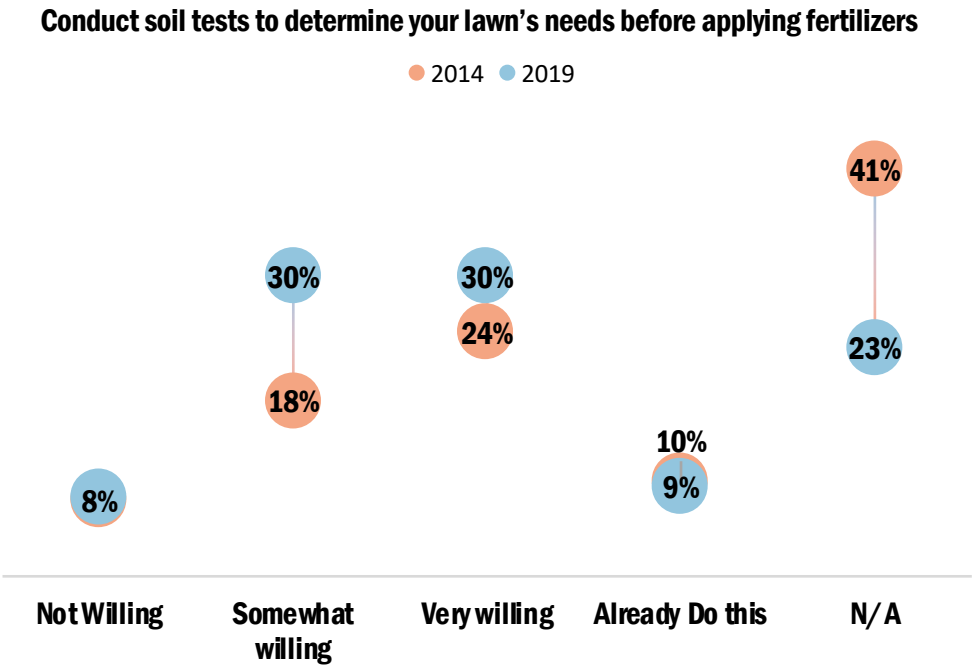
The wording of question (Q10) was changed between the 2014 and 2019 survey, and the response scale was also different. Even though both questions were examining respondents' willingness to reduce pollution to lakes, rivers, and streams, it is hard to make comparisons on the results with different response scales. Therefore, we converted the response scales to analyze the results across years.

Specifically, the responses of *Unwilling to do* are converted to *Not willing*. The responses of *Need more info* are converted to *Somewhat willing*. The reasoning here is that, if respondents are willing to know more about the actions, they may be willing to make the action, to a degree. The responses of *willing to do* are converted to *Very willing*. The responses of *Already do this* and *N/A* stay the same, as 2019 survey use the same wording. With the conversions of response scales, we recommend readers to to use caution in interpreting the results.

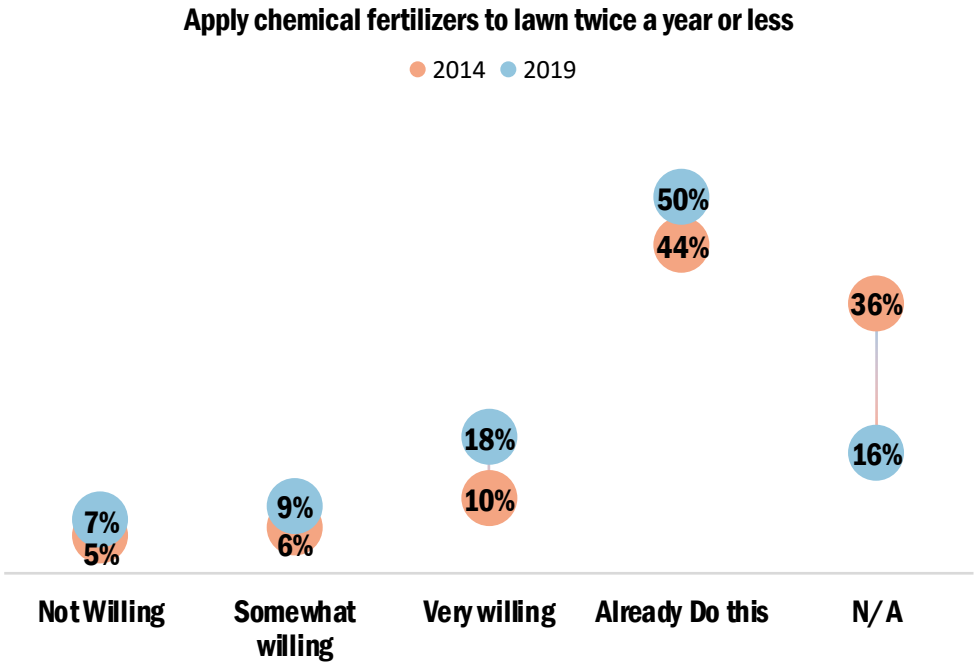
Note that the 2014 results was analyzed using the raw data. With the response conversions and possible different analysis styles, the results may look different from what is on the 2014 report.



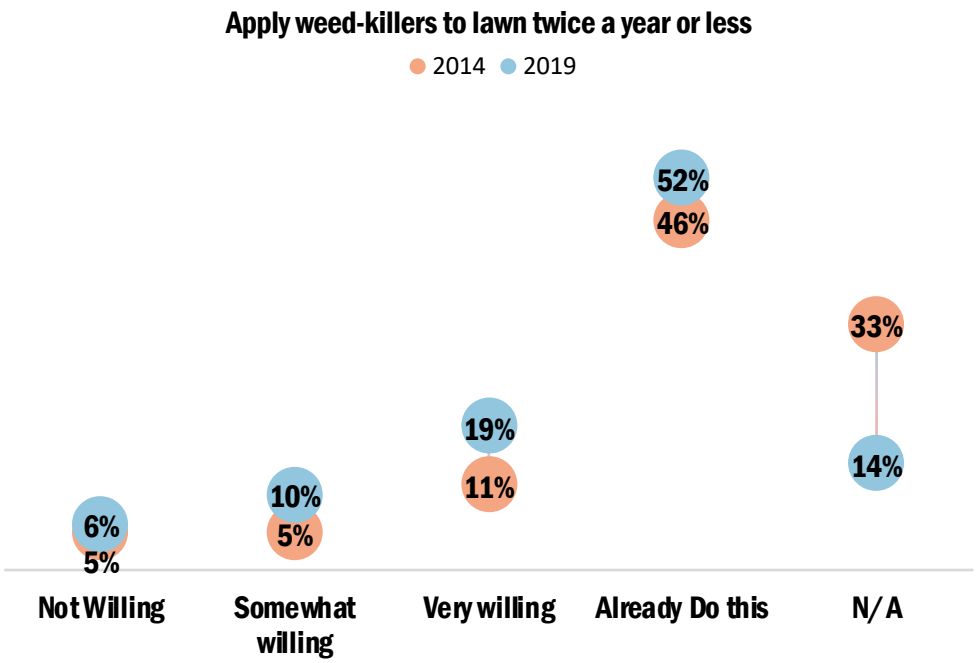
Comparisons: Differences in respondents' willingness to reduce pollution between 2019 and 2014 through performing the listed actions. The items with a major change (>15%) are presented.



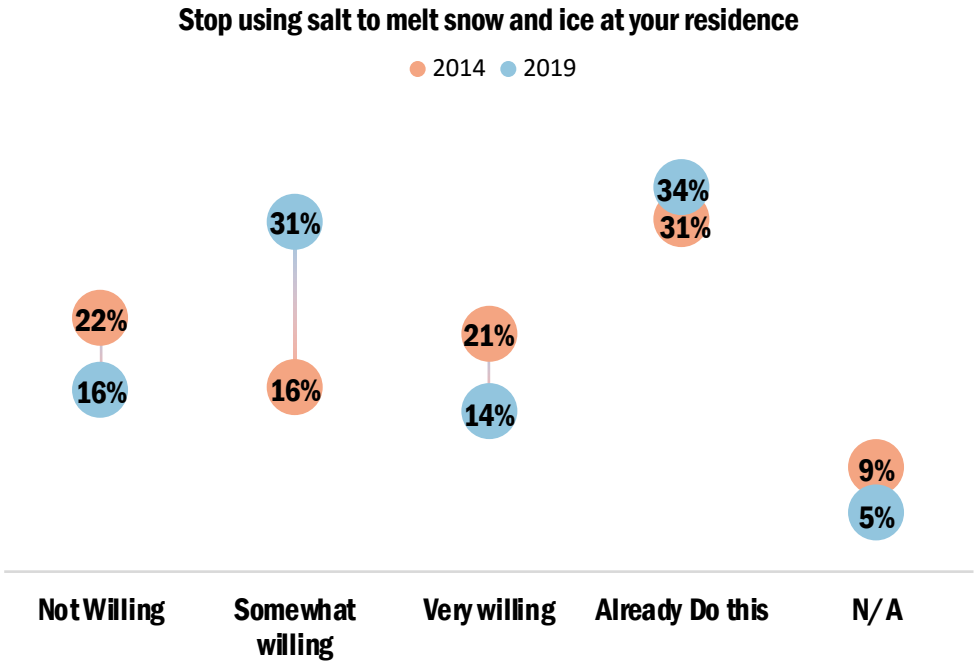
There is a **18% decrease↓** in the percentage of respondents who think **Conduct soil test** is ***not applicable*** to their current situation. Also, there is a **12% increase↑** in in the percentage of respondents who are ***somewhat willing*** to conduct soil tests.



There is a **20% decrease↓** in the percentage of respondents who think **Apply chemical fertilizers to lawn twice a year or less** is ***not applicable*** to their current situation. There is also an **8% increase↑** in the percentage of respondents who are ***very willing*** to do so.



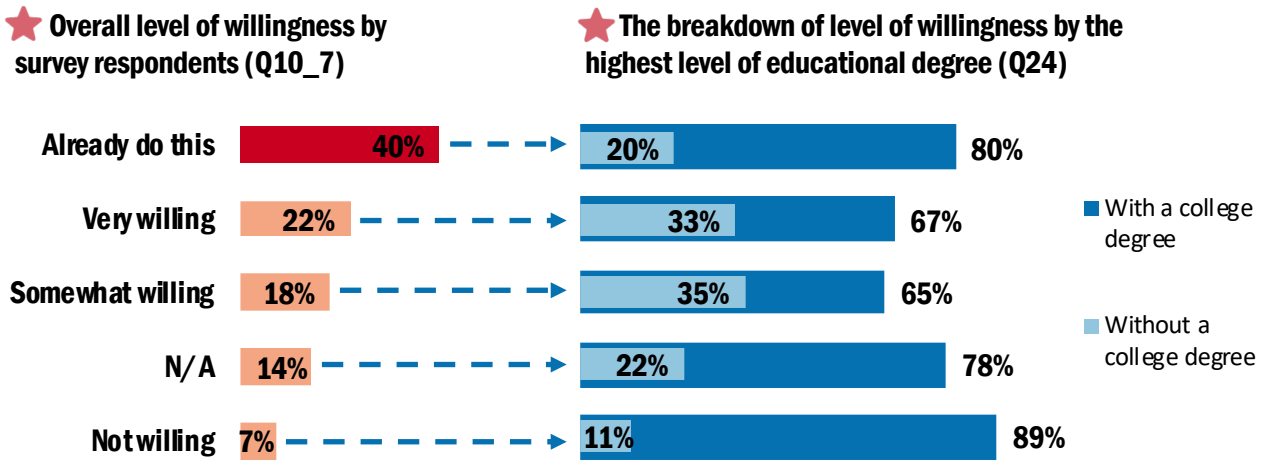
There is a **19% decrease↓** in the percentage of respondents who think **Apply weed-killers to lawn twice a year or less** is ***not applicable*** to their current situation. Also, there is an **8% increase↑** in in the percentage of respondents who are ***very willing*** to do so.



There is a **15% increase↓** in the percentage of respondents who are ***somewhat willing*** to **Stop using salt to melt snow and ice at your residence**.

Cross-tabulation: How does the highest level of educational degree (Q24) affect respondents' willingness to remove leaves from the street in front of their homes before it rains (Q10_7)?

This analysis allows us to compare respondents' **willingness to remove leaves** from the street in front of their homes before it rains. Respondents were divided into those who with a college degree or higher* and those who do not have a college degree. The goal is to see if there is a statistically significant difference between the two groups of respondents in willingness to remove leaves before it rains.



The graph on the left shows the level of willingness to remove leaves from the street in front of their homes before it rains of all the respondents. With **40%** of respondents selecting it, "*already do this*" became the most-selected item. Only **7%** of respondents are not willing to remove leaves. The graph on the right shows the breakdown of the results by educational degree. There were more respondents with a college degree selecting every item than respondents without a college degree.

There is a **statistically significant relationship** (p = .012) between the highest level of educational degree and respondents' willingness to remove leaves**.** For respondents who have a college degree, they are more likely↑ than expected to be *not willing* to remove leaves or have *already removed* leaves before it rains. For those who do not have a college degree, they are more likely↑ than expected to be *somewhat willing* and *very willing* to remove leaves before it rains, and they are less likely↓ than expected to have *already removed* leaves.

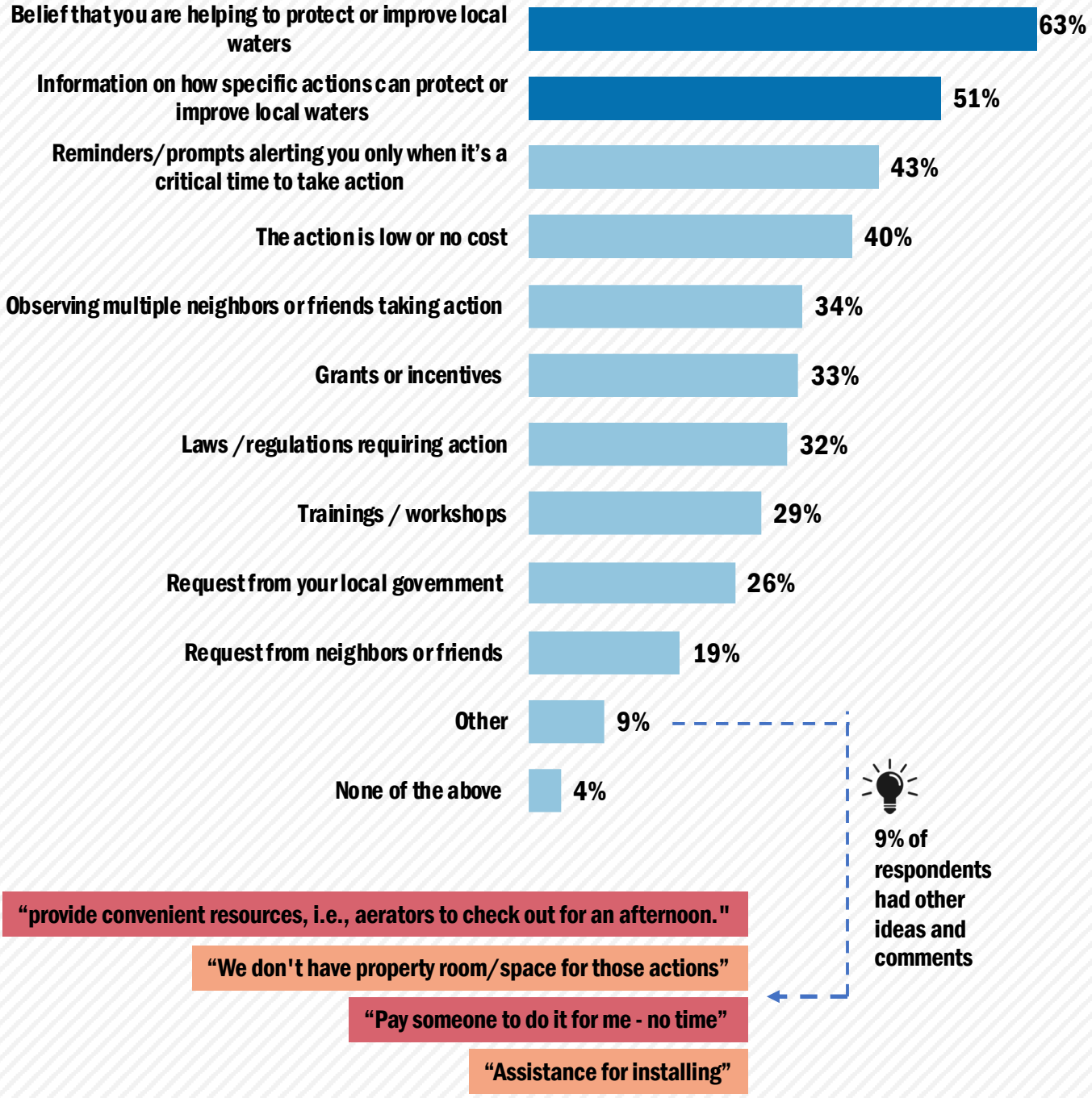
Respondents who have a college degree or higher → **More likely↑** than expected to be ***not willing*** or have ***already*** removed leaves before it rains.

Respondents who do not have a college degree → **More likely↑** than expected to be ***somewhat*** and ***very willing*** to remove leaves before it rains. **Less likely↓** than expected to have already removed leaves.

***Note** The sample was consisted of 75% of respondents who have a college degree o r higher.

11. Of the actions listed above in Question 10 that you are willing to do but not currently doing, what would motivate you to act? (Please select all that apply)

Sixty-three percent of respondents would be motivated to reduce water pollution in lakes, rivers, and streams if they *believe they are helping to protect or improve local waters* or if they *have the information on how specific actions can protect or improve local waters*. A range of **26%** to **43%** of respondents would be motivated to reduce water pollution by seven items below. There were **9%** of respondents indicated "other", and some of their comments are presented below. Check Appendix for the full list of comments.

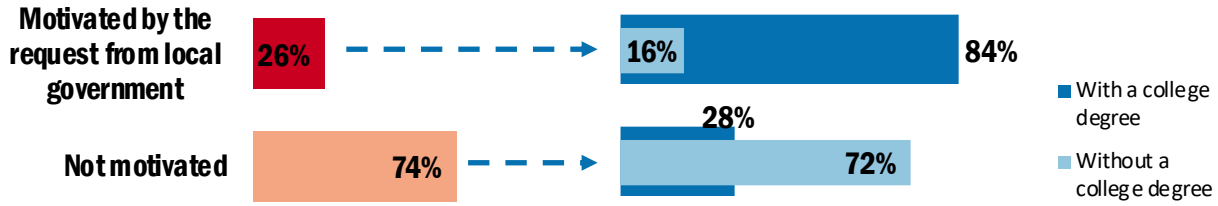


Cross-tabulation: How does the highest level of educational degree (Q24) affect respondents' motivation to reduce pollutions if they receive requests from local government (Q11_5)?

This analysis allows us to compare **respondents' motivations to reduce water pollution** in lakes, rivers, and streams **if they receive requests from local government**. Respondents were divided into those who with a college degree or higher and those who do not have a college degree. The goal is to see if there is a statistically significant difference between the two groups of respondents in motivation to reduce water pollution.

Overall level of motivation by survey respondents (Q11_5)

The breakdown of level of motivation by the highest level of educational degree (Q24)



The graph on the left shows the level of motivation to reduce pollutions if they receive requests from local government of all the respondents. Within the **26%** of respondents who would be *motivated*, **84%** of them have a college degree or higher. Within the **74%** of respondents who would ***not*** *be motivated*, **28%** of them have a college degree or higher.

There is a **statistically significant relationship** (p = .018) between the highest level of educational degree and respondents' motivations to reduce water pollution. For respondents who have a college degree, they are more likely↑ than expected to *be motivated* to reduce water pollution if they receive requests from local government. For those who do not have a college degree, they are less likely↓ than expected to *be motivated* to reduce water pollution if they receive requests from local government.

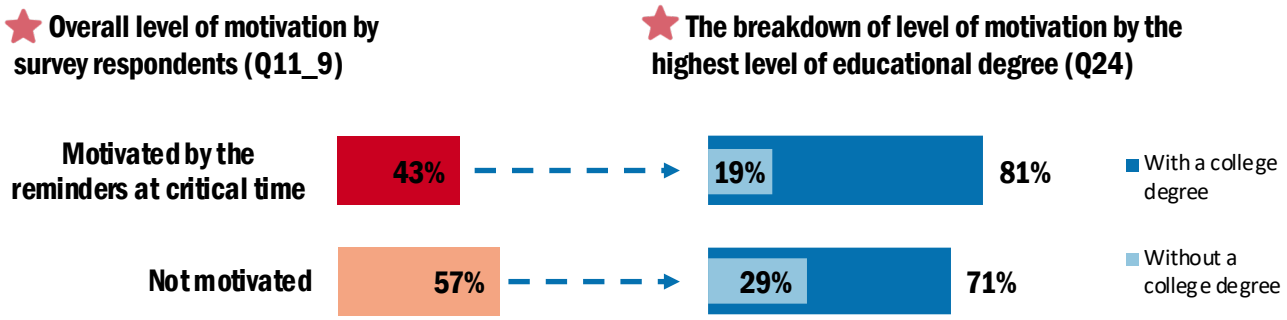
Respondents who have a college degree or higher → **More likely↑** than expected to be ***motivated*** to reduce water pollution if they receive *requests from local government*.

Respondents who do not have a college degree → **Less likely↓** than expected to be ***motivated*** to reduce water pollution if they *receive requests from local government.*

***Note** The sample was consisted of 75% of respondents who have a college degree or higher.

Cross-tabulation: How does the highest level of educational degree (Q24) affect respondents' motivation to reduce water pollution if they receive reminders/prompts alerting them only when it's a critical time to take action (Q11_9)?

This analysis allows us to compare **respondents' motivations to reduce water pollution** in lakes, rivers, and streams **if they receive reminders/prompts alerting them only when it's a critical time to take action**. Respondents were divided into those who with a college degree or higher* and those who do not have a college degree. The goal is to see if there is a statistically significant difference between the two groups of respondents in motivation to reduce water pollution.



The graph on the left shows the level of motivation to reduce pollutions if they receive reminders/prompts alerting them only when it's a critical time to take action of all of the respondents. Within the **43%** of respondents who would be *motivated*, **81%** of them have a college degree or higher. Within the **57%** of respondents who would ***not*** *be motivated*, **71%** of them have a college degree or higher.

There is a statistically significant relationship (p = .016) between the highest level of educational degree and respondents' motivations to reduce water pollution**.** For respondents who have a college degree, they are more likely↑ than expected to *be motivated* to reduce water pollution if they receive reminders or prompts alerting them only at critical time. For those who do not have a college degree, they are less likely↓ than expected to *be motivated* to reduce water pollution in the same situation.

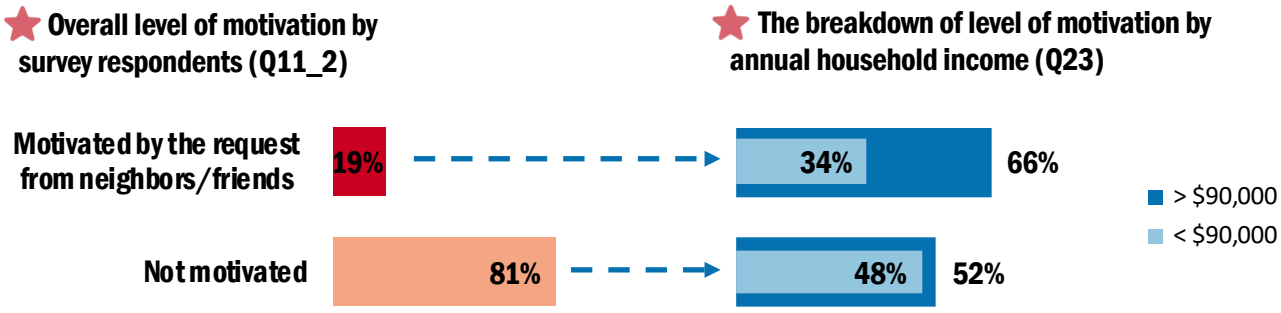
Respondents who have a college degree or higher → **More likely↑** than expected to be ***motivated*** to reduce water pollution if they receive *reminders or prompts only at critical time*.

Respondents who do not have a college degree → **Less likely↓** than expected to be ***motivated*** to reduce water pollution if they *receive reminders or prompts only at critical time*.

***Note** The sample was consisted of 75% of respondents who have a college degree or higher.

Cross-tabulation: How does annual household income (Q23) affect respondents' motivation to reduce water pollution if they receive requests from neighbors or friends (Q11_2)?

This analysis allows us to compare **respondents' motivations to reduce water pollution** in lakes, rivers, and streams **if they receive requests from neighbors or friends**. Respondents were divided into those whose annual household income is more than $90,000* and those whose annual household income is less than $90,000. The goal is to see if there is a statistically significant difference between the two groups of respondents in motivation to reduce water pollution.



The graph on the left shows the level of motivation to reduce pollutions if they receive requests from neighbors or friends of all the respondents. Within the **19%** of respondents who would be *motivated*, **66%** of them have an annual household income more than $90,000. Within the **81%** of respondents who would ***not*** *be motivated*, **52%** of them have an annual household income more than $90,000.

There is a **statistically significant relationship** (p = .042) between the annual household income and respondents' motivations to reduce water pollution. For respondents who make more than $90,000 annually, they are more likely↑ than expected to *be motivated* to reduce water pollution *if they receive requests from neighbors or friends.* For those who make less than $90,000 annually, they are less likely↓ than expected to *be motivated* to reduce water pollution in the same situation.

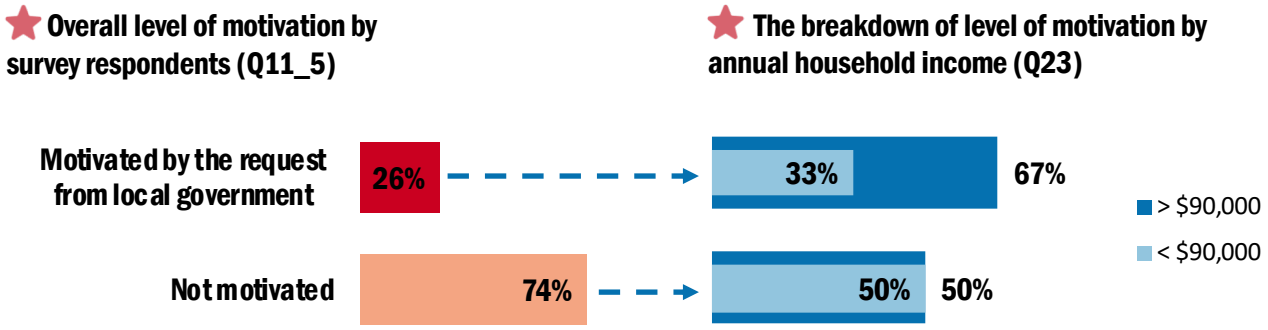
Respondents with a household income more than $90,000 → **More likely↑** than expected to be ***motivated*** to reduce water pollution if they *receive requests from neighbors or friends.*

Respondents with a household income less than $90,000 → **Less likely↓** than expected to be ***motivated*** to reduce water pollution if they *receive requests from neighbors or friends.*

***Note** The sample was consisted of 55% of respondents who have an annual household income more than $90,000.

Cross-tabulation: How does annual household income (Q23) affect respondents' motivation to reduce water pollution if they receive requests from their local government(Q11_5)?

This analysis allows us to compare **respondents' motivations to reduce water pollution** in lakes, rivers, and streams **if they receive requests from local government**. Respondents were divided between those whose annual household income is more than $90,000* and those whose annual household income is less than $90,000. The goal is to see if there is a statistically significant difference between the two groups in motivation to reduce water pollution.



The graph on the left shows the level of motivation to reduce pollutions if they receive requests from local government of all the respondents. Within the **26%** of respondents who would be *motivated*, **67%** of them have an annual household income more than $90,000. Within the **74%** of respondents who would ***not*** *be motivated*, **50%** of them have an annual household income more than $90,000.

There is a **statistically significant relationship** (p = .006) between the annual household income and respondents' motivations to reduce water pollution. For respondents who make more than $90,000 annually, they are more likely↑ than expected to *be motivated* to reduce water pollution *if they receive requests from local government.* For those who make less than $90,000 annually, they are less likely↓ than expected to *be motivated* to reduce water pollution in the same situation.

Respondents with a household income more than $90,000 → **More likely↑** than expected to be ***motivated*** to reduce water pollution if they *receive requests from local government*.

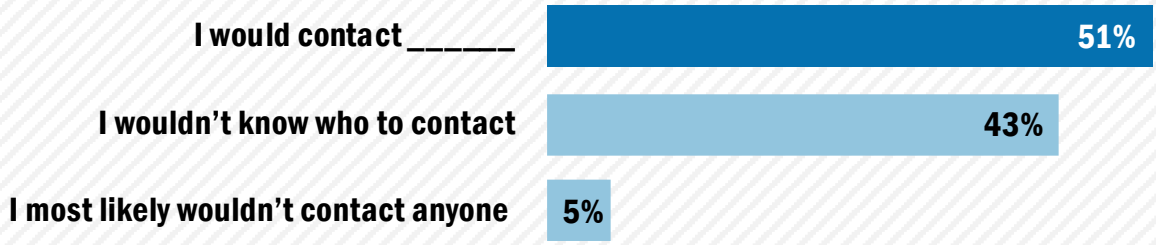
Respondents with a household income less than $90,000 → **Less likely↓** than expected to be ***motivated*** to reduce water pollution if they *receive requests from local government*.

***Note** The sample was consisted of 55% of respondents who have an annual household income more than $90,000.

Information Sources

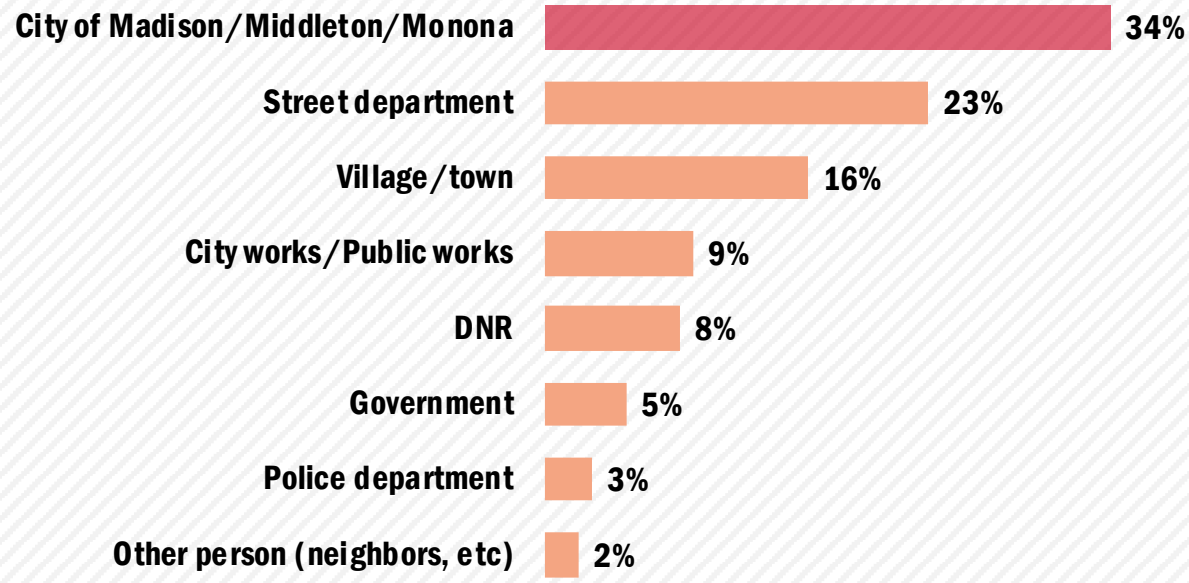
This section contains questions 12 to 15 on the survey. Descriptive information of the respondents, the comparisons of the current 2019 results and the 2014 results, and crosstabulation significant results on the survey items were presented. The title numbers are consistent with the item numbers on the survey.

12. Who, if anyone, would you contact if you noticed a large amount of dirty water (for example with mud, paint or oil) flowing into a storm drain?



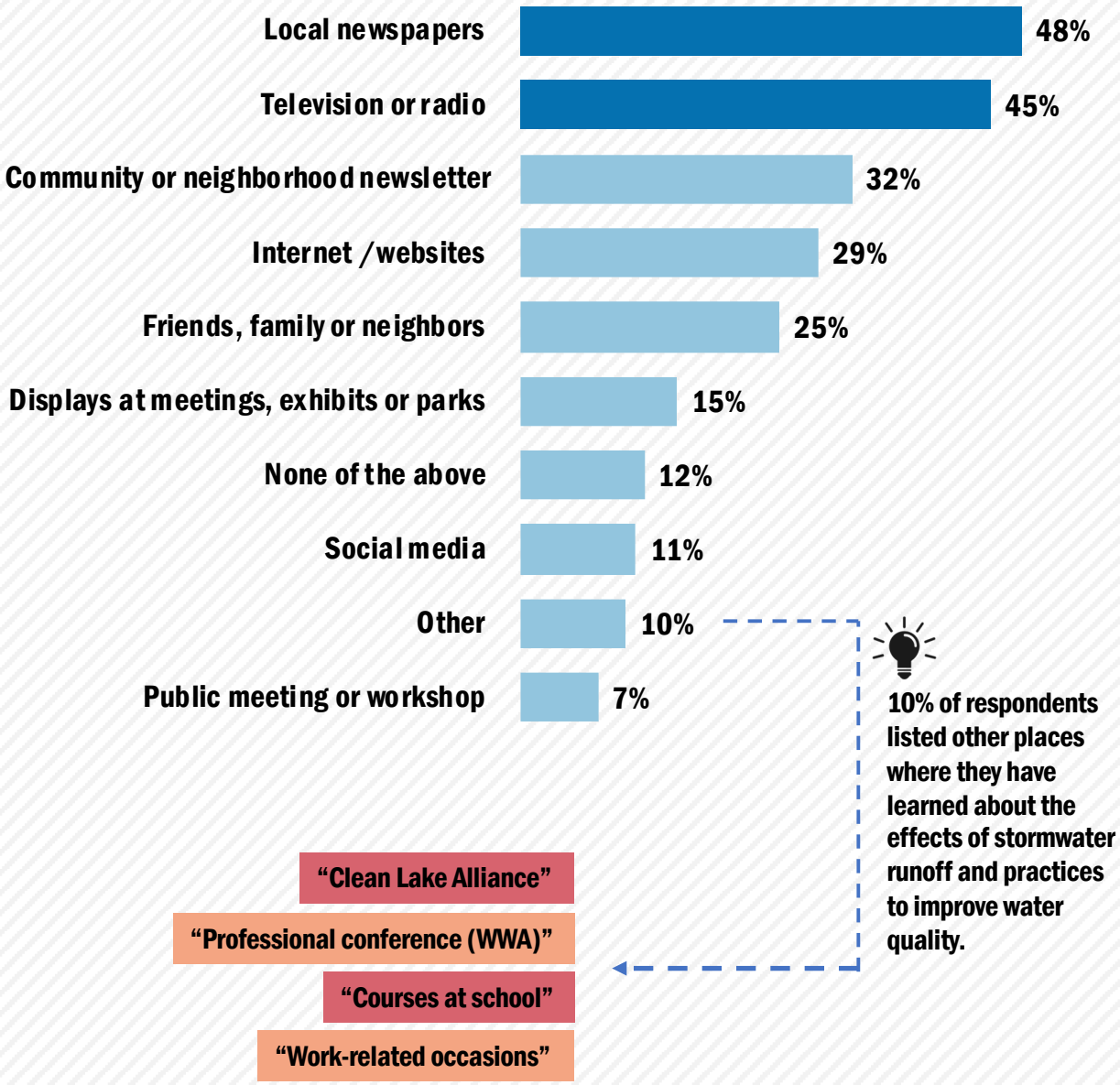
Forty-three percent of respondents who *would not know who to contact*, and **5%** of them most likely *would not contact anyone*. Yet, **51%** of respondents identified some departments or people they would contact.

∗ Who would the 51% of respondents contact if they noticed a large amount of dirty water:



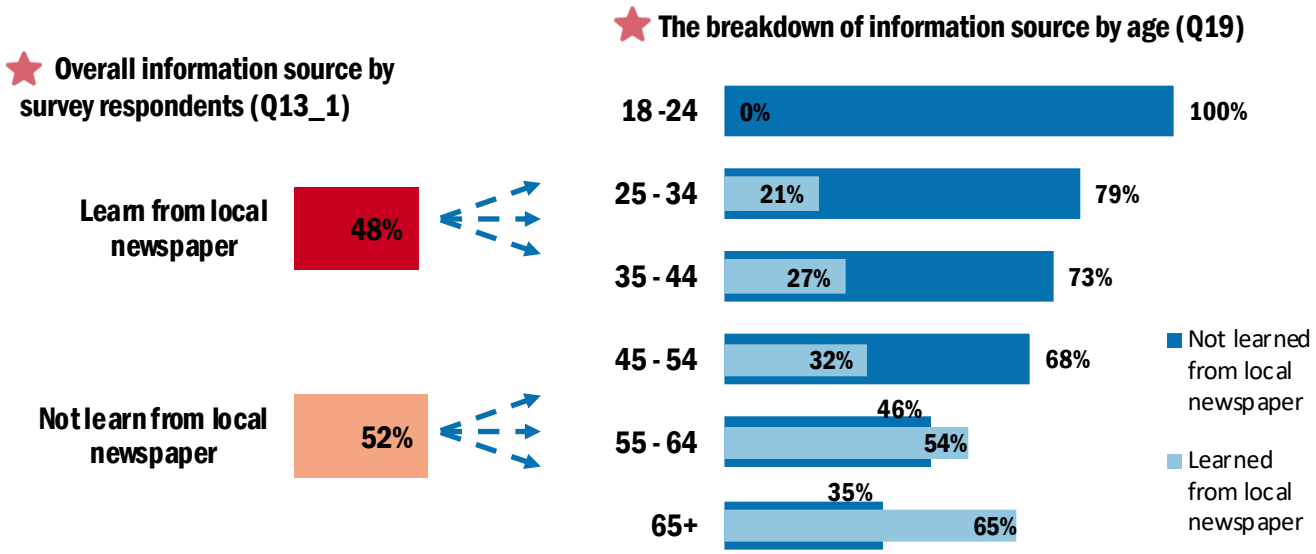
13. During the last five years, have you learned about effects of stormwater runoff or practices to improve water quality from any of the following? (Check all that apply)

Between 45% and 48% of respondents have learned about effects or practices of stormwater runoff to improve water quality from *local newspapers* and *television or radio*. **Between 25% and 32%** of respondents learned about it from *community or neighborhood newsletter*, *internet/websites*, and *friends/family/neighbors*. **Between 10% and 15%** of respondents learned about effects and practices from displays at meetings, social media, other occasions, or none of the options listed on the survey. Only **7%** of respondents learned about it from public meeting or workshop. **Ten percent** of respondents indicated that they have learned about it at other places and some of their comments are presented below. Check Appendix for the full list of comments.



Cross-tabulation: How does age (Q19) affect the likelihood that respondents learn from the local newspaper (Q13_1) about effects of stormwater runoff or practices to improve water quality?

This analysis allows us to compare **respondents' likelihood to learn from local newspaper** about the effects of stormwater runoff or practices to improve water quality. Respondents were divided into six age groups. The goal is to see if there is a statistically significant difference between the six groups of respondents in the likelihood of learning the relevant knowledge from local newspaper.



The graph on the left shows the proportion of the percentage of all respondents learning from *local newspaper*. In general, **the elder the age of the respondents, the more likely they have learned about effects of stormwater runoff or practices to improve water quality from local newspapers**. **No one** from the *18 – 24* age group have learned the knowledge from local newspaper, and **65%** of the respondents whose age are *above 65* have learned the knowledge from local newspaper.

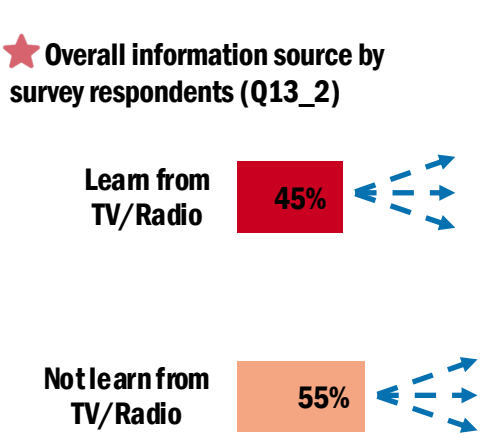
There is a **statistically significant relationship** ($p < .001$) between respondents' age and the likelihood to learn from local newspaper. For respondents whose ages are *between 18 and 54*, they are less likely↓ than expected to have learned about the effects of stormwater runoff or practices to improve water quality *from local newspaper.* For those who are older than 55, they are more likely↑ than expected to have learned the relevant knowledge *from local newspaper.*

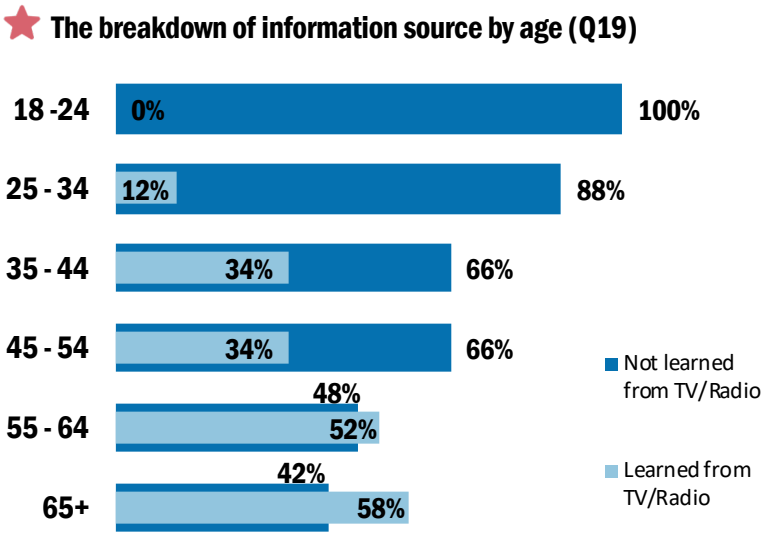
Respondents who are 18 to 54 years old → **Less likely↓** than expected to have learned the relevant knowledge from *local newspaper*.

Respondents who are older than 55 years old → **More likely↑** than expected to have learned the relevant knowledge from *local newspaper*.

Cross-tabulation: How does age (Q19) affect the likelihood that respondents learn from television or radio (Q13_2) about effects of stormwater runoff or practices to improve water quality?

This analysis allows us to compare **respondents' likelihood to learn from television or radio** about the effects of stormwater runoff or practices to improve water quality. Respondents were divided into six age groups. The goal is to see if there is a statistically significant difference between the six groups of respondents in the likelihood of learning the relevant knowledge from television or radio.





The graph on the left shows the proportion of the percentage of all respondents learning from *TV or radio*. In general, **the elder the age of the respondents, the more likely they have learned about effects of stormwater runoff or practices to improve water quality from TV or radio**. **No one** from the *18 – 24* age group have learned the knowledge from TV or radio, and **58%** of the respondents whose age are *above 65* have learned the knowledge from TV or radio.

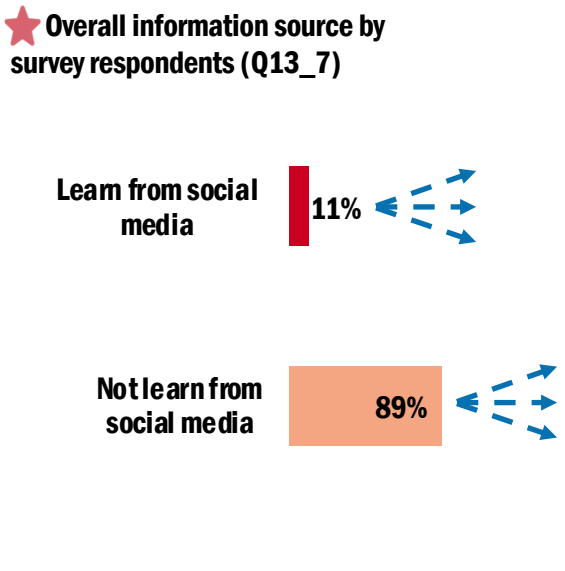
There is a **statistically significant relationship** ($p < .001$) between respondents' age and the likelihood to learn from local newspaper. For respondents whose ages are *between 18 and 54*, they are less likely↓ than expected to have learned about the effects of stormwater runoff or practices to improve water quality *from TV or radio.* For those who are between 55 and 64, they are more likely↑ than expected to have learned the relevant knowledge *from TV or radio.*

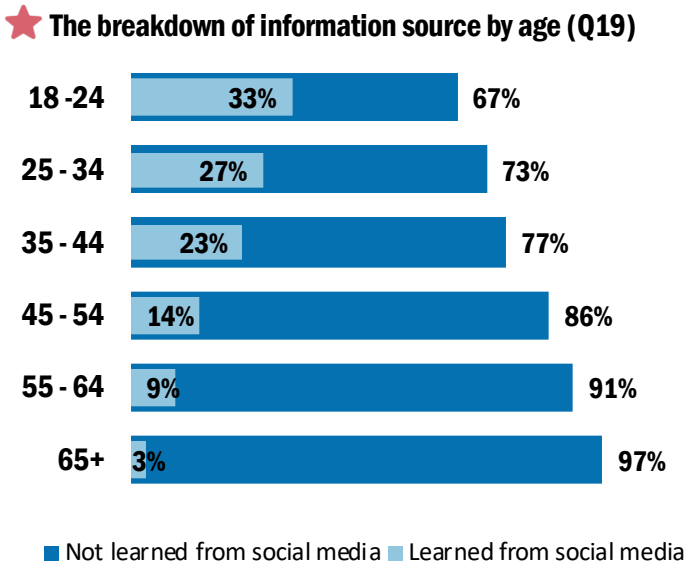
Respondents who are 18 to 54 years old → **Less likely↓** than expected to have learned the relevant knowledge from *television or radio*.

Respondents who between 55 and 64 years old → **More likely↑** than expected to have learned the relevant knowledge from *television or radio*.

Cross-tabulation: How does age (Q19) affect the likelihood that respondents learn from social media (Q13_7) about effects of stormwater runoff or practices to improve water quality?

This analysis allows us to compare **respondents' likelihood to learn from social media** about the effects of stormwater runoff or practices to improve water quality. Respondents were divided into six age groups. The goal is to see if there is a statistically significant difference between the six groups of respondents in the likelihood of learning the relevant knowledge from social media.





The graph on the left shows the proportion of the percentage of all respondents learning from *social media*. In general, **the older the age of the respondents, the less likely they have learned about effects of stormwater runoff or practices to improve water quality from social media**. **One-third (33%)** of respondents from the *18 – 24* age group have learned the knowledge from social media, and only **3%** of the respondents whose age are *above 65* have learned the knowledge from social media.

There is a **statistically significant relationship** ($p < .001$) between respondents' age and the likelihood to learn from social media. For respondents whose ages are between *18 to 44*, they are more likely↑ than expected to have learned about the effects of stormwater runoff or practices to improve water quality *from social media.* For those who are older than 65, they are less likely↓ than expected to have learned the relevant knowledge *from social media.*

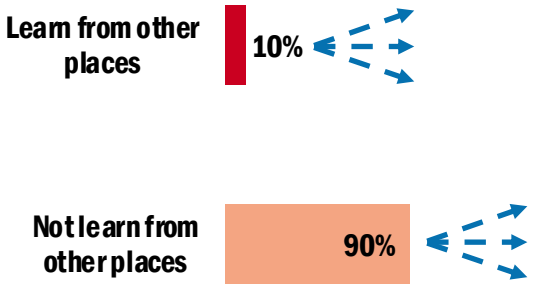
Respondents who are from 18 to 44 years old → **More likely↑** than expected to have learned the relevant knowledge from *social media*.

Respondents who are older than 65 years old → **Less likely↓** than expected to have learned the relevant knowledge from *social media*.

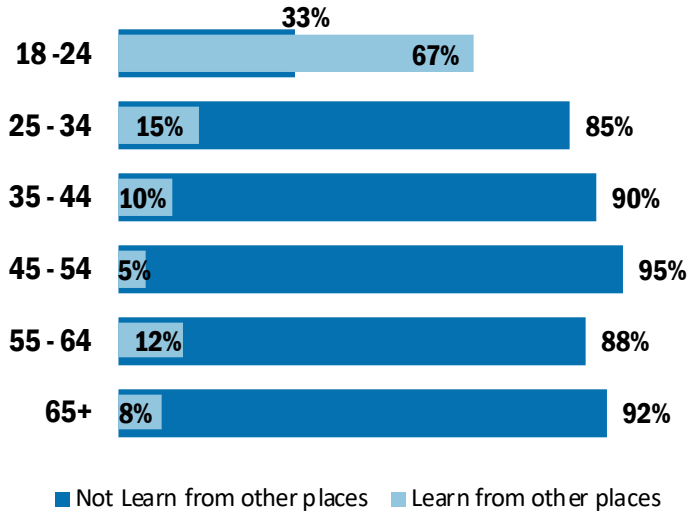
Cross-tabulation: How does age (Q19) affect the likelihood that respondents learn from other places (Q13_9) about effects of stormwater runoff or practices to improve water quality?

This analysis allows us to compare **respondents' likelihood to learn from other places** that are not listed on the survey about the effects of stormwater runoff or practices to improve water quality. Respondents were divided into six age groups. The goal is to see if there is a statistically significant difference between the six groups of respondents in the likelihood of learning the relevant knowledge from other places.

Overall information source by survey respondents (Q13_9)



The breakdown of information source by age (Q19)



The graph on the left shows the percentages of respondents learning from *other* places. In general, **between 85% and 95% of respondents who are from 25 to 65+ years old have not learned about effects of stormwater runoff or practices to improve water quality from other places.** On the contrary, **67%** of respondents who are between *18 and 24* have learned about the relevant knowledge from other places. Only **5%** of respondents who are between *45 and 54* have learned the knowledge from other places.

There is a statistically **significant relationship** (p = .013) between respondents' age and the likelihood to learn from other places. For respondents whose ages are *between 18 and 34,* they are more likely↑ than expected to have learned about the effects of stormwater runoff or practices to improve water quality *from other places.* For those who are *between 45 and 64* and respondents who are *older than 65*, they are less likely↓ than expected to have learned the relevant knowledge *from other places.*

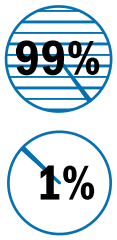
Respondents who are from 18 to 34 years old → **More likely↑** than expected to have learned the relevant knowledge from *other places*.

Respondents who are 45 to 64 years old and those who are older than 65 years old → **Less likely↓** than expected to have learned the relevant knowledge from *other places*.

14. Have you ever visited the following websites?

Respondents were asked to indicate if they have visited **Ripple Effects** and **Dane County Land and Water Resources Dept** websites.

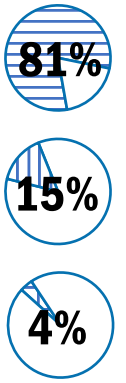
Ripple Effects



99% of the respondents have **not** visited **Ripple Effects** website.

1% of the respondents **not sure** if they have visited **Ripple Effects** website.

Dane County Land and Water Resources Dept



81% of the respondents have **not** visited **DCLWRD** website.

15% of the respondents **not sure** if they have visited **DCLWRD** website.

4% of the respondents **have** visited **DCLWRD** website.

15a. Have you ever seen or heard of any of the following water related campaigns/brands? Please circle any you have seen/heard about. If you haven't heard of any, please circle that option and move to Question 16.

Seventy percent of the respondents indicated that they have **not** heard any of the campaigns/brands, and **less than 20%** of them have heard of any of the four campaigns.

I haven't heard of any of these ✖ ✖ ✖ ✖ ✖ ✖ ✖ ✖ ✖ ✖ ✖ **70%**

Leaf-free Streets for Clean Waters **18%**

WI Salt Wise **16%**

Plant Dane Native Plant Program **9%**

Ripple Effects **1%**

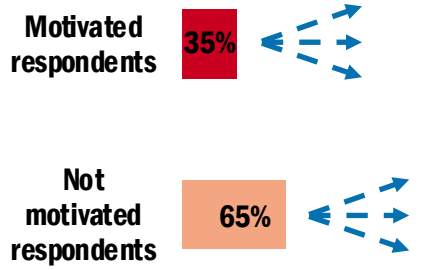
15b. Of the campaigns/brands above that you have heard of, did any motivate you to make a change? If yes, please share a bit about the change you made.

35% of the respondents were motivated to make a change.

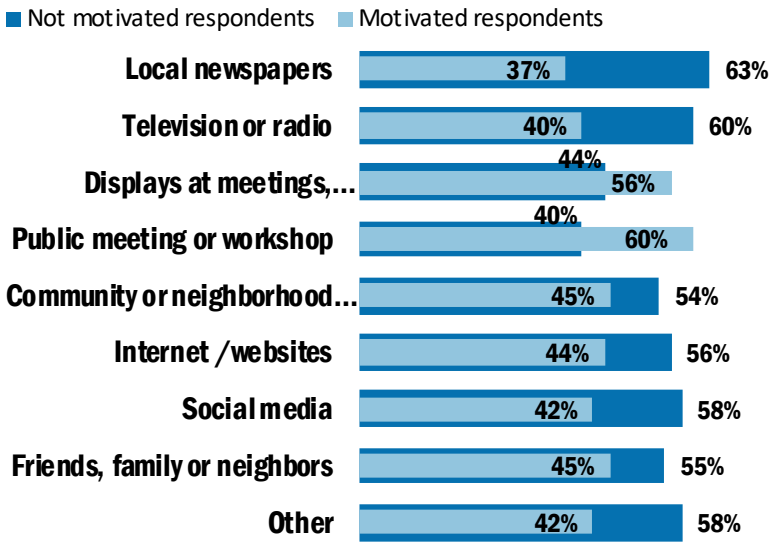
65% of the respondents were not motivated to make a change.

Cross-tabulation: For respondents who were motivated to make a change (Q15b), from which information source did they hear about the campaigns (Q13)?

Overall motivation level by survey respondents (Q15b)



The breakdown of motivation level by information source (Q19)



The graph on the left shows the percentages of respondents who are *motivated to make a change* after hearing about the campaigns. The **35%** of respondents who are motivated identified the *public meeting or workshop*, and *displays at meetings, exhibits, or parks* as the top two information sources.

There is a **statistically significant relationship** ($p < .05$) between respondents' motivations to make a change and information sources. For respondents who are motivated to make a change, they are more likely↑ than expected to have heard of the campaigns from *displays at meetings, exhibits or parks*, *public meeting or workshop*, *community or neighborhood newsletter*, *internet*, and *friends, family or neighbors.*

Respondents who are motivated to make a change.

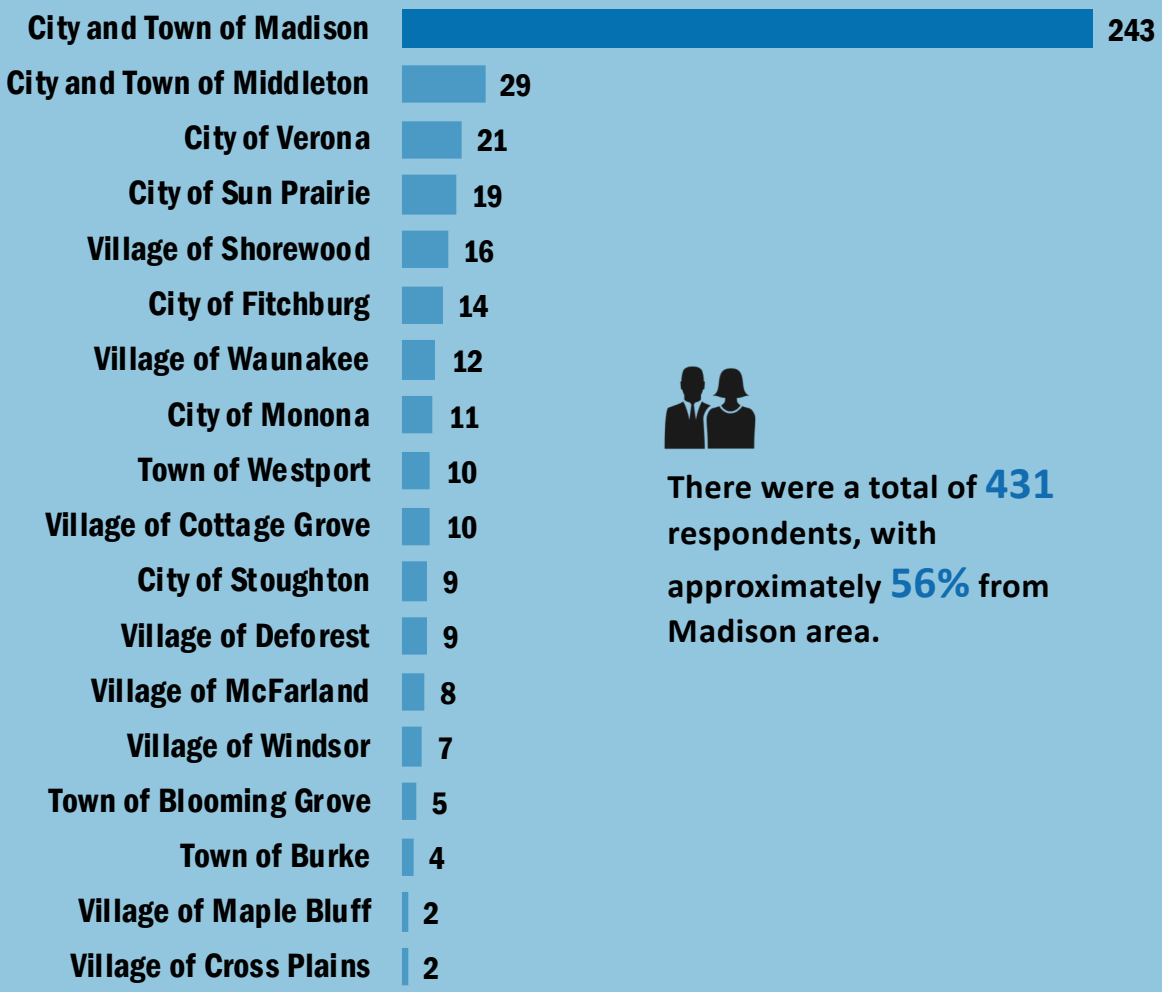
More likely↑ than expected to have heard of the campaigns from *displays at meetings*, *public meeting*, *community newsletter*, *internet*, and *family and friends*.

Information About You and Your Residence

This section contains questions 16 to 24 on the survey. It will introduce the demographic information of the respondents, including locations, lawn/property decision-makings, environmental group membership status, age, gender, the recreational use of water, employment status, annual household income, and education levels. The census data* of Dane County are also presented for some survey items.

This summary is based upon 431 (out of 1500) responses, with a response rate of 29%.

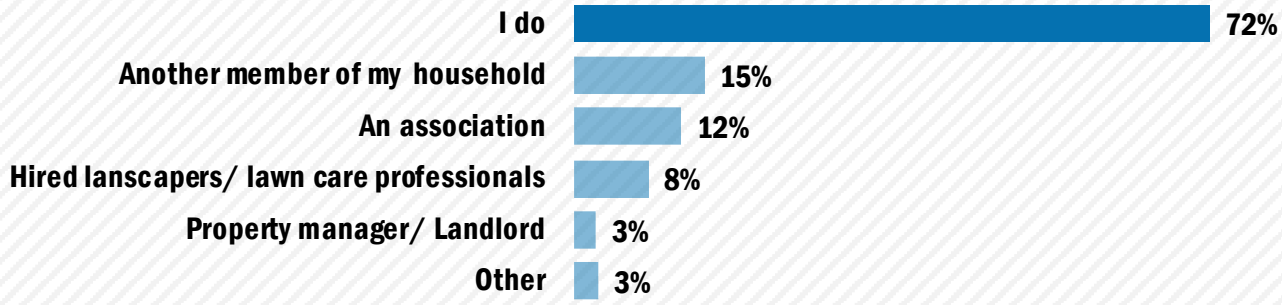
There were a total of 431 respondents, with approximately 56% from Madison area.



***Note** The census data was derived from the U.S. census bureau Dane County 2017 dataset.

16. Who makes decisions about how your lawn / property is maintained? (Select all that apply)

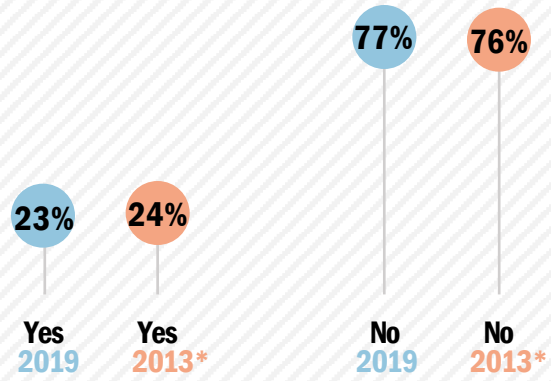
The great majority (72%) of respondents make decisions about how their lawn/property is maintained. This may indicate that most of the survey respondents own their own property.



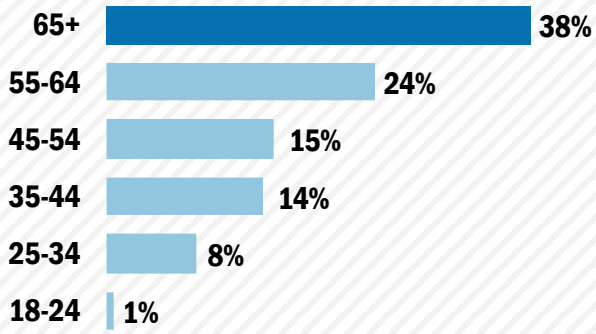
17. Are you currently a member of an environmental, conservation, or watershed organization?

77% of respondents **are not members** in **2019**.

23% of respondents **are members** in **2019**.

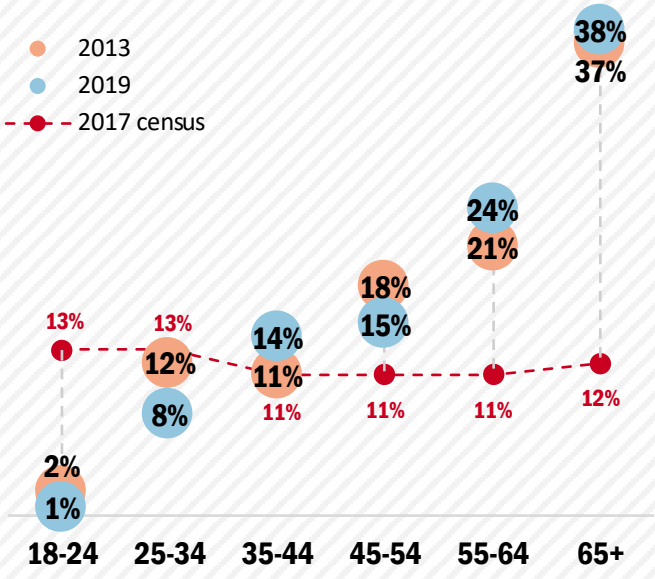


19. What is your age in years?



Survey respondents average age: 57.3

Dane county, WI average age: 35.1



***Note** Only the 2013 demographic data is used in this section, 2014 demographic data was excluded due to its unrepresentativeness.

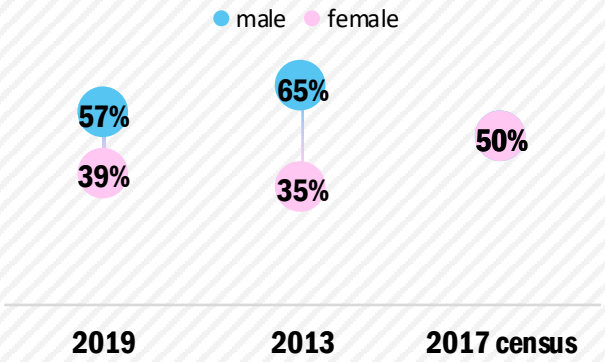
20. What is your gender?

57%(237) males

39%(163) females

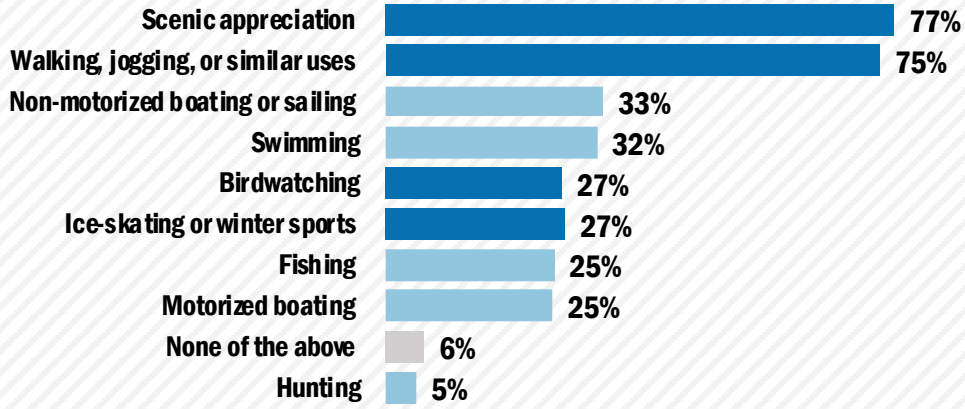
3%(11) prefer not to say

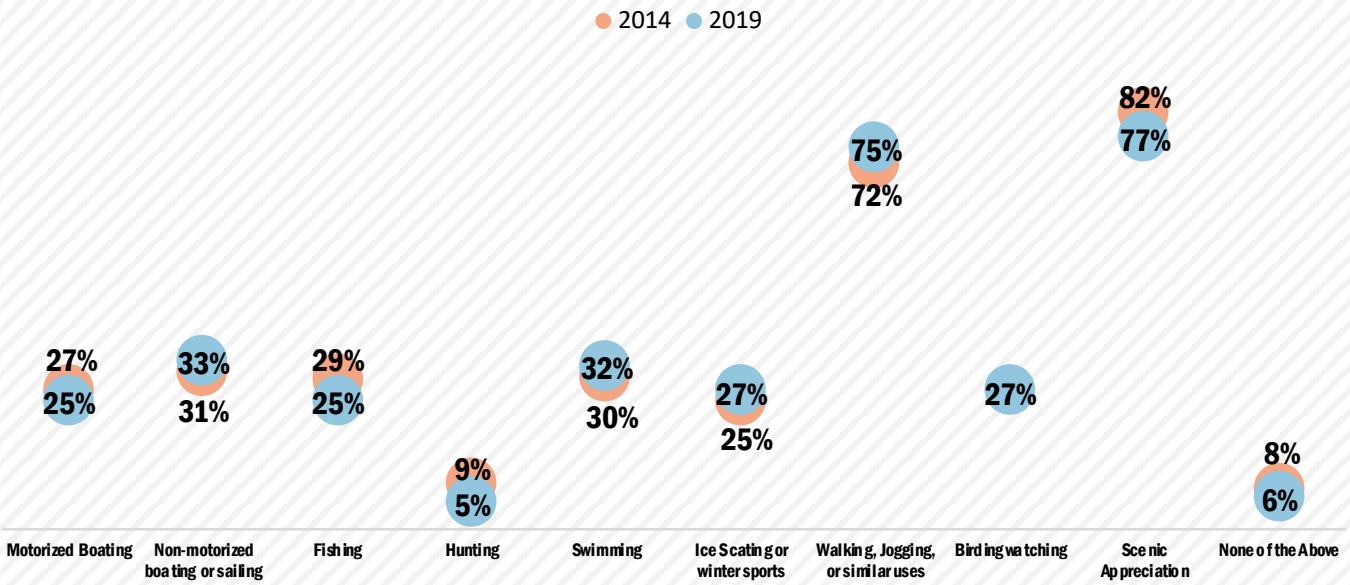
1%(3) prefer to self-describe



21. During the last calendar year, in which of the following ways have you used the water resources in and around your community?

There are **more** respondents who do recreational activities **[out]** of the water than respondents who do recreational activities [in] the water. Six percent of respondents don't do any of the listed activities.



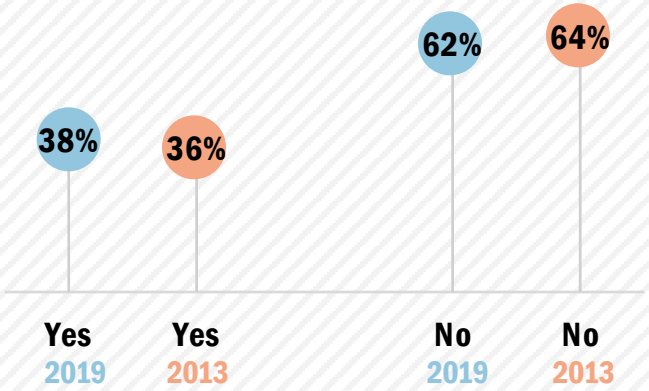


22. Are you retired?

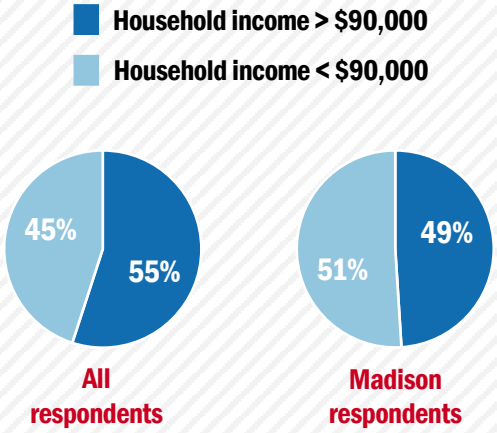
2019 Survey

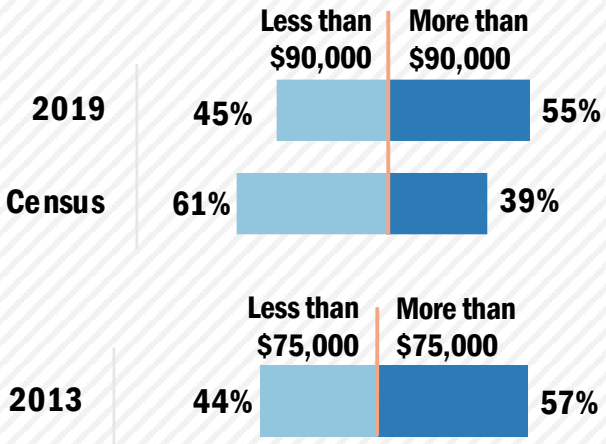
62%(249) not retired

38%(153) retired

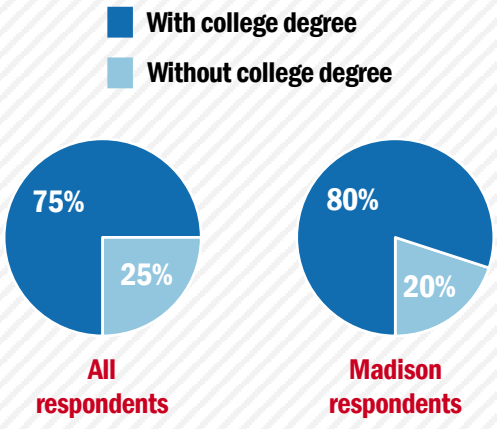


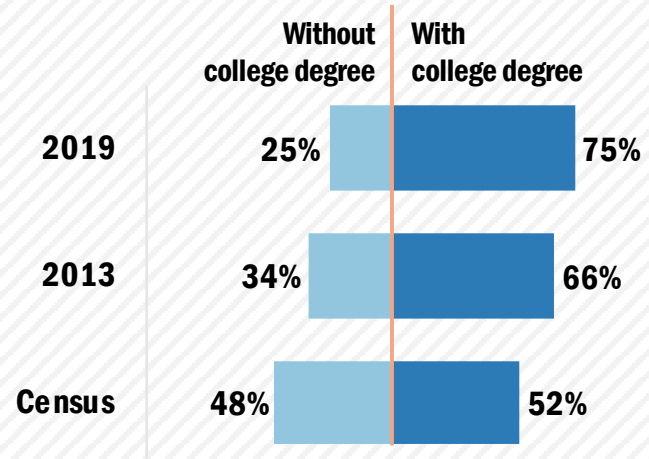
23. Please select the range which best describes your annual household income:





24. What is the highest level of education you have completed?





Appendix A – Qualitative responses from open-ended questions

Q4 When it rains or when snow melts on your property, where do you think the resulting water goes? -Other

- retaining pond
- Directly to lake
- Both Drains and Soaks into Ground
- Lake
- Shorewood hills is uphill from Lake Mendota, some goes there
- Retention pond
- Neighborhood Detention Pond
- lake
- collection/holding pond
- Some in ground, some runs off
- To Street
- Runoff on road into Tiedeman's pond
- Creek
- Sewer or lakes
- Marsh area nearby
- Lake Mendota
- Basement
- Basement dehumidifier or drain
- My well water
- Into lake Monona
- Low areas/ponds marsh
- Into basement
- Six mile creek
- Rain Garden
- Sauk Creek
- Lake Kenosha
- Lake Monona
- pond -> lake Mendota
- Street to Dunn's Marsh to 9-5 pgs. watershed
- River, lake, ocean
- storm pond
- when saturated goes into lake
- Aspiration/ Evaporation
- Retention Pond
- Pond at bottom of hill
- some makes it to my basement
- lakes, waterways
- evaporates
- storm drain and ground
- Storm drain. But all pools in my small yard. Bad drainage.
- My basement

into a storm drain and soaks into the ground
Both "into a storm drain" and "soaks into the ground" This question is improperly set up -- it says choose all that apply, but the responses only allow you to mark one.
I can't select all that apply: storm drain, into the ground, pond down the hill
Note that I could only chose 1 because of the radio buttons. My water soaks into the ground and runoff goes into a storm drain.
Runs into a detention pond
Retention pond behind house
Road/then sewer

Q4 In your opinion, what are the main impacts that stormwater runoff has on your community?

- not sure
- have seen a few flooded streets
- it pollutes the lakes
- nothing
- small amount. Most is captured in soil
- Flooding our local streets even without major storms - normal rainfall) and filling the local marsh.
- Flooding/erosion
- results in algae issues in the local lakes
- In Sun Prairie there are a lot of wet basements, a community wide issue. Heavy soils and poor drainage. Proper stormwater control takes planning and $. $ are always an issue.
- erosion
- pooling and flooding where there are no drainage for the runoff. "pollution"
- ruins our lakes
- Black Earth Creek runs parallel to Main Street in my town and surely much of the street debris ends up in the creek. Many people go fishing in there, and it can't be good for the fish.
- Flooding, move surface contaminants to lakes and streams, Excessive yard fertilizers get flushed to lakes
- Degrades lake quality
- Fouls lake Mendota, causing unsafe swimming conditions (E.coli), more and more frequent algae blooms, flooding (2018)
- If polluted, harms rivers, lakes
- Ground waters
- bugs
- Dirties the lake H20, fertilizer runoff into lake creates phosphorus buildup in the lakes which promotes algae blooms, decreases O2 supply which ultimately causes fish to die
- increased debris, trash, probably chemicals
- leads to pollution of our lakes
- Flooding in some areas
- Increased water pollution - algae blooms
- Algae blooms in lakes, which affects fragile ecosystems in our lakes
- City Growth is outpacing capacity to handle runoff, more ends up in lakes and streams as a result
- lake pollution/sediment load. Some urban flooding issues
- In heavy rains it produces area flooding and river flooding. It carries pollutants (esp. fertilizer) to the lakes/rivers`

- Blue green algae in lakes
- Stormwater runoff directly impacts the health of our lakes and rivers - pollution, algae blooms etc. Improper runoff management also contributes to flooding
- After moving back to Madison after 30+ years in Connecticut, I was surprised by the lack of improvement (or continued problems) with the water quality of Madison's lakes. They are such a unique resource, they should be better protected
- Erosion, pollution
- lakes
- Takes salt, leaves, fertilizer, and dirt with it and it makes its way into our lakes
- Stormwater runoff makes its way to Token Creek and eventually into the lake. Pollutants are carried into the lake
- Increases pollution in our rivers and lakes/ flood damage
- Erosion, transport of invasive riparian species, groundwater contamination through infiltration
- Some impact
- I'm more concerned with farm run off than stormwater runoff from my property/community. We need to do more to control farm run off and clean the water system upstream from our lakes
- Shorewood Hills floods in fall 2018 My spouse helped many lower income people with clothing, food, compensation. / Probably has pesticide/lawncare/ road surface runoff into Lake Mendota
- Carries fertilizer and other nutrients to the nearest stream
- Adds to flow of streams 1) Eutrophication in our lakes 2) Flooding, especially in areas w/ a high degree of impervious pavement
- It affects lakes and rivers adversely
- Flooding? Don't know
- Reduces quality of local streams and lakes
- The amount of nitrogen running into the Madison area lakes has created a cesspool of the watershed. Simply drive to Green lake and see what a watershed looks like that does not have runoff. We need to prevent high levels of nitrogen from getting into the lakes.
- Stormwater runoff, if contaminated, and if it ends up in Lakes, rivers, and streams would have a significant impact on their water quality
- Runs directly into lake Waubesa affecting algae growth
- Algae blooms in local lakes, poor water quality in local lakes
- Main impacts are to lakes, rivers, streams and the wildlife within/around them, affecting the quality and health of the ecosystems which in turn impacts the communities surrounding them
- ultimately poor water quality of the lakes
- Stormwater runoff causes polluted/dirty rivers, streams, and lakes. It causes over growth of algae and reduces oxygen in lakes, which leads to poor water quality for other aquatic life
- Urban flooding and water quality to seven creek and other surface waters
- flooding / algae blooms
- No main impact
- Affects the quality of the lakes
- Lakeshore conditions disgusting
- Fertilizer running into lakes
- Degraded water quality in lakes and streams. Contamination of groundwater impacting wells
- Smelly, weed filled lakes.
- Degrading lake and stream quality
- Idiots who built in flood plains complain about their basements are wrecked. I love on a hill like smart people

- The year it would be flooding. There is not enough retention in the Yahara Lakes watershed. The high nutrient runoff into Monona By is residential and makes the bay weedy and sometimes results in harmful algae
- Algae and pollution in lakes and other waterways
- Flooding
- Flooding
- I live by stark weather creek and Kayak around regularly. Water quality really varies depends on how much rain we get. Too little or too much and the lakes and creek get Nasty
- Makes the lakes smell bad, flood, and have blue-green algae
- We have good settling ponds near our Madison lakes/Lake Wingra
- Algae blooms. Fish kills, toxins from oils/pesticides / High water / Increased lake vegetation
- Heavy rain and flooding in area
- This year it was flooding
- Bluegreen algae / poor h20 quality
- In my community we have a good stormwater drain system
- We live at the bottom of a hill. Most of it keeps running downhill into the drains or lake
- Not sure if stormwater only goes to a holding pond or to a municipal sewage treatment system
- Causes pollution in my lakes and water bodies
- Poor water quality in streams and lakes
- Increase in taxes
- Eventual pollution of lakes - causes algae blooms
- Stormwater runoff floods the forest basin and joining our backyard
- Poor lake Mendota - It gets most of it
- Water doesn't seek into ground. Washes pollutant into storm sewer - salt, leaves, dirt, chemicals, oil. Flooding. Doesn't get into (ground) water table.
- Excess nutrients in runoff
- Improper draining can cause flooding. Pollution in our rivers, streams, lakes. Threat to wildlife
- Debris, leaves, grass clippings, salt goes into lakes
- Weedy lakes, closed beaches, flash flooding
- When Excessive: Flooding of Certain areas/property damage/transportation routes I assume there are effects to natural environment but I don't know what they are
- Algae blooms, poisoning of wildlife/ can't eat caught fish lakes/ streams you can't swim in
- Adds to marsh water and water logged soil areas nearby. Runs off into Lake Waukesha. Water quality in Waukesha compared to Mendota.
- Carries fertilizer from farms and lawns into water system
- A lot: we all love the lakes and use them
- Cost of maintaining good water supply
- Pollutes lakes
- Fertilizers and farm waste/erosion
- Yard waste, chemicals, etc. comes to water sources
- It causes soil erosion and causes flooding which this past year caused very serious problems in the local communities around Madison

- Weeds
- Flooding
- more nutrients in lakes/ higher lake levels
- Blue green algae / closure of beaches / diminished confidence in lake utilization
- polluting our lakes
- Pollutants add to waterways, erosion
- Lake Pollution
- Flooding
- Pollution in Lakes/Rivers / Marine life problems / Reduction in ground water/aquifer replenishment
- Street, house flooding/ damaged crops / wildlife impact
- Street flooding when runoff is severe - sweeps along "stuff" that ordinarily wouldn't get into water supply
- Silting of lake Monona and Mendota / high level of aquatic plants
- it impacts clear clean purity of stark weather creeks, Yahaira River, and the lakes
- N.P.K and sediment flow into streams in watershed and then into lakes / excess nutrients in lakes cause algae blooms and excessive growth of aquatic vegetation / runoff :flashes: into stormwater drains instead of infiltrating and quickly raises lake, stream, river levels / high runoff events increase lake turbidity / bacterial counts rise in lakes, potential health impacts result in beach closings / degraded water quality reduces recreational use of lakes; has a local deleterious economic impact / downstream impacts all the way to the gulf of Mexico
- Washing into waterbodies pesticides, fertilizers, and industrial waste. Un-swimmable, bootable, beachable
- Drains pollutants into bodies of water
- Lake Mendota is suffering. Doing less would actually be more beneficial than doing more. Eliminate fertilizers, pesticides, and chemicals. Show people how to compost leaves and grass clippings. It does not cost more to do less
- Affects the lakes and causes flooding when the current system fails to deal with modern rainfall rates
- Pollutes lake Mendota
- Flooding
- Lake water quality and flooding. Well water quality, health hazards
- Salt and fertilizers and pesticides and organic matter are washed into lake Mendota
- Negative impact on lakes, (beach closures, etc.) flooding
- Algae in lakes
- Well the storm sewers in my neighborhood overflow constantly, flooding our street. City engineering says they're not planning to fix them. They're apparently at the same level as Yahaira and just outflow into the streets
- Pollution of lakes and flooding issues
- Impacts to Badger Mill creek and Sugar River watershed, increasing sediment load and nutrients that might contribute to blue green algae blooms. Decreased health of the streams affects fauna in the stream and birds depending on the fish or insects. I used to see King Fishers along my stretch of Badger Mill Creek, I don't anymore.

- The Village of Shorewood Hills experienced torrential, damaging and dangerous flash flooding from excess stormwater that was flowing above ground on August 20, 2018. While we absolutely value and prioritize measures to improve area lakes and stream water quality, we as a region MUST address the flooding issues
- Flash flooding, filling lakes with excessive nutrients. Beach closures
- Transmits pollution into rivers and lakes
- Water quality, increased incidence of toxic algae blooms / increased weed growth, decreases water flow, unsightly and stinks / litter from streets ends up on the lakeshore - potentially hazardous to wildlife, unsightly
- Salt from sidewalks and road. Agricultural fertilizer and animal wastes
- Flushes pollutants and waste into lake Mendota
- Oils from cars goes with water to storm drain
- Pet waste, leaves, grass clippings, stormwater from roofs
- Ultimately it increases the salinity of surface waters
- As runoff in watershed effects water quality, lakes - both Monona and Mendota are heavily effected. I no longer swim in either.
- Excessive Plant growth is lake flood risk, i.e.: back up in storm drains in basement
- Soil erosion' water contamination
- Not much, our Veridian community has good grading to contain stormwater runoff in retention ponds
- Raw Sewage discharge
- Dirty lakes, streams and groundwater
- Erosion of fields and stream beds, roads. Culverts are too small
- Weed growth in Lake Monona
- Poor H2O quality
- Algae, weeds, fish deaths and resulting odors, loss use beaches - health damage, terrible odor. We are on Condo on Lake Monona. There have been a few days where we can't open our windows or patio doors.
- Too much, too quickly can cause flooding
- Not much at the headwaters of the Yahaira River
- There were several days this past summer that I would have liked to enjoy community lakes, but beaches were closed due to blue green algae
- Weedy Lake
- Probably upgrading sewer systems. Depletion of drinking water quality
- Parking lots do not allow water to soak in and there are not enough retention ponds
- Algae blooms in the Isthmus lakes
- My community being Madison metro area, main impacts are pollution of lakes
- Flooding / Excess nitrogen in water / toxic chemicals in water
- Makes recreational use of waters (lakes, streams, rivers) less accessible
- Stormwater runoff can carry grass clippings / leaves/ fertilizer to storm drains that end up in surface water - Ultimately Lake Mendota
- Trash and chemicals getting into our streams, rivers, and then lakes
- It pollutes our rivers and streams and lakes at a detriment to wildlife, fish (aquatic life), trees etc. and makes it more difficult to produce clean drinking water

- It seems to me that the stormwater runoff carrying pesticides and industrial chemicals has to be one of the biggest issues we face with lakes and water
- I'm not educated on this topic
- Flooding, pollution
- Flooding. Stormwater runoff is changing lake chemistry from salt and nutrients
- Flooding
- Algae blooms in lakes / flooding
- Not sure
- May increase phosphorus levels in lakes
- Damages infrastructure and negatively impacts lake and lake beach quality. My grandsons can no longer freely play or swim at villas beach
- Have people dog to stop shitting on my lawn, my visitors step in poop when neighbors don't pick up after their dogs. Dog poop goes into drain systems on the street
- flooding
- Delivers too many leaves to the lake
- Algae bloom, Lake Mendota
- Some flooding and causing algae in lakes and rivers
- We have lakes that are so bad the beaches are closed for a good part of the summer
- not sure
- it impacts the water quality of our lakes and rivers
- poor lake /river water quality
- Pollutes Dunn's Marsh and 9 springs / algae blooms/eutrophication in local watershed / Aquatic ecosystem disrupted/invertebrates, birds, mammals are harmed (disrupted by invasive like need canary grass) / Groundwater recharge cycle disrupted - runoff leaves area instead of soaking down into ground
- Flooding, erosion, moving pollution around
- During heavy rain, low lying areas o the neighborhood become saturated
- Poor municipal man arguments they allow stormwater basins and marshes to become over grown with weeds and dead organic material
- Goes into lake Monona, goes into local canal/stream
- Reduce tourism
- Don't know
- Algae growth, weed growth, smells/ toxins, not pleasant to view
- Sending pollutants into laws by picking up those pollutants where draining
- Polluting the lakes, rivers and streams; flooding
- Over production of algae the lakes stink, we used to live at villas 30 years ago but I wouldn't stick my toes in the water now
- fertilizers from chemicals lawing to farming fields ends up in the lakes and rivers. Weeds grow at a faster rate catching debris. This in turn adds organic water to lakes and streams. Eutrophication
- flooding
- clean water
- the proximity of lakes to our stormwater system means they can back up quickly after significant rain events like in August of 18. Also stormwater running right off into our lakes is a significant source of pollution

- Algae blooms in lakes and rivers
- Pollutes the lakes rivers making them unsafe and costing the community money to clean. If impacts more than just the water, also polluting the soil which grows food making it unsafe to consume.
- Can contribute to flooding/ increase in lake levels. Washes dirt and contaminants into lakes and streams can increase erosion
- Flood
- Summer of 2018, too much rain. Direct flow into lake and huge grass algae bloom
- The storm runoff is polluting our rivers, lakes, streams which impacts the wild life and drinking water. We need to be more mindful of how we are impacting our mindful of how we are impacting our environment and the effects we are laying on generations to come, what happened when we have wars over fresh water instead of oil? Scary thoughts
- A couple of things in the last 30 years heavy rains damaged yards, several homes had water in their basements
- impacts the local ponds and rivers
- Our family are new resident to these community, so I might not have the best answer for these question, but I have seen my sounding neighbors are pretty good at taking care of their lawn and clean out the leaf before it rain
- pollutes our lakes and rivers
- neighborhood flooding (actually 3rd time our neighbor head flooded in the last 10 years)
- enter taken creak which gather to lake Mendota
- polluting lake Mendota
- I truly don't know. I am sure if it was an extreme problem, people who work for the government agencies would be working on the problem (I would hope !)
- Located street flooding
- Algae Bloom
- Algae in the chain of lakes
- polluting lake Mendota
- Flooded basements and clogged drains
- Poor lake water quality, weeds and carp in the lakes
- Water quality of our lakes and rivers
- Acid rain gets into drinking water; Manure by products get into streams and pollute it and kill fish and things living there; Animals drink it
- lowering the water quality
- Rising lake water levels
- If affects quality of drinking water and quality of lakes and rivers
- Accumulation of geese
- The lakes have been a disgrace my whole lifetime. It is a difficult problem, but is solvable
- construction
- some pollution in creeks, streams, rivers and lake Mendota
- raises risk of flooding like we had in August 2018 in Madison. Burdens municipal water treatment fertility. Raising water operation cost to utility and property owners
- Lakes are important to our city. They are becoming toxic due to run off from farms waste and toxic chemicals used if fields and on yards

- Lake waste
- Salt from snow impacts the …
- I belong to a local paddling club. We paddle on small streams or rivers frequently in southern Wisconsin. I know that Wisconsin farmers are paid to plot crops. So that they are not planted close to stream and river banks. I see flagrant violation of this practice. Corn fields planted up to the rivers stream banks. The erosion is significant and need to be stopped. Paddle down the Pecatonica and see for yourselves.
- recharges streams and likes; can be opening to establish dialog about environment more broadly; pollutes streams and lakes; sign, recant costs to manage
- I don't know?
- polluting lakes and streams
- Lakes are not swimmable and habitat for wildlife is harmed
- Hurts lakes n streams. kills fish, weed growth, algae, etc.
- grass clippings and leaves pollute the lake and add phosphorus which contributes to algae bloom
- Affects water quality in rivers, streams and lakes
- Lake Waukesha going green
- Because I am relatively new to Wisconsin, and live in a downtown area, I feel that I am poorly qualified to comment. I know little about agricultural practices in the county and have not researched this topic.
- pollution of lakes and streams, algae in lakes, and flooding in basements
- I really don't know.
- I don't know. I would think it's everything listed above. So eliminating one won't help without all the others.
- Increasing flooding and affecting on water quality
- erosion and flooding and polluting
- fouls the lakes, removes topsoil
- cloudy lakes, algae bloom, overabundance of lake weeds
- Flooding
- Contributes to poor water quality.
- lake algae bloom/health
- some flooding, leads to pollution of streams
- Pollution to lakes and waterways, algae growth and mucky bottoms
- When rainwater can't absorb into the ground, it goes along the streets and sidewalks and picks up pollutants along the way, this polluted runoff can flow into our rivers and streams.
- Don't know
- Poor water quality in downstream receiving waters
- Depending on the time of year, spring run off or significant summer rains can create a significant issue with salt/pesticide/oils and other potential types of materials/debris as it is too much for treatment or holding ponds to contain. This will and I'm sure does pose a significant risk on the watersheds ecosystem and potential hazards to people that use these places for recreation.
- Potential flooding
- stormwater in our area has the potential for flooding
- Water pollution from contaminants washed into lakes and streams by stormwater.
- Fertilizers and pesticides
- Potential for flooding homes and basement sewage backup
- Pollution-poorer water quality; Flooding-property damage

Q11 Of the actions listed above in Question 10 that you are willing to do but not currently doing, what would motivate you to act? -Other

- it aggravates me that I work on my property and street, but others don't. I care a great deal
- information, I don't know where to get a rain barrel or how to install a rain garden for example
- provide convenient resources, i.e. aerators to check out for an afternoon
- Am disabled, need help to do some actions
- Salt Alternative Available (we do use sand)
- PSAs on Radio/TV
- Tort law change for 10i so I do not get sued for someone falling on my property
- Pay someone to do it for me - no time
- Already have a drainage ditch @ property line
- Private property discounts for services
- Coordinating effort using neighborhoods
- Data showing the action would be effective
- We don't have property room/space for those actions
- Wouldn't be too physical
- RE: salt - a substitute that will ensure safety
- Assistance for installing
- Information to demonstrate composting/mulching at my home is a net improvement over city pickup and mulching
- Involves job training/ed.
- A and B cost / C. Larger amount of leaf cover and lack of knowledge how to manage without raking / M storm drain not visible to me / N. organization by local government
- Aerate, heavy machine makes it difficult need help to do it
- Effectiveness of the action
- I live in a condo
- Very easy to do - I have physical limitations
- Property management or condo board makes decisions, cost is always 1st concern
- Is weeding involved
- No mosquitos
- Reduced
- A dice on rain garden placement
- getting others in our household on board
- someone to came help me install set up
- tam a strong and 35 year member of work unlimited town
- Stop building homes in flood areas
- Village need to PU leaves more often or tell me which else to put them. Fertilizer: never use it.
- Used to do many of the above pollutions
- My spouse getting behind me doing this
- Some willing but no yard space and HOA restrictions. Also want water away from house so can’t keep too much.
- Happy to do it; just need information on exactly what to do. I don't have time to research all this, but if you give us instructions we would follow them.
- Neighborhood group community efforts doing this together
- We already have too much government

Q12 Who, if anyone, would you contact if you noticed a large amount of dirty water (for example with mud, paint or oil) flowing into a storm drain? -I would contact_____

- Township
- Town of Madison Water Coop, Public Works
- whoever I found on the internet that seemed like the appropriate person
- local government
- my city hall of SP
- Middleton Streets/Public Works
- Police
- City of Madison
- Sewer treatment
- Town of Burke
- The Town of Madison
- City of Monona
- Our village administrator
- Village Hall of Shorewood
- Shorewood Village
- City
- City Hall
- local government - city or county
- Madison streets department
- City of Madison Water Utility
- Water Dept/City
- Streets Department
- DNR
- Alder
- City of Madison - would determine dept based on source of contamination
- the city
- public works department
- police department/city works
- Westport town hall
- City streets people
- City of Madison Streets
- Streets Department
- Village
- DNR
- The village of Windsor
- Village of Waunakee
- City of Middleton
- local government
- Village of McFarland Public Works Department
- Streets Department
- local streets department
- City hall

- Town hall
- City of Madison
- Monona Water Utility
- City of Monona
- Madison Stormwater Management
- City Streets Department
- City Department
- City Hall
- Streets Department or Non-ere. PD in Monona
- Streets and sanitation
- Madison Streets Department
- City of Madison
- City Police
- City of Fitchburg
- DNR
- WDNR
- City
- The City of Madison streets
- City of Madison Streets and Recycling
- City Engineering or Water Utility
- Police
- City of Fitchburg
- DNR
- Madison Water utility
- City Streets Department
- City of Madison
- City Civil Engineering
- Village Hall of Shorewood
- City Engineer/Dane Co/DNR
- City
- City of Madison Engineering
- City of Madison
- Street Department
- Monona City Hall
- City Hall
- City of Madison
- City of Madison/Streets Division
- City of Madison
- City street department and health department
- City Hall
- City Streets Division
- City of Madison or Dane County
- Alderwoman Marsha Rommel
- City of Middleton
- City of Sun Prairie
- City Government

- City Hall
- City Hall: follow up with whichever agency they recommend
- Streets and sanitation or building inspection if source was readily identifiable as a construction site
- City Engineering
- Street Department
- City of Madison H20 and streets
- City Street Dept
- City hall for directions of who to call
- MSN public H20 Utility
- City of Madison planning and development
- Alderman
- City Streets Department / Despoil off of Sycamore SR
- Streets department
- City Engineer
- City Council and Mayor of Verona
- Village of Shorewood Hills or City of Madison
- City of Madison
- City of Madison and alderperson Vervoer
- City Engineer or Water Utility
- Local city hall
- Alderman
- WDNR
- Streets Division City of Madison
- City Alder or Friend at city water dept
- Dept of Natural Resources
- Village Administrator or Public Works Crew Chief
- Village Clerk
- Local Government
- Village Streets Department
- Village of Monona H2o utility/sewage
- Police, city manager
- Village Municipality
- Dept of Natural Resources
- Village of McFarland Utility
- DNR/Local police
- Town of pleasant springs
- Village Dept of Public Works
- Waunakee Village
- Village of Waunakee City Hall
- Village Hall
- City Municipal Services
- The Water utility
- Village Hall
- Village administrator
- DNR, Dane Co. Sheriff
- Madison wastewater

- Madison sewer and water or Madison parks department; need education
- Village Public Works
- Dane County Land and Water Resources
- DNR
- Town of Madison
- City of Madison
- Streets Department
- DNR Local Government
- Lake Kegonsa San. Dist.
- City Public Works
- Shorewood Hills Admin
- City of Middleton
- City of Madison Municipal Department
- City or DNR
- Fitchburg City Dept or Streets or Environmental
- Village Office
- village
- city
- DNR
- City administrator or parks and streets department
- City, DNR
- city engineering blog, inspection
- DNR
- Water Dept
- Maple bluff office
- city of Madison
- WNR or DNR
- village
- Madison water utility
- Town of Madison
- google this question
- water Dept
- City Hall to be directed to proper place
- Madison pubic department
- Clean it up
- local officials
- water utility
- city of Madison
- my neighbor
- city of Madison dept
- Street Department
- neighborhood
- Dane Co.
- village office
- DNR of Wisconsin
- City street division
- Municipal office

- Village
- Condo management
- Town Board
- Police, DNR
- Local government, Dane or Madison Public Health
- Village or local government
- DNR
- Municipal office
- Stoughton Street Dept
- 911 non-emergency number
- City water
- Village administrator
- the city streets and sanitation division but I'm not sure if this is the but option, resulting in a quick response
- Dept of public works
- president and board of local association
- Dept of public works
- city of Middleton or whichever municipality issue is located
- city of Fitchburg
- my neighbor
- DNR
- water utility
- city government
- MMSD
- DNR
- City of Madison

Q13 During the last five years, have you learned about effects of stormwater runoff or practices to improve water quality from any of the following? -Other

- University
- my educational background
- Friends of the Lakes
- Friends of Pheasant Brown Couse Mother Nature list coursework
- Church
- Billboards
- Did not live here for 4 of 5 years but used Madison on-line raingarden info when constructing a rain garden in Connecticut
- email
- Master's degree/DNR
- Environmental Groups
- Work Related
- Courses at school
- Library book

- Neighborhood Association
- UW Arboretum
- W Arboretum
- MG & E
- Common Sense
- Own research
- School and 25 year career in environmental consulting and environmental regulatory work
- Betty Lou Cruises
- Clean Water Alliance
- Clean Lakes Alliance
- Lake Tides publication UW-Wire
- Teaching student for class in 9th grade biology
- Professional Conference (WWA)
- Common Sense
- TV University Place
- Clean Wisconsin
- co-workers
- as a municipal employee, now retired
- College courses, seminars at UW-Whitewater
- flooding in our backyard in Aug. 2018 and twice before that
- Clean Lake Alliance
- Cannot select multiples; Local newspapers, websites
- This site does not allow me to check more than one
- tv, radio, internet, social media, friends
- TV, radio, displays, friends
- University Courses
- MMSD efforts in Milwaukee
- Yard signs

Q15b Of the campaigns/brands above that you have heard of, did any motivate you to make a change?

- Ripple Effects, Plant Dane
- Be Salt Wise
- Leaf Free Streets
- n/a
- Be Salt Wise
- Be Salt Wise
- Be Salt Wise
- Leaf Free Streets
- Leaf Free Streets
- Be Salt Wise and Leaf Free Streets
- Leaf Free Streets
- Be Salt Wise and Leaf Free Streets

- Leaf Free Streets
- love your lakes
- Be Salt Wise and Leaf Free Streets
- Be Salt Wise and Leaf Free Streets
- Leaf Free Streets
- Leaf Free Streets
- Plant Dane
- Be Salt Wise
- Plant Dane
- Plant Dane
- Be Salt Wise
- Be Salt Wise
- Leaf Free Streets
- Leaf Free Streets
- Leaf Free Streets
- Leaf Free Streets
- Leaf Free Streets
- Plant Dane
- Leaf Free Streets
- Leaf Free Streets
- Be Salt Wise
- Plant Dane
- Be Salt Wise and Leaf Free Streets
- Be Salt Wise and Leaf Free Streets
- Be Salt Wise
- Be Salt Wise
- Leaf Free Streets
- Leaf Free Streets
- Dane County Land and Water Resources dept
- Leaf Free Streets
- Leaf Free Streets
- Be Salt Wise
- Be Salt Wise
- Be Salt Wise
- Be Salt Wise
- Be Salt Wise
- Leaf Free Streets
- Leaf Free Streets
- Leaf Free Streets
- Be Salt Wise
- Leaf Free Streets
- Leaf Free Streets
- Plant Dane
- Leaf Free Streets\ Be Salt Wise

- Be Salt Wise
- Be Salt Wise
- Plant Dane
- Be salt wise
- Be salt wise
- Leaf-free street
- leaf-free streets

Q15b If yes, please share a bit about the change you made

- use less salt on sidewalks, driveway
- We keep our leaves piled up on the edge of our lawn in the fall as they wait for the leaf collection instead of in the street
- reminds me of actions I would most likely take anyway
- Ask snow removal contractor to use less salt at work
- use less salt and environment protection
- More conscious about salt usage and encouraging/shaming others to do the same. Some local business are out of control with salt!
- Use leaves as mulch in beds
- I use little salt more sand clean up street gutter from leaves
- Manage leaves even better and reduced salt use
- I clean the street in front of homes by me
- Use less salt, keep gutters free from leaves
- don't leaf them helped me be sure our leaf piles stay out of the gutter
- using little amounts of salt and keeping leaves out of street
- Only slat when necessary and compose leaves at home
- I sweep up leaves in our parking lots and dispose of them
- I collect my leaf debris and take it to the recycling center
- I planted a rain garden
- use salt sparingly
- Selected native perennials
- Low cost Native Plants inspired me to plant Natives in my yard
- Rarely use salt
- I use the recommended amount of Salt on my walk
- We Raked
- We clean street leaves and use no salt
- Clean leaves from street and drains at the corner (in most of our block)
- Clean neighbor's leaves from gutter / Gave salt info to property managers
- Not rake all my leaves up onto the curb, leave some in back
- Planted perennials. Increased motivation to compost leaves
- Rain gardens
- I rake to keep leaves out of streets
- I wasn't aware of the need to remove leaves. Until I became a homeowner and saw signs in the neighborhood
- I do encourage neighbors to use less salt and I have urged the village to do so. They have responded by using beet juice

- Planning rain garden near driveway
- Kept leaves out of gutter and use less salt and salt alternative on pavement
- Not using salt on driveway, sidewalk. Keeping leaves out of my street in front of house
- Try to use less, but I have a very steep driveway
- Asking HOA to consider switching from salt to sand for sidewalks
- No salt on driveway
- State site caused us to plant rain gardens
- I live on a tree covered street and now rake the street to get leaves to the terrace when I rake my lawn
- Reroute rain gutters, keep leaves out of street
- Try to keep leaves off/not go in drain
- We put leaves in the street for pickup in Verona. I move mine up on the lawn if rain is forecast. I clean leaves from storm drains in my neighborhood when I walk my dog.
- More mindful about salt application in winter months
- Our condo association has directed our snow removal contractor to limit salt use this winter
- But already following these practices
- Village Using less salt on roads
- Use a lot less salt on driveway/walkways enough to help me to be able to shovel it up
- More routinely clean/remove leaves in front of our house on the street
- Yes, urged our homeowners association to use environmentally friendly products
- I clean leaves from street and storm drains (2) near me
- I work for the DC Hwy Dept, I plow snow and we are working on ways to reduce salt usage
- Chg mix on driveway - snow and sleet
- Keep leaves and Debris out of street
- I pick up my leaves from the street
- Was already knowledgeable about how native plants are good for our water, insects, birds, pollinator
- More conscious about hard surfaces and what is on them
- raking leaves onto curb from street
- sweep leaves from gutters, limit salt use, native plants/ grasses
- Use salt sparingly
- native grasses and butterfly weed/ bash
- I compost, don't use salt much, don't spray the lawn
- I only salt on narrow path across the drive and steps up to the hour for our letter carrier. I also shovel and seep multiple times during snow to keep pavement clean
- I actively remove leaves from the gutter in front of my house of collect trash from streams while kayaking
- More garden, less salt use, much leaves
- less salt used, mainly for ice storms. Put zero leaves in the gutter on road. Also tell neighbors and friends to try to do the same
- leaves be removed by the city
- more aware
- in the works
- salt managing
- Mulch all leaves for gardens
- put less salt down

- My volunteering to remove leaves from road
- I know that the less salt used is better for the environment and I use sand instead.
- leaf-free streets, sends me alerts reminding when to clean up curb leaves
- plants rain garden
- rake into piles for pick up
- salt wise, do not use salt. just the neighborhood sand barrels
- Not raking into street
- Planted native plants from county and garden stores.
- Clean leaves from front street.
- Cleared streets/ our street of leaves

Use the space below for additional comments about water resources or issues in your community.

- I'm a busy mom of two who cares about the environment but doesn't have a lot of extra time to look up information. I feel people are set in their ways and just do what they've always done. My suggestion is to mail out a one page color brochure that doesn't look like junk mail with information about how to be better stewards of the community and county. Thanks
- Compost site HWY Q. Culvert from barnyard into ditch HWY Q
- Need stricter laws and consequences. The Madison lakes are a crime! I will not swim, boat, or step in any of them. They have been polluted beyond repair in my opinion. It's a shame this was not more important than more buildings and highways. Over populated with self-serving people. Too little, too late! I try to do my part... wish more people would care about the earth.
- good luck!
- I live in an area of Lake Monona that because of prevailing winds, lots of lake debris and weeds accumulate. Also it is becoming more shallow over time cousins lots of weed growth, making it very difficult to get my sail boat out and in. Also lots of algae blooms. Would be nice if Dane County could cut weeds more often and clean up floating debris. Or dredge to make it deeper.
- There is a boat that sank off the shore near Olbrich Park that is still there and has not been removed. Concerned it will pollute the waters when ice breaks it up
- I believe that plastic is also a contributing factor with regard to the water that makes its way tin storm drains, lakes, ponds, oceans. Wisconsin has too much along our roadsides, parks, rain gardens, along sidewalks. It is a shame that in general people do not care about the environment. So sad.
- I wish I had more info about how I could help
- There is an urgent need to prepare for the effects of global warming on the frequency of 500 or 1000 year rain events like this year. This survey should have asked about that, in particular the need to lower lake levels and both increase the outflow from the Yahara system (southward) and decrease the inflow from the watershed with preservation and expansion of wetlands etc. and other measures. New construction must be required to include more mitigation of h20 absorption loss ('paving over'). There should be a system wide study effort of all these options (see isthmus coverage) to determine which can be done. Flooding is expensive!

- People need to be encouraged and taught how to compose leaves at home / city should not be pushing leaves into the street to pick them up / publicize brush pick up dates to prevent washing away before pick up / don't replant leave losing trees in the terraces (between sidewalks and streets) incentivize rain gardens instead / neighborhood covenant rules should reflect environmental concerns and initiatives, not just keeping up with the jones's
- The big Cattail marsh off the beltline needs to be sprayed and burned. This will allow more water to use that space. That marsh is filling in and not a good reservoir any more
- I think 'fines' should be given to people who rake the leaves off the curb, into the street. Each time they are fined, the amount should be increased.
- More free or low cost native plants and grasses with info about planting them in suburban yards to reduce stormwater and extra fert run off would be helpful
- Q21: We have left the Madison lakes. Our boat is in Green Lake, Milwaukee, or Florida. The fact that beaches are closed, pets die, and we get sinus infections form Madison cly shows the government and farmers need to change
- Sorry this is late, December is a very busy month for me
- Thanks for your work on the yahara river watershed. I am curious as to why programs like seck the mark are not included. It isn't direct engagement as the survey seems to be focused on but its expenditures from tax dollars would hopefully be engaging to the community
- Thanks, I want to learn more. This was helpful.
- Keep up the fine work with all the flooding, it's imperative to work harder on this. Thank you!
- Thank you UWEX for knowing there is a problem
- Short notice for return time. Hope you get enough responses to make effort worthwhile
- I do not have street drains near my house so I have many blocks of water go by my house which is okay because I know it will be in a drain two blocks away and it will be in strakweather creek soon. I have not seen anything in this survey about pool water. I have talked with DNR fish people and they tell me it kills fish. How many pools do you think that drains into Madison chain of lakes. I know you can't see it but its bad. The blue algae that shuts down our beaches you can see and smell it. I swam in that same crap 70 years ago. I know most of the chemicals in the water have been cleared up but we have a long way to go.
- Please help save our rivers and lakes. Thank you!
- Thank you for doing this. Our lake and water quality are very important and the time for action is now!
- Thank you for your efforts. I have lived on or near Lake Mendota and the Yahara Watershed for over 70 years - my the changes!
- I would like to see the water level of Lake Mendota lowered to prevent another disaster like 2018. And - have all future building in the flood-prone area have sensible preventive Building/landscaping practices enacted. Finally, if the bedroom communities wiled the political clout to keep lake level up. Sue them for damages downstream.
- I live near Lake Wingra and am saddened by the state of the lake. Would love to help!
- I do not want new regulations. I do not want inspectors issuing fines to me for behavior of my tenants who might even be your kids.
- The City of Madison needs to do a better job of cleaning the streets - that sums it all up! The people who litter should be fined -

- I think community education is key, starting with k-12. But as well as laws/regulations to force people and businesses to take action
- I look forward to knowing more. Have only lived in Madison for 18 months. Would love help/financing to install a rain garden/infiltration system and/or rain barrels. Knowledge and cost are a limiting factor, as well as minor physical disability which limits what I can physically do. Spouse has limited interest, but would maintain once in place with my urging and help`
- The Yahara Lakes are so dirty, we're decided not to have a slip on them for 2018. We've boated these lakes for 10+ years and the zebra mussels at picnic point in summer 2018 were the tipping point for us
- The campaigns mentioned in question 15 need to be advertised more
- I am very concerned but not very knowledgeable. Education efforts would be great
- I was distressed to observe the bright green algae last summer on Madison lakes. I am no longer willing to swim in the lakes. Even canoeing is sometimes unpleasant due to algae growth. I fully support public info campaign to help us all do better to prevent more nutrients entering the system
- I frequently utilize city of Middleton ice skating ranks and city of Madison lakes for swimming, stand up paddle boarding, canoeing, and utilizing beach space for plan and picnicking
- I'm glad this survey is being conducted to protect and improve our valuable lakes and waterways - thank you!
- I moved to Madison 29 years ago and enjoyed swimming in the lakes. No longer. Even Kayaking is unpleasant some time. Ag and urban runoff needs to be reduced. Farming is easiest to trck, perhaps fines?
- The WI State Journal series on the Yahara River did more to educate me than anything I have ever read
- 1) Stop planting trees in medians/right of ways where leaves wash into storm drains 2) When mowing medians pick up/catch grass clippings rather than sending them into the street and then into storm drains. Other alternatives to sweep after mowing with street sweepers
- What about using copper sulfate pellets in Lake Waubesa?
- I am not a member of an environmental conservation or watershed agnation but I donate money to them
- My home backs up to protected land. The street water drains into this area which ends up being garbage, neighborhood kid toys, and junk. I try to maintain the area in back of my home but walking along the bike path the garbage is getting worse. It's not being maintained
- Every year there should be an event for everyone to swim in lake Mendota or Monona at the same time. Then, make a statement as to how clean or not clean the lake was, compile the results and track them each year for 25 years. Many don't go in these lakes because they are 'yuck'!!
- Our condo association is inclined to overuse fertilizers and insecticides. This has been a bone of contention. The assn. is an elected voluntary and unpaid residents. Deforest has fortunately experienced low levels of flooding in 2018.
- I have land that abuts Starkweather Creek. I would love help/resources to build rain garden, etc.

- Some of our neighbors put all their leaves in the street - blocking sewer drains, if one was to volunteer to clear the drains where would the leaves/debris be relocated
- Thank you for this. We would be grateful for some practical and attainable steps to better steward the land around us that feels like a losing battle
- I live in the arboretum. Runoff comes from beltline, car lots, and parking lots. we have open drainage, a berm, and flood more than we should.
- I see major overuse of highway and sidewalk and bike trail salt and preshow treatment. Expectations seem to have risen that roads should quickly be cleared instead of having travel plans attend to adjust to weather conditions
- As a person that is 68 years old, I always use sand for sidewalks, but I might use salt on ice melt because the city of Madison puts fines on me if snow and ice is not removed in 24 hours
- Since we're a community of lakes, having clean lakes that everyone can enjoy without worrying about health consequences to the environment or people is very important. This should be one of the top priorities for the city of Madison.
- I recall when all the lakes were clean and beautiful. Not any longer!
- I would like to see (or know about if now happening) the widespread use of permeable pavers/alternatives to hard surface pavement
- I live in a high rise without a lawn
- We raised our family on these lakes swimming, boating, fishing all the time. Now we don't do any of it as algae, garage etc. all bad smelly! Worst eat fish out of the lake. Keep holing these improved.
- I live on lake Monona, my farm in Richland Center is on a trout stream and my cabin is on an island outside of Minocqua. I was born and raised in WI. Clean air and water are what makes us unique. If I was gov. I would pay farmers to add 10ft of looter to each field that butts up to a water source. Dane country is in a tough spot because it wants to grow but erecty Costco in a wel land seems shert wighted. I'm retired young and willing to help. 6084388751 Tim Nicholson
- Something is late. I hope you can still use the feedback. The ever growing issue with our lakes and streams is very concerning
- Future survey might add a question or two about size and location of property. What is reasonable or likely to be implemented on one's property, and what is considered more reasonable to seek to address collectively/ externally probably is different on large suburban lots and tiny urban lots
- Live along Madison resident, grew up[by waver park, My family had a…
- I am happy to have participated in this survey and look forward to seeing strides toward protecting our waters.
- Get the world out boot using salt less and better communication on the "leaf-free streets for clean water" program
- We experienced wever flooding due to bad stormwater management in August, losing our basement and two cars. I hope they connect Shorewood hills to the main stormwater live on University soon
- Online form doesn't allow multiple selection on questions marked "please select all that apply"
- That need to happen two main thins to impose and Madison lake watershed: 1. An effective information campaign to teach the public about the problem of non-point source pollution. 2. strong legistration
- should be more control on Dane county lakes for motorized boating and sports; we haves so much ice and snow in Dane country , how do we protect people if salt or other means not used v.s. issues with stormwater?

- Additional thoughts: the focus on this survey seems to focus on Madison/ Dane county home owner arounds. Although important, things that individual and home owners as a group can do are small compared to the effect that farms and industry have to over watershed. There needs to be a conserted focus on Dane county farm to: 1. abide by agreements and laws are enforcement and heavy fines for violation. There needs to be strong government regulator regulates against the trend for hug pig, chicken and cow corporate farming enterprise. Don't fool yourselves and don't place the ones of watershed pollution on the homeowner regulate corporate farms. Fine small farmers for violations. I grew up in Madison swimming in our lakes. I was taught in elementary school that we needed our swamps, gronland wetlands to filter runoff. Its been developed for homes and business where was responsible government been to prevent this. Let's bring responsible government back to correct the ills that have been degraded our lakes and streams. The city supervisor of Fitchburg was elected on a campaign promise to preserve a large section of land bordering the abortion. Once elected he sold out to the developers. This is crime at the governmental level

Appendix B – Quantitative responses summary

Your Views on Local Lakes, Rivers & Streams

Dear Dane County Resident,

This survey is being conducted by the University of Wisconsin-Extension on behalf of the Madison Area Municipal Stormwater Partnership, which includes 20 area municipalities, Dane County, and UW-Madison (see map below). We are seeking people's perceptions of water quality in area lakes, rivers, and streams as well as what concerns they may have. Your insights as a local resident are particularly important to us. We would greatly appreciate your participation in this survey to help us learn how we might work together to best protect these water resources. This is your chance to be heard. Results will help inform programs for protecting and improving water resources in Dane County.

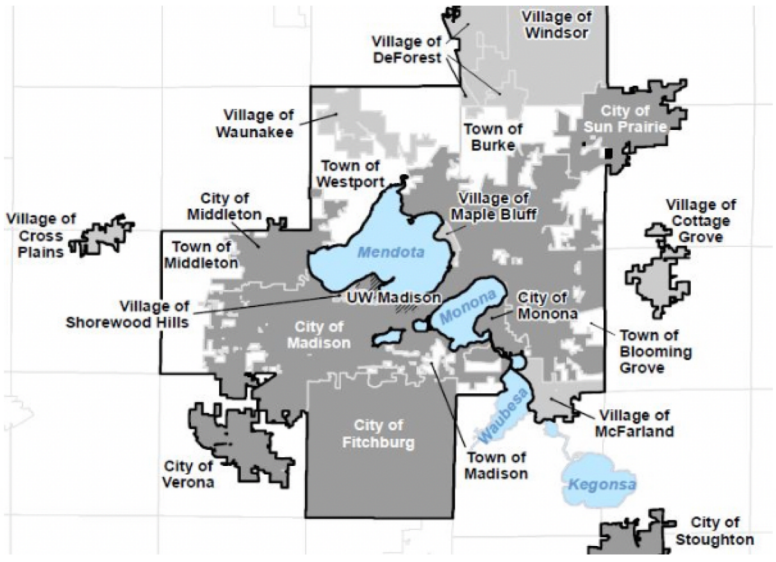
We ask that this survey be completed by the person in your home **who makes most of the yard or lawncare decisions, and who is at least 18 years old**. The survey should take approximately 20 minutes to complete. Please complete the survey and return it in the enclosed stamped envelope by **November 30th, 2018**.

Your voluntary participation in this survey is very important to ensure that we understand your thoughts and concerns about Dane County's lakes, rivers, and streams. If you have any questions about the survey, please contact Samuel Pratsch at UW-Extension at (608)265-3473 or samuel.pratsch@ces.uwex.edu. Thank you in advance for your help!

Sincerely,

Samuel Pratsch, PhD

UW Extension
University of Wisconsin-Extension



Please answer questions by filling in the circle that best matches your response and provide any information requested. Don't worry about providing the "right" answer – the purpose of this survey is to gather perceptions of water resources, water quality issues and practices for managing stormwater runoff. **Stormwater runoff** is rain or melted snow that does not soak into the ground, but rather "runs off" hard surfaces like rooftops, driveways, lawns etc. Thanks for your help!

Your Perceptions of Local Water Resources

1. **Do you live in a watershed?** 49% Yes 18% No 33% Don't know

2. **In general, how would you rate the water quality of the lakes, rivers, and streams located in Dane County?**

	Very Poor	Poor	Good	Very Good	Don't Know
Lakes	11%	54%	29%	2%	4%
Rivers and Streams	4%	31%	48%	7%	9%

3. **The items below are sources of water pollution. In your opinion, how much do each of the items contribute to pollution in lakes, rivers, and streams in and around your community?**

	Not at all	A little	A moderate amount	A lot	Don't know
a. Discharges from sewage treatment plants	15%	38%	18%	9%	20%
b. Discharges from industry	4%	27%	31%	21%	17%
c. Pet waste	10%	53%	19%	8%	9%
d. Manure from farm animals	2%	10%	32%	50%	6%
e. Salt applied to roads/sidewalks etc. in winter	0%	12%	42%	43%	3%
f. Stormwater runoff* from streets & highways	0%	12%	37%	46%	5%
g. Stormwater runoff* from residential rooftops & driveways	4%	27%	39%	24%	6%
h. Stormwater runoff* from non-residential rooftops & parking lots	2%	19%	37%	35%	7%
i. Grass clippings on sidewalks and streets	6%	42%	34%	12%	5%
j. Leaves on streets	4%	29%	41%	23%	4%
k. Soil erosion from construction sites	2%	37%	36%	14%	11%
l. Soil erosion from farm fields	1%	22%	36%	32%	8%
m. Lawn/urban fertilizers and pesticides	0%	17%	36%	43%	3%
n. Agricultural fertilizers and pesticides	1%	7%	27%	60%	5%
o. Improper disposal of hazardous household waste	5%	36%	26%	19%	14%

***Stormwater runoff** is rain or melted snow that does not soak into the ground, but rather "runs off" surfaces like rooftops, driveways, lawns etc.

4. **When it rains or when snow melts on your property, where do you think the resulting water goes? (Please select all that apply)**

I'm not sure	Into a storm drain	Into a ditch	It soaks into the ground	Other (specify)
2%	71%	14%	62%	11%

5. Where does stormwater runoff go once it leaves your neighborhood? (Please select all that apply)

I'm not sure	To a creek, stream, river or lake	To a municipal sewage treatment system	To a holding pond	To a field or infiltration basin	Other (specify) _____
17%	65%	19%	20%	12%	2%

6. In your opinion, what are the main impacts that stormwater runoff has on your community?

Actions, Concerns, and Efforts

7. Which of the following statements best describes your level of awareness about current efforts your local government is involved with to improve water quality in your community?

9% I am not aware of any current efforts.

49% I think activities are taking place, but I don't know very much about them.

38% I am somewhat familiar with current efforts.

4% I am very knowledgeable about current efforts.

8. Your local government is actively working to improve the quality of local rivers, streams and lakes by reducing pollutants in stormwater runoff, and would like to know whether or not you support this investment in water quality.

74% I support these efforts and would like us to be doing more, even if that costs more

25% I support these efforts at the current expenditure level

1%. I would like my community to spend less on these efforts

0%. I would like my community to stop investing in these efforts

9. In your opinion, how effective can the following efforts be for improving the water quality of lakes, rivers and streams in and around your community?

	Not Effective	Somewhat Effective	Effective	Very Effective	Don't Know
a. Street sweeping	4%	40%	33%	12%	11%
b. Installing rain gardens	3%	32%	35%	16%	14%
c. Removing street leaves before it rains	4%	23%	41%	24%	8%
d. Developing infiltration facilities where stormwater can soak into the ground	1%	14%	46%	28%	11%
e. Enforcing erosion & stormwater ordinances	1%	15%	42%	34%	8%
f. Restoring wetlands	1%	4%	26%	63%	6%
g. Public education on practices to reduce the amount and/or improve the quality of stormwater runoff	2%	23%	39%	32%	4%
h. Reducing salt usage for melting snow and ice	1%	18%	46%	29%	5%
i. Developing buffers along waterways & shorelands	1%	11%	38%	36%	14%

10. Which of the following actions would you be willing to do regularly to reduce pollution to area lakes, rivers and streams? Or, are you already doing any of these actions?

	Not willing	Somewhat willing	Very willing	Already do this	Not Applicable
a. Conduct soil tests to determine your lawn's needs before applying fertilizers	8%	30%	30%	9%	23%
b. Aerate your lawn to help water soak into the ground	5%	24%	36%	24%	11%
c. Incorporate native plants into landscaping to help water soak into the ground	4%	18%	38%	34%	6%
d. Apply chemical fertilizers to lawn twice a year or less	7%	9%	18%	50%	16%
e. Apply weed-killers to lawn twice a year or less	6%	10%	19%	52%	14%
f. Manage leaves in your yard by composting or mulching	7%	14%	14%	58%	7%
g. Remove leaves from the street in front of your home before it rains	7%	18%	22%	40%	14%
h. Leave grass clippings on your lawn after mowing	2%	4%	11%	77%	6%
i. Direct gutter downspouts to lawn/natural area instead of your driveway	1%	6%	11%	75%	6%
j. Install a rain barrel to collect rain from your downspouts	16%	28%	30%	15%	11%
k. Install a rain garden to collect rainwater from your downspouts	19%	30%	28%	10%	12%
l. Stop using salt to melt snow and ice at your residence	16%	31%	14%	34%	5%
m. Report spills into storm drains	3%	15%	58%	9%	15%
n. Adopt a storm drain near your home- commit to keep it clear of debris and snow when prompted.	16%	28%	33%	11%	12%
o. Clean up and dispose of your pet's waste	1%	2%	5%	51%	40%

11. Of the actions listed above in Question 10 that you are <u>willing to do</u> but not currently doing, what would <u>motivate you to act</u>? (Please select all that apply)

63% Belief that you are helping to protect or improve local waters

19% Request from neighbors or friends

51% Information on how specific actions can protect or improve local waters

29% Trainings / workshops

26% Request from your local government

32% Laws /regulations requiring action

34% Observing multiple neighbors or friends taking action

33% Grants or incentives

43% Reminders / prompts alerting you only when it's a critical time to take action

40% The action is low or no cost

9% Other (please specify) _____

4% None of the above

Information Sources

12. Who, if anyone, would you contact if you noticed a large amount of dirty water (for example with mud, paint or oil) flowing into a storm drain?

5% I most likely wouldn't contact anyone

43% I wouldn't know who to contact

51% I would contact _____

13. During the last five years, have you learned about effects of stormwater runoff or practices to improve water quality from any of the following? (Check all that apply)

48%	Local newspapers	29%	Internet /websites
45%	Television or radio	11%	Social media (Facebook, Twitter etc.)
15%	Displays at meetings, exhibits or parks	25%	Friends, family or neighbors
7%	Public meeting or workshop	10%	Other (Please specify) _____
32%	Community or neighborhood newsletter	12%	None of the above

14. Have you ever visited the following websites?

	Yes	No	Not Sure
Ripple Effects www.ripple-effects.com	1%	99%	0%
Dane County Land and Water Resources Dept. www.lwrd.countyofdane.com	4%	81%	15%

15. Have you ever seen or heard of any of the following water related campaigns/brands? Please circle any you have seen/heard about. If you haven't heard of any, please circle that option and move to Question 16.

WI Salt Wise 16%

Leaf-free Streets for Clean Waters 18%

Plant Dane Native Plant Program 9%

Ripple Effects 1%

I haven't heard of any of these 70%

15b. Of the campaigns/brands above that you have heard of, did any motivate you to make a change? If yes, please share a bit about the change you made.

35% Yes (Please specify) _____
65% No

Information About You and Your Residence

These questions are included to compare the total group participating in this survey with the general population of the communities involved. Responses are voluntary and will remain confidential.

16. Who makes decisions about how your lawn /property is maintained? (Select all that apply)

72%	I do	8%	Hired landscapers / lawn care professionals
15%	Another member of my household	12%	An association
3%	Property manager / Landlord	3%	Other: (Please specify)_____

17. Are you currently a member of an environmental, conservation, or watershed organization?

23% Yes 77% No

18. What is your zip code? _____

19. What is your age in years? _____ Average 57.3 years old_____

20. What is your gender?

57% Male
39% Female
1% Prefer to self-describe _____
3% Prefer not to say

21. During the last calendar year, in which of the following ways have you used the water resources in and around your community? (Please select all that apply)

25% Motorized boating
33% Non-motorized boating or sailing
25% Fishing
5% Hunting
32% Swimming
27% Ice-skating or winter sports
75% Walking, jogging, or similar uses
27% Birdwatching
77% Scenic appreciation
6% None of the above

22. Are you retired? 38% Yes 62% No

23. Please select the range which best describes your annual household income:

3% Less than $25,000
7% $25,000-$39,999
13% $40,000-$59,999
21% $60,000-$89,999
22% $90,000-$119,999
33% $120,000 and over

24. What is the highest level of education you have completed?

0% Some school
4% High school degree / GED
14% Some college or vocational training
6% 2-year associates degree
35% 4-year college degree
40% Graduate/professional degree

Thank you for your time and assistance!

Please return this survey in the stamped return envelope provided by November 30th, 2018. Use the space below for additional comments about water resources or issues in your community.