
Clear Creek Watershed Social Assessment: Urban Survey

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Executive Summary

Background & Methods

The Clear Creek Watershed Social Assessment was funded by the East Central Iowa Council of Governments as part of the Iowa Watershed Approach for Urban and Rural Resilience, through a grant from the U.S. Department of Housing & Urban Development. The primary goal of the Clear Creek Watershed Community Assessment was to better understand general attitudes and awareness about water quality in the Clear Creek Watershed (Iowa & Johnson counties, IA). The Clear Creek Watershed Coalition will integrate the results from the Community Assessment into an Education & Outreach Plan that will seek to build support for watershed improvement projects and best management practices.

The results presented in this report represent one aspect of the two-part Clear Creek Watershed Social Assessment and complement the information gathered in the survey of agricultural landowners and operators in Johnson and Iowa Counties. This summary provides the key findings from a survey of Johnson County, IA residents focused on perceptions of and attitudes toward water quality in the Clear Creek Watershed. The main objectives of the survey were to examine people's views, knowledge, and attitudes regarding water quality, their attitudes towards water protection practices, and for a subset of respondents, their experiences with flooding in their current residence. Results for the subsection of flood related questions will be analyzed separately and are not included in this report.

A random sample of 1,500 addresses were selected and adult residents (18 years of age or older) who reside in towns within the Clear Creek watershed boundaries were invited to participate in the study. A self-administered mail-back survey design was used to collect information from the sample. We received 399 usable questionnaires for an overall adjusted response rate of 27%

Key Findings

- **Views on water quality:** In ratings of a variety of potential issues that might be concerns, perceptions of poor quality of drinking water and poor quality of water in lakes, rivers, and creeks were two of the top three problems identified by respondents, with approximately one-third of the sample indicating that these were moderate or severe problems in their area. Six-in-ten respondents (60%) rated their home drinking water as fair or poor, 35% rated it as good, and 5% rated it as excellent. With regard to waterway quality, lakes were seen as the bodies of water with the highest quality water while rivers were viewed as the waterways with the lowest water quality.
- **Perceived water quality problems:** When asked about specific problems with their local lakes, rivers, and creeks, respondents identified flooding, polluted swimming/wading areas, and excessive aquatic plants or algae as the main problems. Approximately one-quarter of respondents classified each as a moderate or severe problem in their area. Several activities and behaviors were identified as perceived threats to water quality, including the use of fertilizers/pesticides on lawns (46%), the excessive use of fertilizers/herbicides/pesticides for crops (40%), and new housing and commercial development (37%).
- **Knowledge of water quality issues:** Approximately one-third of respondents (34%) indicated that they were not at all knowledgeable about water quality, half reported that they were slightly knowledgeable, 15% said that they were moderately knowledgeable, and only 2%

identified themselves as being very knowledgeable. Although half of the respondents indicated that they could not define a watershed very well or at all, when presented with four possible definitions, seven out of ten (71%) chose the correct answer (that a watershed refers to an area of land that drains to a common body of water).

- **Information:** Regarding water quality messages, approximately half of the respondents (49%) indicated that they would be moderately or very interested in learning more about local water quality issues. Most respondents preferred to receive information through the mail (57%), the Internet (42%), or newspapers (39%) and only 6% of all respondents said that they preferred not to receive information on this particular topic.
- **Water quality practices:** While two-thirds of respondents (67%) indicated that they knew where they could properly dispose of hazardous household waste in their community, one-third (33%) reported that they did not know where to do so. In addition, the majority of dog owners (81%) reported that they disposed of pet waste with their regular garbage. When asked about the efforts they or a member of their household made to preserve or improve water quality in the past three years, individuals reported reducing their use of water for yard care (43%), reducing their use of pesticides, fertilizers, or other chemicals (33%), and changing the way their yard is landscaped (17%).
- **Lawn care practices:** Eight in ten respondents (80%) agreed or strongly agreed that the way their lawn is cared for can influence water quality in local streams. Most respondents said that they would be willing to change their lawn care practices to improve water quality (72% agreed or strongly agreed with this statement). Practices currently used by over half of the respondents included keeping grass clippings out of roads and ditches (87%), using mulching lawn mowers (75%), and aerating/adding compost to their lawn (55%). The most infrequent practices were having a rain garden (5%) and having permeable pavers (12%). These two practices were also the least well known by non-users, with over four in ten respondents indicating that they did not know what rain gardens or permeable pavers were (45% and 42%, respectively). In contrast, the practices with which non-users were more familiar and interested in trying included having a rain barrel (39%), using organic fertilizers (36%), and aerating/adding compost to their lawn (35%).
- **Attitudes toward water quality improvements:** Six in ten respondents (61%) indicated that more should be done to protect and improve the creeks in their area. Nearly three-quarters (72%) agreed that the quality of life in their community depends on good water quality in local streams, rivers, and lakes. A plurality of respondents (44%) agreed or strongly agreed that they would be willing to pay more to improve water quality. However, almost one-quarter of respondents (23%) opposed paying more for water improvement.

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Background & Methods

The goal of the Clear Creek Watershed Community Social Assessment was to understand general attitudes about and awareness of water quality in the Clear Creek watershed (Iowa & Johnson counties, IA). This assessment is part of a broader Comprehensive Watershed Management Plan process that is currently underway in the Clear Creek watershed with funding from the State of Iowa and support from the seven jurisdictions and the Soil & Water Conservation Districts in Iowa and Johnson counties that comprise the Clear Creek Watershed Coalition (CCWC).

The results presented in this report represent one component of the two-part Clear Creek Watershed Community Social Assessment and complement the information gathered in the survey of agricultural landowners and operators in Johnson and Iowa Counties. The CCWC will utilize the results from both parts of the Community Assessment to inform their Education & Outreach Plan aimed at building support for watershed improvement projects and best management practices.

The survey of urban residents in Johnson County assessed baseline data on watershed awareness levels, attitudes about the watershed, personal sources of information, knowledge levels, and willingness to engage in watershed improvement activities. A random sample of 1,500 addresses were selected and adult residents (18 years of age or older) who reside in towns within the Clear Creek watershed boundaries were invited to participate in the study. A self-administered mail-back data collection method was used to collect information from the sample.

Participants received up to four mailings:

- 1) an advance letter from the Center for Social and Behavioral Research (sent September 29, 2017);
- 2) an initial mailing containing a prepaid incentive (\$2), a paper questionnaire, and a prepaid return envelope (sent October 10);
- 3) a reminder/thank you postcard (sent October 16); and
- 4) a final mailing with a paper questionnaire and prepaid return envelope sent on October 27 to those who had not yet responded.

To mitigate potential respondent burden and possible depression of response rates, this study employed a split-half design, with half the sample (n=750) receiving an 8-page questionnaire and half (n=750) receiving a 12-page questionnaire that included an additional section of flood-specific questions (see Appendices 1 and 2).

We received 399 usable questionnaires: 212 completed 8-page questionnaires and 187 completed 12-page questionnaires for adjusted response rates of 28.3% and 25.1%, respectively and an overall adjusted response rate of 26.7% (RR3, AAPOR Standard Definitions, 2016¹).

Percentages in figures are rounded to the nearest whole number, therefore percentage totals will range from 99% to 101%.

¹ American Association for Public Opinion Research (2016). *Standard definitions: final dispositions of case codes and outcome rates for surveys (9th ed.)*. Author: Ann Arbor, MI.

Results

Respondent Characteristics

Personal characteristics

Table 1 shows the percentages of all demographic variables. As can be seen, 61% of respondents were female and 39% were male. The mean age of respondents was 47 years old ($SD = 17.65$), with reported ages ranging from 21 to 90.

Approximately two-thirds of respondents had a college degree (66%), 24% had some college or a vocational or technical diploma, and 8% reported high school as their highest level of education.

The majority of respondents were employed or self-employed (69%). The remainder were retired (22%), students (6%), stay-at-home parents/homemakers (2%), seeking employment (1%), or disabled (1%).

Approximately four of ten respondents lived in a city of 25,000 or more people (44%) and a similar proportion lived in a larger town of 5,000 to less than 25,000 people (41%).

Most respondents reported that, at the time of the interview, there were one or two adults living in their household (32% and 59%, respectively). Approximately six of ten respondents (63%) reported no youth living in their household while those who did live with a youth indicated that there were one or two (15% and 17%, respectively) in the household.

Regarding income, around one-quarter of respondents reported that their annual household income fell between \$50,000 and \$74,999. Approximately one-third indicated that their household income was lower than \$50,000 (37%) and the other third indicated that it was higher than \$75,000 (38%).

In terms of race, 90% of respondents identified themselves as white, 5% as Asian and 3% as Black. When asked about their ethnicity, 2% of respondents indicated being Hispanic, Latino, or of Spanish origin.

Table 1. Respondent characteristics

| Characteristics | % |
|---|----------|
| Sex | |
| Male | 39 |
| Female | 61 |
| Education | |
| Some high school or less | 2 |
| High school diploma/GED | 8 |
| Vocational or technical diploma | 6 |
| Some college | 18 |
| B.A., B.S., or equivalent | 37 |
| Graduate Degree Master's, Ph.D., M.D., etc | 29 |
| Employment status | |
| Employed/self-employed full-time | 63 |
| Employed/self-employed part-time | 6 |
| Seeking employment | 1 |
| Stay-at-home parent/homemaker | 2 |
| Retired | 22 |
| Student | 6 |
| Disabled, not working | 1 |
| Residential status | |
| Farm | 1 |
| Rural setting, not a farm | 1 |
| Rural subdivision outside of city limits | 2 |
| Small town of less than 5,000 people | 11 |
| Larger town of 5,000 to less than 25,000 people | 41 |
| City of 25,000 or more people | 44 |
| Household Income | |
| Less than \$25,000 | 14 |
| \$25,000 to less than \$50,000 | 23 |
| \$50,000 to less than \$75,000 | 24 |
| \$75,000 to less than \$150,000 | 29 |
| \$150,000 or more | 9 |
| Ethnicity | |
| Hispanic/Latino/Spanish origin | 2 |
| Race | |
| White | 90 |
| Black or African American | 3 |
| Asian | 5 |
| Native Hawaiian or Other Pacific Islander | 1 |
| American Indian or Alaska Native | 1 |

Characteristics related to where they live

Most of the respondents (64%) have lived in Johnson County for more than ten years, while 22% have lived in the county for five years or less. On average, respondents have lived at their current address for 9 years ($SD = 10.7$), with a minimum of zero and a maximum of 62 years. As indicated in Figure 1, the majority of them owned their current house (72%) and slightly over one-quarter (28%) rented the place where they lived.

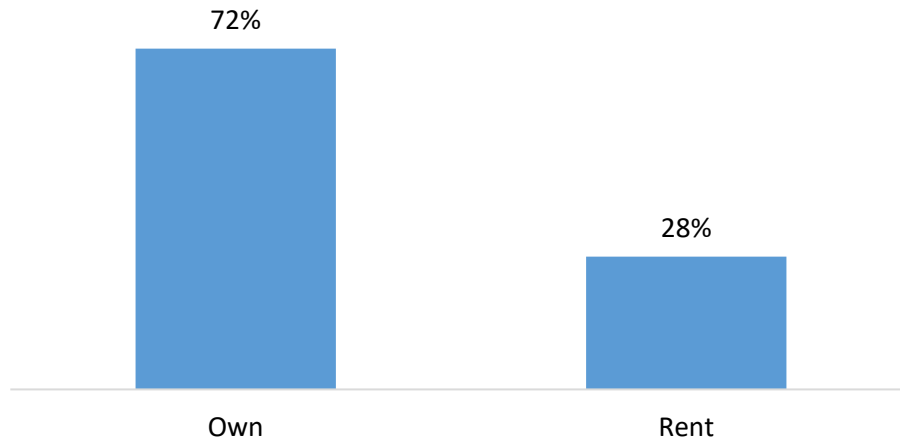


Figure 1. Property ownership of respondents

While 12% of respondents indicated that the property at which they lived touched the banks of a creek, stream, river, or wetland, the remainder (88%) reported that their property did not touch waterways (Figure 2).

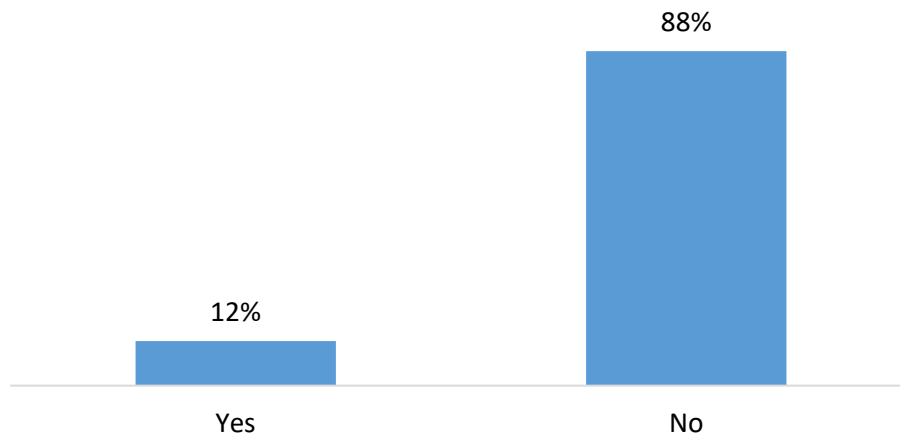


Figure 2. Respondents live on bank of waterway

Quality of drinking water

Respondents were asked to report their level of concern about a variety of issues that might face their area. Topics ranged from jobs to crime with three specific environmental issues included in the list related to water quality and air pollution. As can be seen in Figure 3, the poor quality of drinking water was one of the top three problems identified by respondents, with approximately one-third (31%) indicating that this was a moderate or a severe problem in their area. The other two issues identified as most problematic were the poor quality of water in lakes, rivers, and creeks and the deteriorating condition of roads and bridges. In both cases, approximately one-third of respondents reported that these were moderate or severe problems in their area (34% and 35%, respectively).

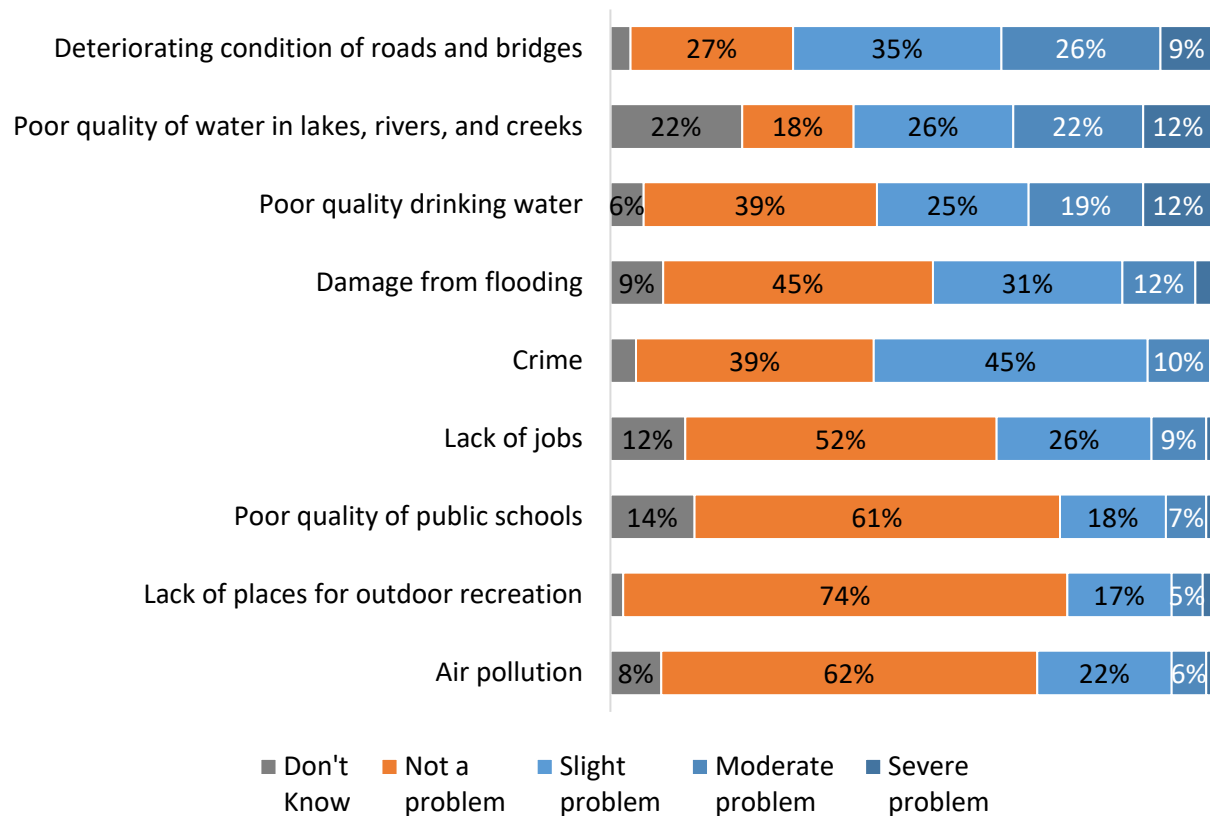


Figure 3. Severity of issues facing Johnson County

When asked specifically to rate the quality of their home unfiltered drinking water, six out of ten respondents (60%) reported that the quality was poor or fair, 35% indicated that it was good, and 5% rated it as excellent (Figure 4).

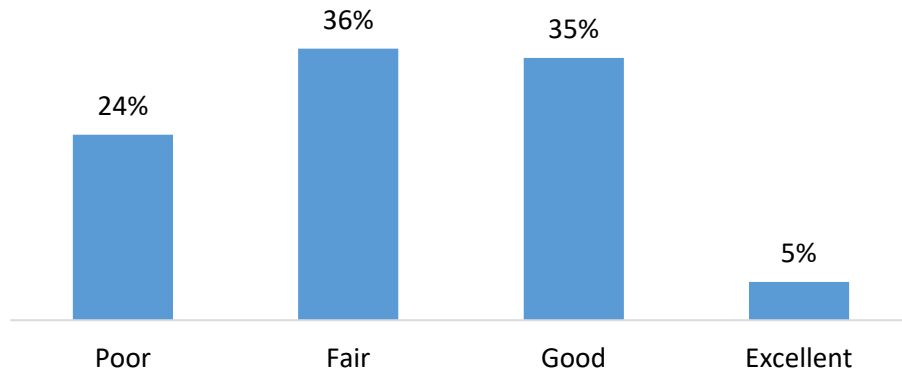


Figure 4. Perceptions of drinking water quality in Iowa

In general, respondents saw themselves as being more concerned about the safety of the tap water than were other members in their community. While 42% of respondents indicated that they were moderately or extremely concerned about this issue, only 29% indicated that other people in their community were similarly concerned (Figure 5).

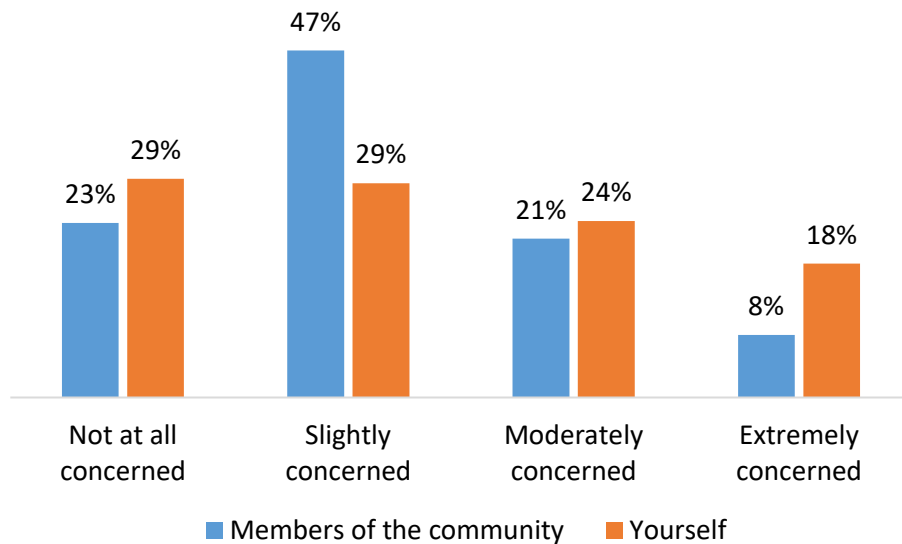


Figure 5. Concern over safety of tap water

Quality of water in lakes, rivers, and creeks

In addition to asking about the quality of drinking water, respondents were asked about the quality of water in nearby waterways and about the frequency with which they visited lakes, rivers, and creeks in their area. As indicated in Figure 6, respondents reported visiting local waterways with different frequencies. The waterway reportedly visited most within the last 12 months was Kent Park Lake, with 52% of respondents reporting having visited the lake a few times or more. In contrast, Rhine Creek was

the waterway visited the least, with only 4% of respondents having visited the creek within the last 12 months. Clear Creek was in between, with 35% of respondents indicating that they had visited the creek a few times or more in the previous year.

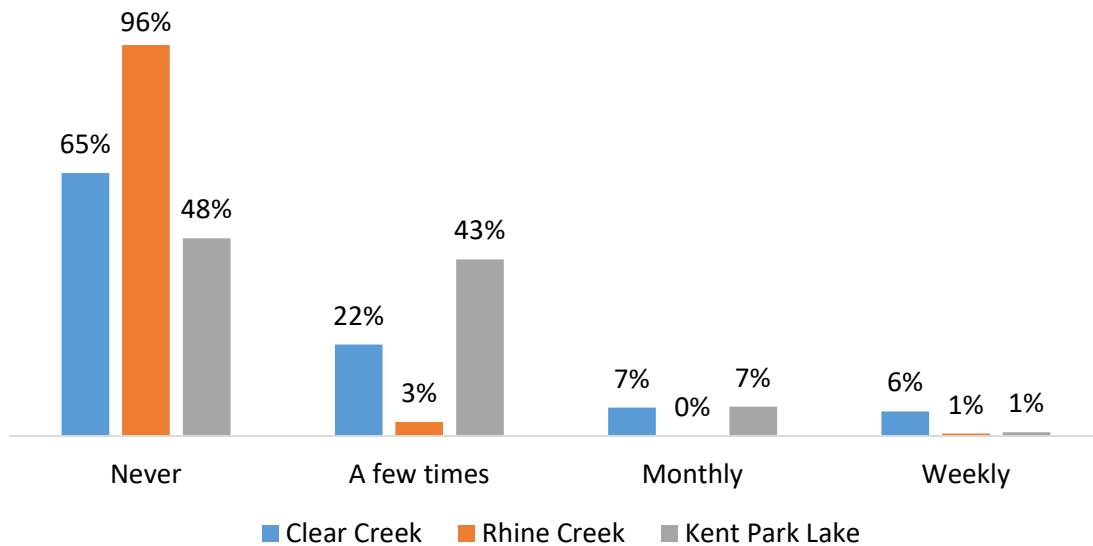


Figure 6. Visitation to Clear Creek, Rhine Creek, and Kent Park during the last year

Concerning water quality in waterways, lakes were seen as the waterways with the best water quality, with 39% of respondents indicating that the quality was good or excellent and 15% reporting that it was poor (Figure 7). On the other hand, rivers were considered the waterways with the lowest water quality, with slightly over one-quarter of respondents (28%) indicating that the quality of the water was good and none stating that it was excellent. In addition, one-quarter of respondents (25%) reported that the water quality in rivers in their area was poor.

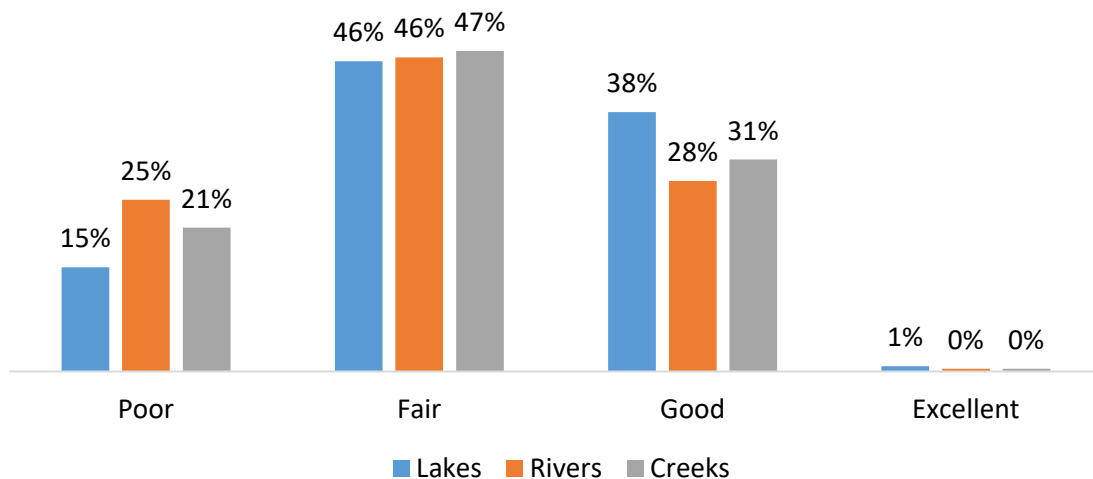


Figure 7. Perceived water quality in lakes, rivers, and creeks

To further explore attitudes toward water quality, respondents were asked to rate the quality of the water for different activities. Swimming/wading and eating fish caught in the water were the activities for which water quality was rated lowest. Over half of the respondents (54%) considered that water quality was poor or fair for swimming/wading and four out of ten (40%) indicated the same for eating fish caught in local waters (Figure 8). On the positive side, water quality was considered best for scenic beauty and wildlife habitat with a large percentage of respondents stating that the quality of water was good or excellent for these activities (67% and 45%, respectively).

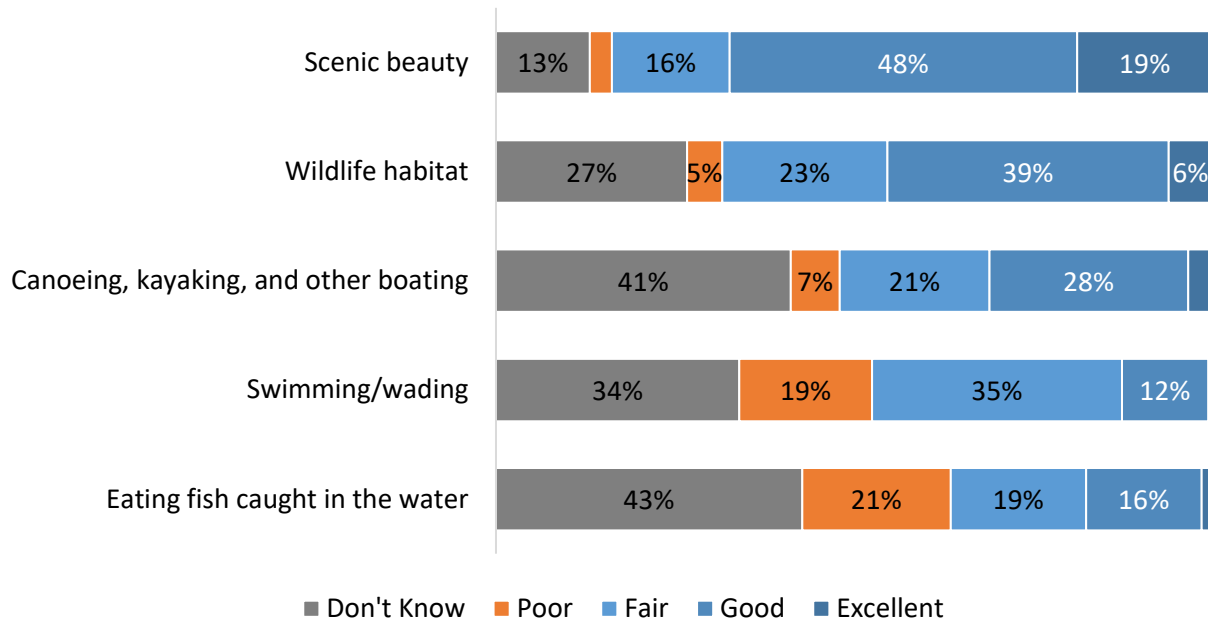


Figure 8. Perceptions of activity-specific water quality

When asked about specific problems for their local lakes, rivers, and creeks, respondents identified flooding, polluted swimming/wading areas, and excessive aquatic plants or algae as the main problems with approximately one-quarter of respondents classifying them as moderate or severe problems in their area (Figure 9). Other issues considered problematic (severe or moderate problem) by more than 15% of respondents included reduced opportunities for water recreation (18%), odor coming from waterways (17%), and reduced beauty of waterways (15%).

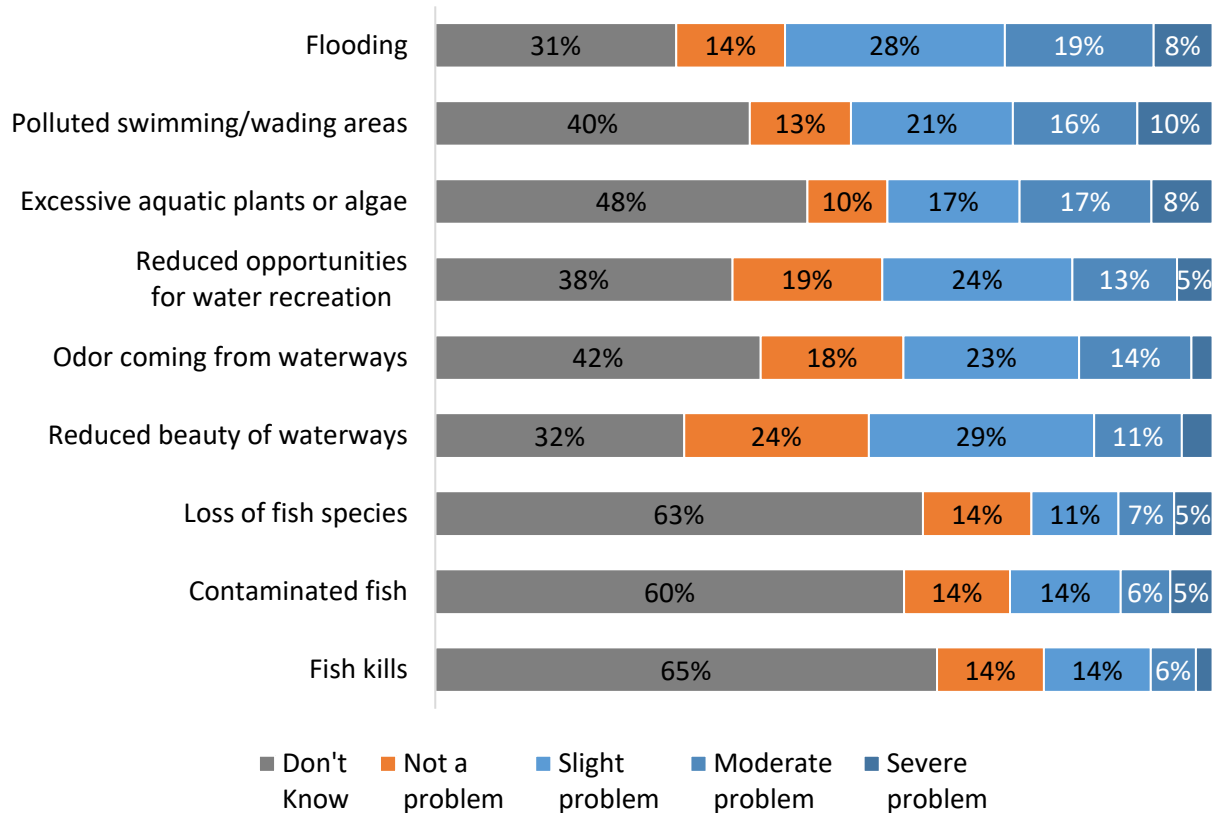


Figure 9. Perceived problems with local waterways

Knowledge of water quality issues

Respondents were asked several questions to identify their level of knowledge of water quality issues. Slightly over half of the respondents indicated that they could not define “aquifer” or “watershed” if asked to explain them to another person (52% and 51%, respectively) (Figure 10). In contrast, nearly two-thirds of respondents said that they could define somewhat well or very well “surface water” and “groundwater” (64% and 67%, respectively).

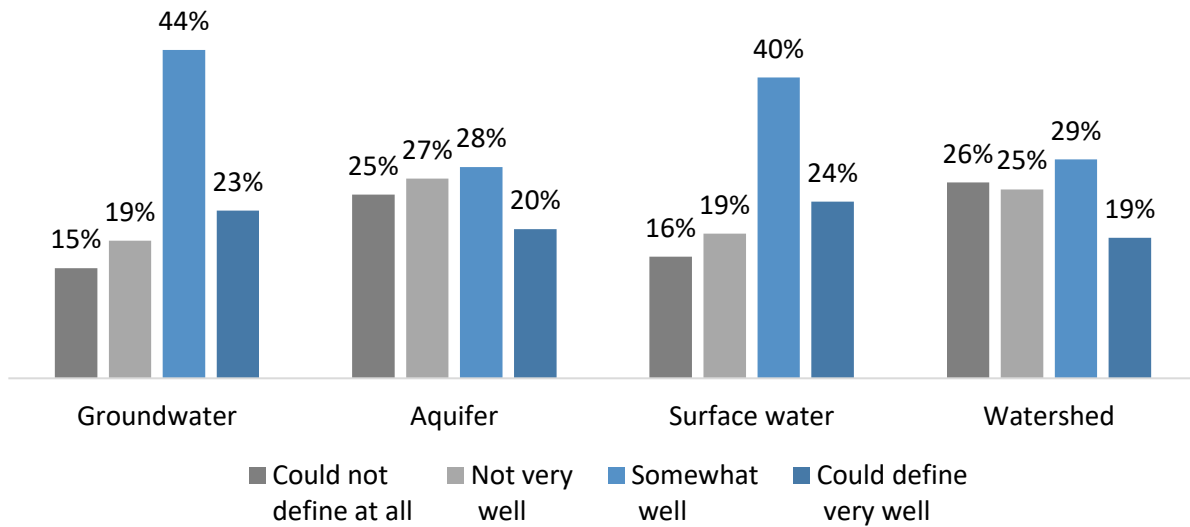


Figure 10. Perceived ability to define hydrologic terms

Although half of the respondents indicated that they could not define a watershed very well or at all, when presented with four definitions, seven out of ten (71%) correctly identified that a watershed refers to “an area of land that drains to a common body of water.” However, 16% mistakenly thought that watershed referred to “a basin to hold extra water to prevent flooding,” 8% selected “a structure that stores water,” and 5% believed it referred to an underground water supply.

In terms of knowledge about water quality issues, one-third of respondents (34%) indicated that they were not at all knowledgeable, half (50%) reported that they were slightly knowledgeable, and 15% said that they were moderately knowledgeable. Only 2% identified themselves as being very knowledgeable regarding water quality issues (Figure 11).

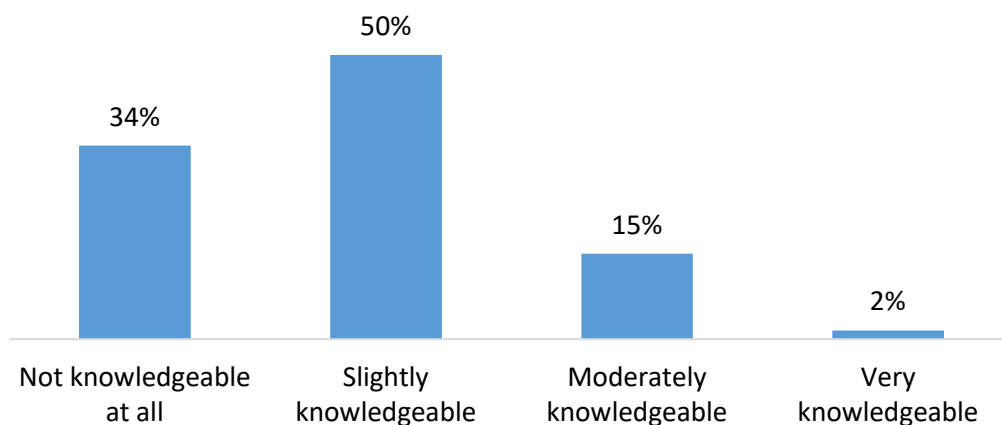


Figure 11. Self-reported level of knowledge regarding water quality issues

Respondents were presented with a number of activities and situations and asked to rate the extent to which they have been problematic for their local waterways (Figure 12). For each item, a plurality of respondents indicated that they did not know whether the activities and situations have been a

problem, with percentages ranging from 33% to 60%, depending on the specific items. The situations identified as moderate or severe problems by the most number of respondents included the use of fertilizers/pesticides on lawns (46%), the excessive use of fertilizers/herbicides/pesticides for crops (40%), and the new housing and commercial development (37%).

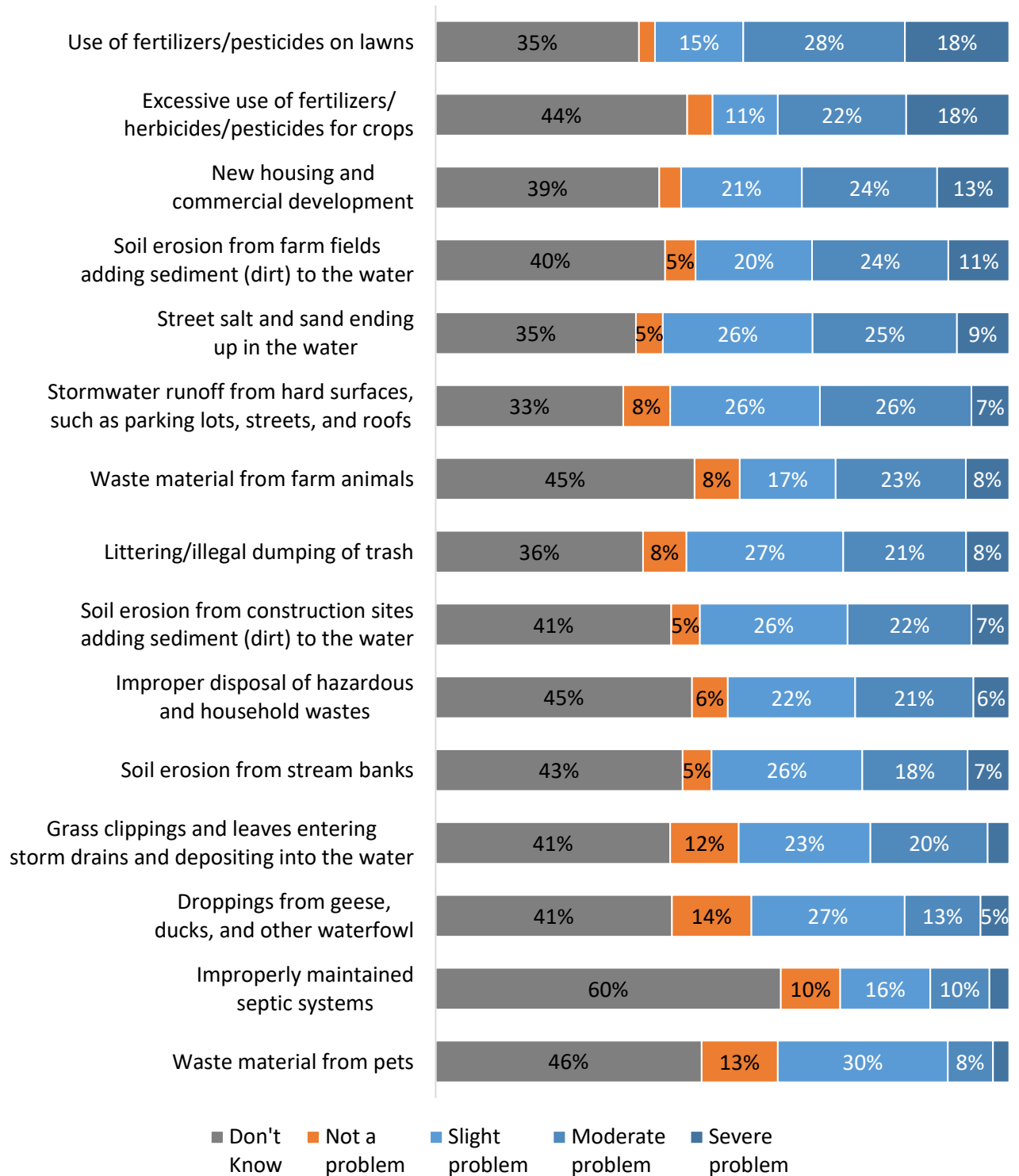


Figure 12. Contributions to problems for local waterways

Regarding water quality messages, approximately half of the respondents (49%) indicated that they would be moderately or very interested in learning more about water quality issues facing their area. Most respondents preferred to receive information through the mail (57%), the Internet (42%), or the newspapers (39%), and only 6% of all respondents said that they preferred not to receive information on this particular topic (Figure 13).

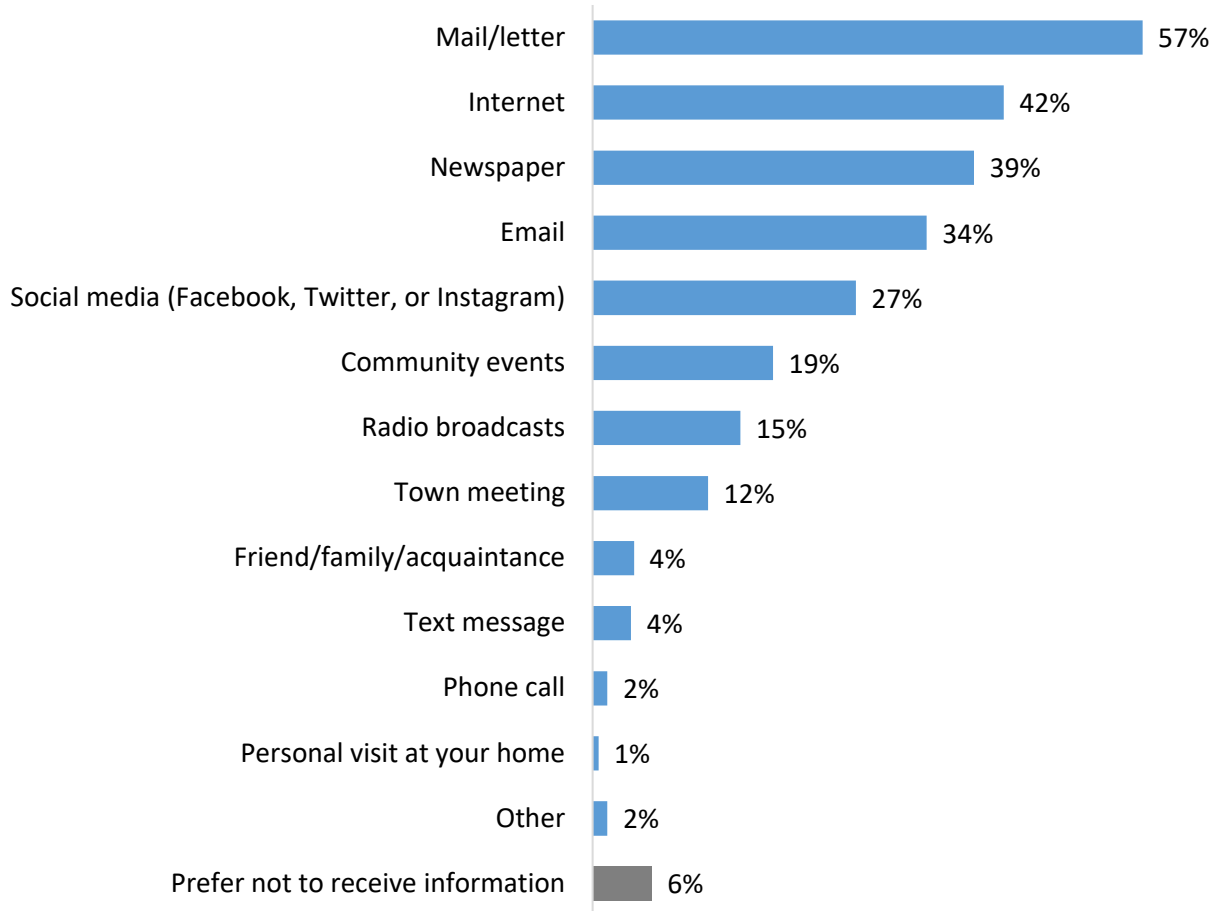


Figure 13. Preferred sources of information

Water quality and lawn care practices

Respondents were asked about the individual and community efforts made to preserve or improve water quality in the past three years. The actions reported by the most number of individuals were that they reduced their use of water for yard care (43%), reduced their use of pesticides, fertilizers, or other chemicals (33%), and changed the way their yard is landscaped (17%) (Figure 14).

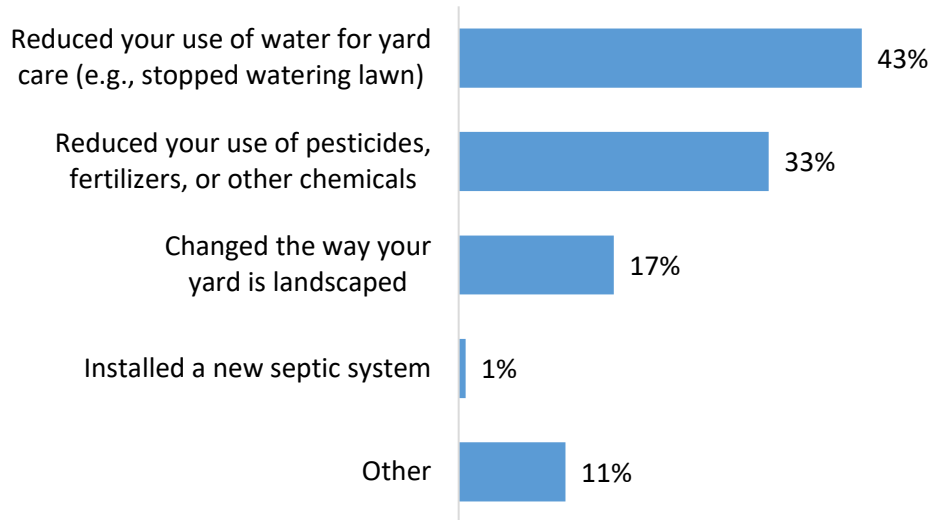


Figure 14. Efforts made to preserve or improve water quality

To further explore beneficial water quality practices, respondents were asked about their waste management practices. Approximately one-third of respondents (35%) indicated that they had a dog or lived with someone who had a dog. The majority of those with pets in the household (81%) reported disposing of pet waste with their regular garbage (Figure 15).

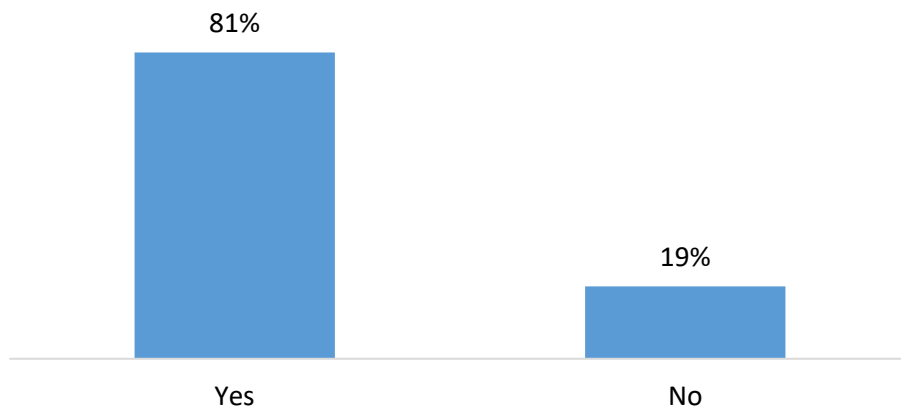


Figure 15. Disposal of pet waste with regular garbage

While two-thirds of respondents (67%) indicated that they knew where they could properly dispose of hazardous household waste in their community, one-third (33%) pointed out that they did not know (Figure 16).

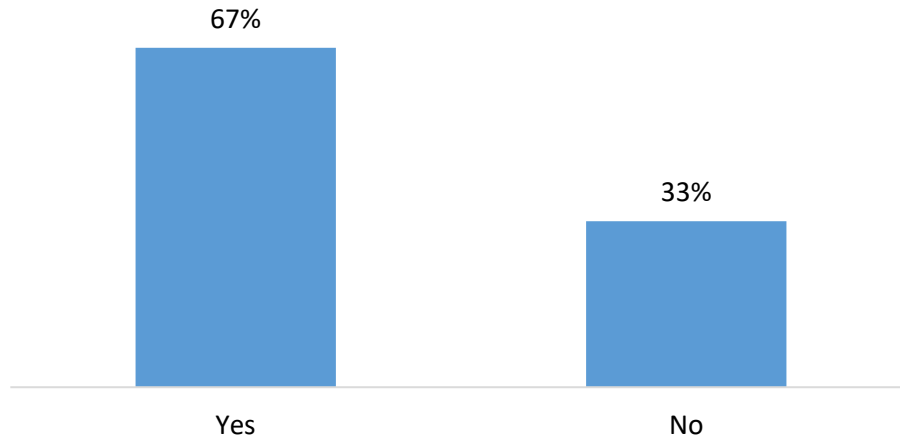


Figure 16. Knowledge of disposal of hazardous waste

Approximately two-thirds of respondents (66%) indicated that they or another member of their household are responsible for making decisions about lawn care on the property where they live. Those who responded affirmatively were asked about their lawn care activities (Figure 17). Practices used by the majority of the respondents included keeping grass clippings out of roads and ditches (87%), using mulching lawn mowers (75%), and aerating/adding compost to their lawn (55%). Practices adopted by more than one-quarter of the respondents also included allowing vegetation to grow unmowed along streams (41%) and using organic fertilizers (30%). The most infrequent practices were having a rain garden (5%) and having permeable pavers (12%). These two practices were not only the most infrequent but also the least well known by non-users, with over four out of ten respondents indicating that they did know what rain gardens and permeable pavers were (45% and 42%, respectively). In contrast, the practices with which non-users were more familiar and interested in trying included having a rain barrel (39%), using organic fertilizers (36%), and aerating/adding compost to their lawn (35%).

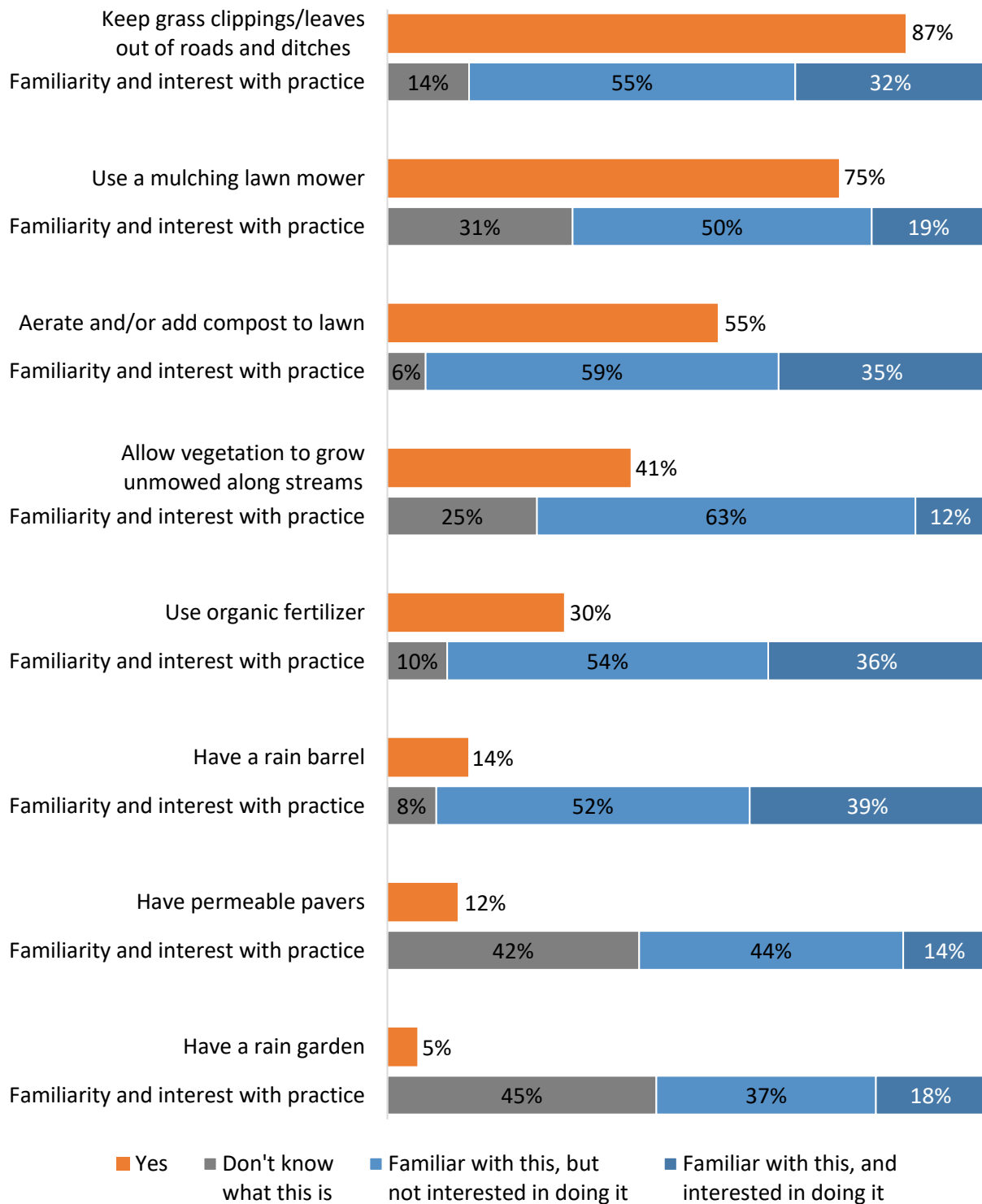


Figure 17. Lawn care practices

Attitudes toward water quality improvements

Respondents were asked the degree to which they disagreed or agreed with a list of fifteen statements regarding a variety of issues related to water quality and lawn care. A vast majority of respondents (80%) agreed or strongly agreed that the way their lawn is cared for can influence water quality in local streams. Most respondents said that they would be willing to change their lawn care practices to improve water quality (72% agreed or strongly agreed).

Respondents were divided in terms of the importance of cost in their own decision-making. Slightly over one-third (36%) agreed that cost is the most important factor in their lawn care decisions, while 30% disagreed (i.e., disagreed or strongly disagreed) with this statement (Figure 18). A majority of respondents (54%) agreed that having an attractive lawn that is green and weed-free is important to them, while 22% disagreed that an attractive lawn was important and another quarter (25%) neither agreed nor disagreed with this statement.

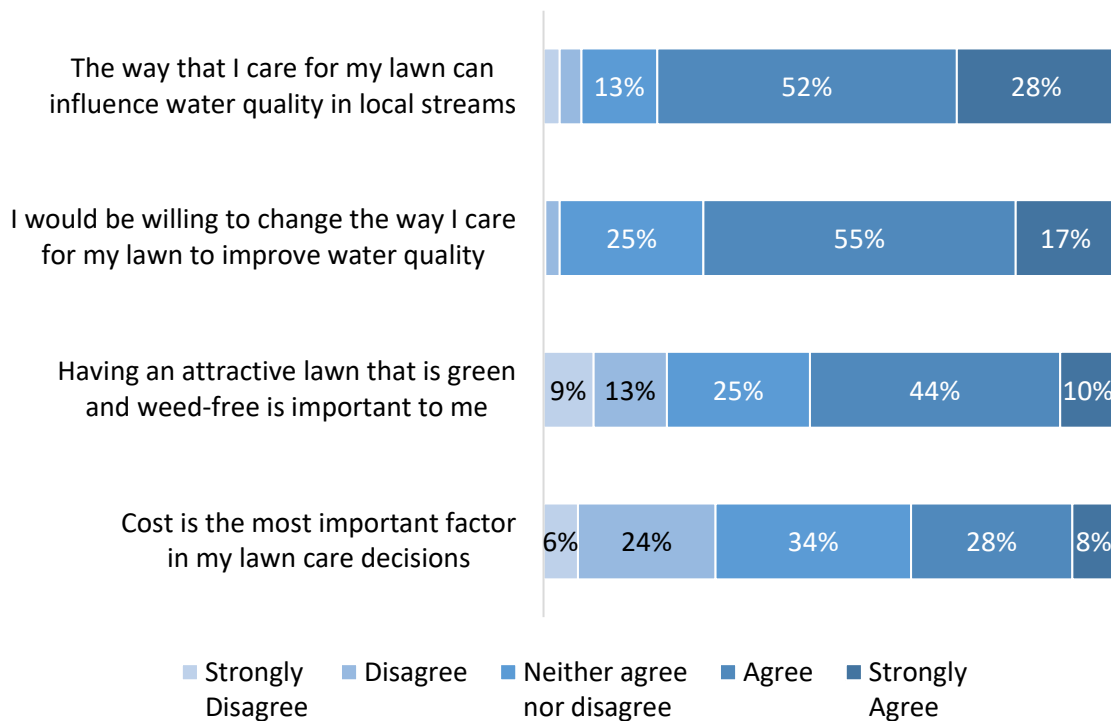


Figure 18. Lawn care opinion

The second set of attitudes related to agreement on determinants and policies linked to water quality. Approximately two-thirds of respondents (66%) disagreed or strongly disagreed with the statement “water running off from my property (e.g., roof, driveway, parking area) does not have an impact on water quality in local streams” (Figure 19). Nearly three-quarters (72%) agreed that the quality of life in their community depends on good water quality in local streams, rivers, and lakes and six in ten respondents (61%) indicated that more should be done to protect and improve the creeks in their area. Over 40% of respondents (44%) said that they agreed or strongly agreed that they would be willing to pay more to improve water quality. However, almost one-quarter of respondents (23%) opposed paying more for water quality improvement.

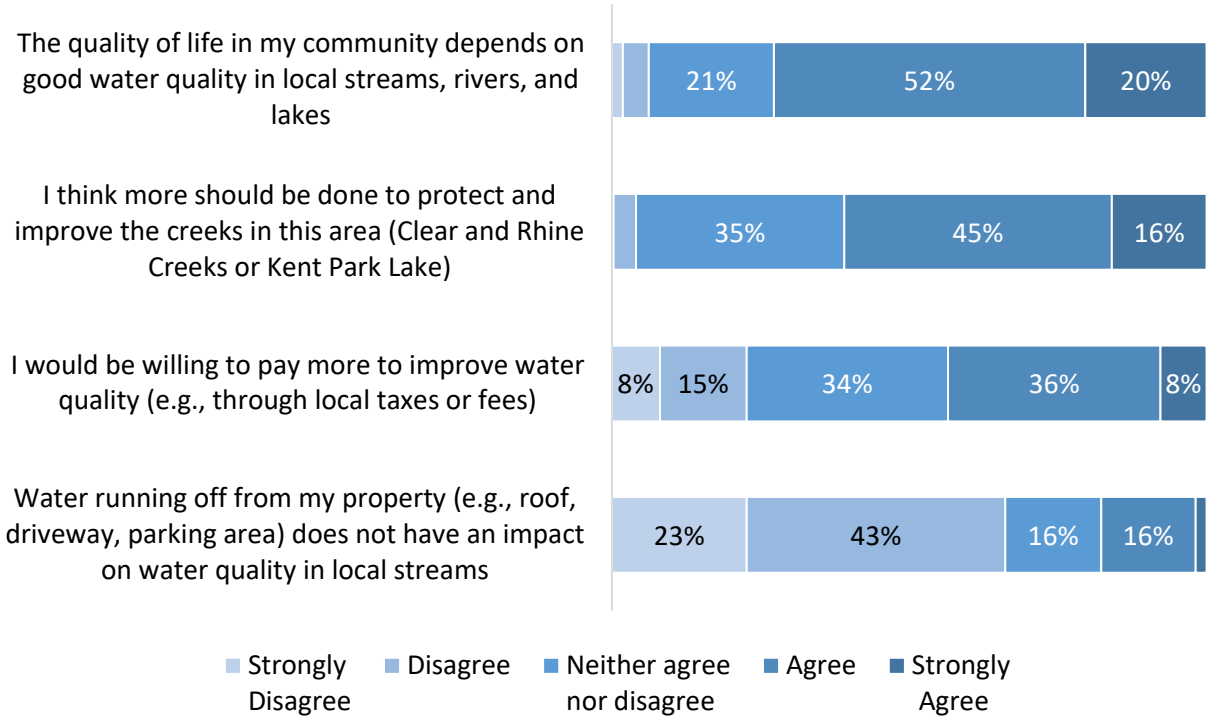


Figure 19. Opinions about water quality

Summary

The urban survey was designed to analyze perceptions and attitudes toward water quality in the Clear Creek Watershed (Iowa and Johnson counties, IA), providing baseline data on attitudes about the watershed, sources of information, knowledge levels, and willingness to engage in watershed improvement activities. This work represents one part of the two-part CCW Community Social Assessment and complements the information gathered in the survey of agricultural landowners and operators. Both studies will be used to develop an Education and Outreach Plan aimed at building support for watershed improvement projects and best management practices in this area.

When asked general views about problems facing the area, the poor quality of drinking water and the poor quality of water in lakes, rivers, and creeks were two of the top three problems identified by respondents. Furthermore, the majority of respondents (60%) rated their home drinking water as poor or fair and a plurality indicated that they were moderately or very concerned about the safety of their tap water. In regards to waterway quality, lakes were seen as the bodies of water with the highest quality water while rivers were viewed as the waterways with the lowest quality. Respondents identified flooding, polluted swimming/wading areas, and excessive aquatic plants or algae as the main problems facing their local lakes, rivers, and creeks. In addition, they characterized the use of fertilizers/pesticides and herbicides and the new housing and commercial development as threats to water quality.

In terms of understanding water quality, most respondents (84%) indicated that they were not at all or only slightly knowledgeable about water quality issues. Although half of the respondents indicated that they could not define a watershed very well or at all, when presented with four possible definitions seven out of ten (71%) chose the correct answer, reporting that a watershed refers to an area of land that drains to a common body of water. Approximately half of the respondents (49%) indicated that they would be moderately or very interested in learning more about local water quality issues. Most respondents preferred to receive information through the mail, the internet, or newspapers, and only 6% of all respondents said that they preferred not to receive information on this particular topic.

An overwhelming majority of respondents (80%) agreed or strongly agreed that the way their lawn is cared for can influence water quality in local streams. Moreover, most respondents said that they would be willing to change their lawn care practices to improve water quality (72% agreed or strongly agreed with this statement). Practices currently used by over half of the respondents included keeping grass clippings out of roads and ditches, using mulching lawn mowers, and aerating/adding compost to their lawn. The most infrequent practices were having a rain garden (5%) and having permeable pavers (12%). These two practices were also the least well known by non-users, with over four in ten respondents indicating that they did not know what rain gardens or permeable pavers were. In contrast, the practices with which non-users were more familiar and interested in trying included having a rain barrel, using organic fertilizers, and aerating/adding compost to their lawn.

Regarding water quality attitudes, six in ten respondents (61%) indicated that more should be done to protect and improve the creeks in their area. A plurality of respondents (44%) agreed or strongly agreed that they would be willing to pay more to improve water quality, while nearly one-quarter disagreed (i.e., disagreed or strongly disagreed) with this initiative. When asked about the efforts made to preserve or improve water quality in the past three years, individuals reported reducing their use of water for yard care (43%), reducing their use of pesticides, fertilizers, or other chemicals (33%), and changing the way their yard is landscaped (17%). In terms of knowledge related to water quality practices, two-thirds of respondents (67%) indicated that they knew where they could properly dispose of hazardous household waste in their community. Additionally, the majority of dog owners (81%) reported that they disposed of pet waste with their regular garbage.

Appendix 1: Short Questionnaire

1. How long have you lived in Johnson County?

- Less than 2 years
 2 to 5 years
 6 to 10 years
 More than 10 years

2. How long have you lived at your current address? _____ years [IF LESS THAN A YEAR, ENTER "0"]

3. Do you own or rent your current home?

- Own
 Rent
 Other (please specify) _____

4. Please, indicate how much each of the following issues are a problem in your area, if at all.

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|---|------------------|-------------------|---------------------|-------------------|---------------|
| a. Crime | 1 | 2 | 3 | 4 | 7 |
| b. Poor quality drinking water | 1 | 2 | 3 | 4 | 7 |
| c. Poor quality of water in lakes, rivers, and creeks | 1 | 2 | 3 | 4 | 7 |
| d. Poor quality of public schools | 1 | 2 | 3 | 4 | 7 |
| e. Lack of jobs | 1 | 2 | 3 | 4 | 7 |
| f. Air pollution | 1 | 2 | 3 | 4 | 7 |
| g. Lack of places for outdoor recreation | 1 | 2 | 3 | 4 | 7 |
| h. Deteriorating condition of roads and bridges | 1 | 2 | 3 | 4 | 7 |
| i. Damage from flooding | 1 | 2 | 3 | 4 | 7 |

5. In general, how would you rate the quality of your home drinking water as it comes from the faucet unfiltered?

- Poor
 Fair
 Good
 Excellent

6. Please answer the following questions regarding your views about local tap water.

| | Not at all concerned | Slightly concerned | Moderately concerned | Extremely concerned |
|---|-------------------------|-----------------------|-------------------------|------------------------|
| a. Overall, how concerned, if at all, do you think the members of your community are about the safety of their tap water? | 1 | 2 | 3 | 4 |
| b. How concerned, if at all, are you about the safety of your tap water? | 1 | 2 | 3 | 4 |

7. Does the property at which you currently live touch the banks of a creek, stream, river or wetland?

- Yes
 No

8. When it rains, where do you think water goes once it falls onto your land or yard? [CHECK ALL THAT APPLY]

- Storm drain and then straight to the nearest river
 Storm drain and then straight to a treatment plant
 Runs into the nearest creek
 Roadside ditch and then creek or river
 It gets absorbed into the land
 Don't know/Not sure

9. Overall, how would you rate the quality of water in your area's waterways (lakes, rivers, and creeks)?

| | Poor | Fair | Good | Excellent | Don't know |
|-----------|------|------|------|-----------|------------|
| a. Lakes | 1 | 2 | 3 | 4 | 7 |
| b. Rivers | 1 | 2 | 3 | 4 | 7 |
| c. Creeks | 1 | 2 | 3 | 4 | 7 |

10. In the last 12 months, how often did you visit...

| | Never | A few times | Monthly | Weekly |
|-------------------|-------|-------------|---------|--------|
| a. Clear Creek | 1 | 2 | 3 | 4 |
| b. Rhine Creek | 1 | 2 | 3 | 4 |
| c. Kent Park Lake | 1 | 2 | 3 | 4 |

11. In which of the following outdoor activities do you participate on a regular basis? [CHECK ALL THAT APPLY]

- Biking Running/jogging/walking Nature enjoyment/Bird watching
 Fishing/hunting Playgrounds/picnics Photography
 Kayaking/canoeing Swimming/wading Other (please specify) _____

12. For each of the following activities, how would you describe the quality of water in your area's waterways (lakes, rivers, and creeks)?

| | Poor | Fair | Good | Excellent | Don't know |
|--|------|------|------|-----------|------------|
| a. Canoeing, kayaking, and other boating | 1 | 2 | 3 | 4 | 7 |
| b. Swimming/wading | 1 | 2 | 3 | 4 | 7 |
| c. Eating fish caught in the water | 1 | 2 | 3 | 4 | 7 |
| d. Wildlife habitat | 1 | 2 | 3 | 4 | 7 |
| e. Scenic beauty | 1 | 2 | 3 | 4 | 7 |

13. From your viewpoint, how much have each of the following been a problem for your local waterways (Clear and Rhine Creeks or Kent Park Lake)?

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|---|---------------|----------------|------------------|----------------|------------|
| a. Polluted swimming/wading areas | 1 | 2 | 3 | 4 | 7 |
| b. Contaminated fish | 1 | 2 | 3 | 4 | 7 |
| c. Loss of fish species | 1 | 2 | 3 | 4 | 7 |
| d. Reduced beauty of waterways | 1 | 2 | 3 | 4 | 7 |
| e. Reduced opportunities for water recreation | 1 | 2 | 3 | 4 | 7 |
| f. Excessive aquatic plants or algae | 1 | 2 | 3 | 4 | 7 |
| g. Fish kills | 1 | 2 | 3 | 4 | 7 |
| h. Odor coming from waterways | 1 | 2 | 3 | 4 | 7 |
| i. Flooding | 1 | 2 | 3 | 4 | 7 |

14. To the best of your knowledge, how much do each of the following issues or practices contribute to problems for your local waterways (Clear and Rhine Creeks or Kent Park Lake)?

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|--|---------------|----------------|------------------|----------------|------------|
| a. Soil erosion from construction sites adding sediment (dirt) to the water | 1 | 2 | 3 | 4 | 7 |
| b. Soil erosion from farm fields adding sediment (dirt) to the water | 1 | 2 | 3 | 4 | 7 |
| c. Soil erosion from stream banks | 1 | 2 | 3 | 4 | 7 |
| d. Use of fertilizers/pesticides on lawns | 1 | 2 | 3 | 4 | 7 |
| e. Grass clippings and leaves entering storm drains and depositing into the water | 1 | 2 | 3 | 4 | 7 |
| f. Improper disposal of hazardous and household wastes (e.g., chemicals, non-alkaline batteries, fluorescent light bulbs, pharmaceuticals) | 1 | 2 | 3 | 4 | 7 |
| g. Improperly maintained septic systems | 1 | 2 | 3 | 4 | 7 |
| h. Stormwater runoff from hard surfaces, such as parking lots, streets, and roofs | 1 | 2 | 3 | 4 | 7 |
| i. Street salt and sand ending up in the water | 1 | 2 | 3 | 4 | 7 |
| j. Droppings from geese, ducks, and other waterfowl | 1 | 2 | 3 | 4 | 7 |
| k. Waste material from pets | 1 | 2 | 3 | 4 | 7 |
| l. Waste material from farm animals | 1 | 2 | 3 | 4 | 7 |
| m. Littering/illegal dumping of trash | 1 | 2 | 3 | 4 | 7 |
| n. Excessive use of fertilizers/herbicides/pesticides for crops | 1 | 2 | 3 | 4 | 7 |
| o. New housing and commercial development | 1 | 2 | 3 | 4 | 7 |

15. How knowledgeable would you say you are about water quality issues facing your area?

- Not knowledgeable at all
 Slightly knowledgeable
 Moderately knowledgeable
 Very knowledgeable

16. How well do you think you could define each of the following terms if asked to explain them to another person?

| | Could not define at all | Not very well | Somewhat well | Could define very well |
|------------------|-------------------------|---------------|---------------|------------------------|
| a. Groundwater | 1 | 2 | 3 | 4 |
| b. Aquifer | 1 | 2 | 3 | 4 |
| c. Surface water | 1 | 2 | 3 | 4 |
| d. Watershed | 1 | 2 | 3 | 4 |

17. Of the following, which is the best definition of a watershed? [CHECK ONE]

- A structure that stores water
- An area of land that drains to a common body of water
- A basin to hold extra water to prevent flooding
- An underground water supply

18. How interested would you say you are in learning about water quality issues facing your area?

- Not interested at all Slightly interested Moderately interested Very interested

19. How would you prefer to get information about local efforts to improve water quality? [CHECK TOP 3 ONLY]

- | | |
|---|--|
| <input type="checkbox"/> Mail/letter | <input type="checkbox"/> Internet |
| <input type="checkbox"/> Social media (Facebook, Twitter, or Instagram) | <input type="checkbox"/> Text message |
| <input type="checkbox"/> Town meeting | <input type="checkbox"/> Email |
| <input type="checkbox"/> Personal visit at your home | <input type="checkbox"/> Community events |
| <input type="checkbox"/> Radio broadcasts | <input type="checkbox"/> Phone call |
| <input type="checkbox"/> Friend/family/acquaintance | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Newspaper | <input type="checkbox"/> Prefer not to receive information |

20. In the last three years, have you or someone in your household done any of the following as part of an individual or community effort to preserve or improve water quality? [CHECK ALL THAT APPLY]

- Changed the way your yard is landscaped
- Reduced your use of water for yard care (e.g., stopped watering lawn)
- Reduced your use of pesticides, fertilizers, or other chemicals
- Installed a new septic system
- Other (please specify) _____

21. Do you or someone you live with have a dog?

- Yes No [GO TO Q22]

21a. If YES, do you dispose of pet waste with your regular garbage?

- Yes No

22. Do you know where in your community you can properly dispose of hazardous household waste (e.g., chemicals, non-alkaline batteries, fluorescent light bulbs, pharmaceuticals)?

- Yes No

23. Are you or another member of your household responsible for making decisions about lawn care on the property you own/rent?

- Yes No [GO TO Q25]

| 24. Do you currently... | Yes | No → | If NO, which of the statements below best describes your familiarity and interest with the corresponding practice? | | |
|--|--------------------------|--------------------------|---|--|--|
| | | | Don' t know what this is | Familiar with this, but not interested in doing it | Familiar with this, and interested in doing it |
| a. Have a rain garden? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Use a mulching lawn mower? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Keep grass clippings/leaves out of roads and ditches? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Have a rain barrel? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Allow vegetation to grow unmowed along streams? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Aerate and/or add compost to lawn? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Use organic fertilizer? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Have permeable pavers? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

25. Please indicate your level of agreement or disagreement with each of the statements below.

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|-------------------|----------|----------------------------|-------|----------------|
| a. The way that I care for my lawn can influence water quality in local streams | 1 | 2 | 3 | 4 | 5 |
| b. Cost is the most important factor in my lawn care decisions | 1 | 2 | 3 | 4 | 5 |
| c. Having an attractive lawn that is green and weed-free is important to me | 1 | 2 | 3 | 4 | 5 |
| d. I would be willing to change the way I care for my lawn to improve water quality | 1 | 2 | 3 | 4 | 5 |

26. Please indicate your level of agreement or disagreement with each of the statements below.

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|--|-------------------|----------|----------------------------|-------|----------------|
| a. Water running off from my property (e.g., roof, driveway, parking area) does not have an impact on water quality in local streams | 1 | 2 | 3 | 4 | 5 |
| b. I would be willing to pay more to improve water quality (e.g., through local taxes or fees) | 1 | 2 | 3 | 4 | 5 |
| c. I think more should be done to protect and improve the creeks in this area (Clear and Rhine Creeks or Kent Park Lake) | 1 | 2 | 3 | 4 | 5 |
| d. The quality of life in my community depends on good water quality in local streams, rivers, and lakes | 1 | 2 | 3 | 4 | 5 |

Finally, we would like to ask some general questions about you.

27. Would you describe yourself as... Male Female In another way

28. What is your age? _____

29. What is the highest grade or level of education that you have completed?

- Some high school or less
- High school diploma (includes GED)
- Vocational or technical diploma/certificate
- Some college but no Bachelor's Degree
- B.A., B.S., or equivalent
- Graduate Degree, Master's, Ph.D., M.D., etc.

30. Which of the following best describes your current employment situation?

- Employed or self-employed full-time (at least 30 hours per week)
- Employed or self-employed part-time (less than 30 hours per week)
- Seeking employment
- Stay-at-home parent/homemaker
- Retired
- Student
- Disabled, not working

31. What is your current approximate annual household income from all sources?

- Less than \$15,000
- \$15,000 to less than \$25,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 to less than \$100,000
- \$100,000 to less than \$150,000
- \$150,000 or more

32. Which of the following best describes where you live?

- On a farm
- In a rural setting, not on a farm
- In a rural subdivision outside of city limits
- In a small town of less than 5,000 people
- In a larger town of 5,000 to less than 25,000 people
- In a city of 25,000 or more people

33. How many people currently live in your household?

Number of adults (18 years of age or older) _____

Number of youth (younger than 18 years of age) _____

34. Are you of Hispanic, Latino, or Spanish origin?

Yes No

35. Which one or more of the following best describes your race? [CHECK ALL THAT APPLY]

- White
- Black or African American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
- Other (please specify) _____

36. What is your ZIP Code? _____

37. In what City or Town do you live? _____

Please provide any additional comments you may have in the space below.

Additional Comments

Thank you very much for your participation!
Please return completed questionnaire in envelope provided to:
University of Northern Iowa
Center for Social and Behavioral Research
Cedar Falls, IA 50614-0402

Appendix : Full Questionnaire

1. How long have you lived in Johnson County?

- Less than 2 years
 2 to 5 years
 6 to 10 years
 More than 10 years

2. How long have you lived at your current address? _____ years [IF LESS THAN A YEAR, ENTER "0"]

3. Do you own or rent your current home?

- Own
 Rent
 Other (please specify) _____

4. Please indicate how much each of the following issues are a problem in your area, if at all.

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|---|---------------|----------------|------------------|----------------|------------|
| j. Crime | 1 | 2 | 3 | 4 | 7 |
| k. Poor quality drinking water | 1 | 2 | 3 | 4 | 7 |
| l. Poor quality of water in lakes, rivers, and creeks | 1 | 2 | 3 | 4 | 7 |
| m. Poor quality of public schools | 1 | 2 | 3 | 4 | 7 |
| n. Lack of jobs | 1 | 2 | 3 | 4 | 7 |
| o. Air pollution | 1 | 2 | 3 | 4 | 7 |
| p. Lack of places for outdoor recreation | 1 | 2 | 3 | 4 | 7 |
| q. Deteriorating condition of roads and bridges | 1 | 2 | 3 | 4 | 7 |
| r. Damage from flooding | 1 | 2 | 3 | 4 | 7 |

5. In general, how would you rate the quality of your home drinking water as it comes from the faucet unfiltered?

- Poor
 Fair
 Good
 Excellent

6. Please answer the following questions regarding your views about local tap water.

| | Not at all concerned | Slightly concerned | Moderately concerned | Extremely concerned |
|---|----------------------|--------------------|----------------------|---------------------|
| c. Overall, how concerned, if at all, do you think the members of your community are about the safety of their tap water? | 1 | 2 | 3 | 4 |
| d. How concerned, if at all, are you about the safety of your tap water? | 1 | 2 | 3 | 4 |

7. Does the property at which you currently live touch the banks of a creek, stream, river or wetland?

- Yes
 No

8. When it rains, where do you think water goes once it falls onto your land or yard? [CHECK ALL THAT APPLY]

- Storm drain and then straight to the nearest river
 Storm drain and then straight to a treatment plant
 Runs into the nearest creek
 Roadside ditch and then creek or river
 It gets absorbed into the land
 Don't know/Not sure

9. Overall, how would you rate the quality of water in your area's waterways (lakes, rivers, and creeks)?

| | Poor | Fair | Good | Excellent | Don't know |
|-----------|------|------|------|-----------|------------|
| d. Lakes | 1 | 2 | 3 | 4 | 7 |
| e. Rivers | 1 | 2 | 3 | 4 | 7 |
| f. Creeks | 1 | 2 | 3 | 4 | 7 |

10. In the last 12 months, how often did you visit...

| | Never | A few times | Monthly | Weekly |
|-------------------|-------|-------------|---------|--------|
| d. Clear Creek | 1 | 2 | 3 | 4 |
| e. Rhine Creek | 1 | 2 | 3 | 4 |
| f. Kent Park Lake | 1 | 2 | 3 | 4 |

11. In which of the following outdoor activities do you participate on a regular basis? [CHECK ALL THAT APPLY]

- Biking Running/jogging/walking Nature enjoyment/Bird watching
 Fishing/hunting Playgrounds/picnics Photography
 Kayaking/canoeing Swimming/wading Other (please specify) _____

12. For each of the following activities, how would you describe the quality of water in your area's waterways (lakes, rivers, and creeks)?

| | Poor | Fair | Good | Excellent | Don't know |
|--|------|------|------|-----------|------------|
| f. Canoeing, kayaking, and other boating | 1 | 2 | 3 | 4 | 7 |
| g. Swimming/wading | 1 | 2 | 3 | 4 | 7 |
| h. Eating fish caught in the water | 1 | 2 | 3 | 4 | 7 |
| i. Wildlife habitat | 1 | 2 | 3 | 4 | 7 |
| j. Scenic beauty | 1 | 2 | 3 | 4 | 7 |

13. From your viewpoint, how much have each of the following been a problem for your local waterways (Clear and Rhine Creeks or Kent Park Lake)?

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|---|---------------|----------------|------------------|----------------|------------|
| j. Polluted swimming/wading areas | 1 | 2 | 3 | 4 | 7 |
| k. Contaminated fish | 1 | 2 | 3 | 4 | 7 |
| l. Loss of fish species | 1 | 2 | 3 | 4 | 7 |
| m. Reduced beauty of waterways | 1 | 2 | 3 | 4 | 7 |
| n. Reduced opportunities for water recreation | 1 | 2 | 3 | 4 | 7 |
| o. Excessive aquatic plants or algae | 1 | 2 | 3 | 4 | 7 |
| p. Fish kills | 1 | 2 | 3 | 4 | 7 |
| q. Odor coming from waterways | 1 | 2 | 3 | 4 | 7 |
| r. Flooding | 1 | 2 | 3 | 4 | 7 |

14. To the best of your knowledge, how much do each of the following issues or practices contribute to problems for your local waterways (Clear and Rhine Creeks or Kent Park Lake)?

| | Not a problem | Slight problem | Moderate problem | Severe problem | Don't know |
|--|---------------|----------------|------------------|----------------|------------|
| p. Soil erosion from construction sites adding sediment (dirt) to the water | 1 | 2 | 3 | 4 | 7 |
| q. Soil erosion from farm fields adding sediment (dirt) to the water | 1 | 2 | 3 | 4 | 7 |
| r. Soil erosion from stream banks | 1 | 2 | 3 | 4 | 7 |
| s. Use of fertilizers/pesticides on lawns | 1 | 2 | 3 | 4 | 7 |
| t. Grass clippings and leaves entering storm drains and depositing into the water | 1 | 2 | 3 | 4 | 7 |
| u. Improper disposal of hazardous and household wastes (e.g., chemicals, non-alkaline batteries, fluorescent light bulbs, pharmaceuticals) | 1 | 2 | 3 | 4 | 7 |
| v. Improperly maintained septic systems | 1 | 2 | 3 | 4 | 7 |
| w. Stormwater runoff from hard surfaces, such as parking lots, streets, and roofs | 1 | 2 | 3 | 4 | 7 |
| x. Street salt and sand ending up in the water | 1 | 2 | 3 | 4 | 7 |
| y. Droppings from geese, ducks, and other waterfowl | 1 | 2 | 3 | 4 | 7 |
| z. Waste material from pets | 1 | 2 | 3 | 4 | 7 |
| aa. Waste material from farm animals | 1 | 2 | 3 | 4 | 7 |
| bb. Littering/illegal dumping of trash | 1 | 2 | 3 | 4 | 7 |
| cc. Excessive use of fertilizers/herbicides/pesticides for crops | 1 | 2 | 3 | 4 | 7 |
| dd. New housing and commercial development | 1 | 2 | 3 | 4 | 7 |

15. How knowledgeable would you say you are about water quality issues facing your area?

- Not knowledgeable at all
 Slightly knowledgeable
 Moderately knowledgeable
 Very knowledgeable

16. How well do you think you could define each of the following terms if asked to explain them to another person?

| | Could not define at all | Not very well | Somewhat well | Could define very well |
|------------------|-------------------------|---------------|---------------|------------------------|
| e. Groundwater | 1 | 2 | 3 | 4 |
| f. Aquifer | 1 | 2 | 3 | 4 |
| g. Surface water | 1 | 2 | 3 | 4 |
| h. Watershed | 1 | 2 | 3 | 4 |

17. Of the following, which is the best definition of a watershed? [CHECK ONLY ONE]

- A structure that stores water
 An area of land that drains to a common body of water
 A basin to hold extra water to prevent flooding
 An underground water supply

18. How interested would you say you are in learning about water quality issues facing your area?

- Not interested at all
 Slightly interested
 Moderately interested
 Very interested

19. How would you prefer to get information about local efforts to improve water quality? [CHECK TOP 3 ONLY]

- | | |
|---|--|
| <input type="checkbox"/> Mail/letter | <input type="checkbox"/> Internet |
| <input type="checkbox"/> Social media (Facebook, Twitter, or Instagram) | <input type="checkbox"/> Text message |
| <input type="checkbox"/> Town meeting | <input type="checkbox"/> Email |
| <input type="checkbox"/> Personal visit at your home | <input type="checkbox"/> Community events |
| <input type="checkbox"/> Radio broadcasts | <input type="checkbox"/> Phone call |
| <input type="checkbox"/> Friend/family/acquaintance | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Newspaper | <input type="checkbox"/> Prefer not to receive information |

20. In the last three years, have you or someone in your household done any of the following as part of an individual or community effort to preserve or improve water quality? [CHECK ALL THAT APPLY]

- Changed the way your yard is landscaped
- Reduced your use of water for yard care (e.g., stopped watering lawn)
- Reduced your use of pesticides, fertilizers, or other chemicals
- Installed a new septic system
- Other (please specify) _____

21. Do you or someone you live with have a dog?

- Yes No [GO TO Q22]

21a. If YES, do you dispose of pet waste with your regular garbage?

- Yes No

22. Do you know where in your community you can properly dispose of hazardous household waste (e.g., chemicals, non-alkaline batteries, fluorescent light bulbs, pharmaceuticals)?

- Yes No

23. Are you or another member of your household responsible for making decisions about lawn care on the property you own/rent?

- Yes No [GO TO Q25]

| 24. Do you currently... | Yes | No → | If NO, which of the statements below best describes your familiarity and interest with the corresponding practice? | | |
|--|--------------------------|--------------------------|---|--|--|
| | | | Don't know what this is | Familiar with this, but not interested in doing it | Familiar with this, and interested in doing it |
| i. Have a rain garden? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Use a mulching lawn mower? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Keep grass clippings/leaves out of roads and ditches? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| l. Have a rain barrel? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| m. Allow vegetation to grow unmowed along streams? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| n. Aerate and/or add compost to lawn? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| o. Use organic fertilizer? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| p. Have permeable pavers? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

25. Please indicate your level of agreement or disagreement with each of the statements below.

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|-------------------|----------|----------------------------|-------|----------------|
| e. The way that I care for my lawn can influence water quality in local streams | 1 | 2 | 3 | 4 | 5 |
| f. Cost is the most important factor in my lawn care decisions | 1 | 2 | 3 | 4 | 5 |
| g. Having an attractive lawn that is green and weed-free is important to me | 1 | 2 | 3 | 4 | 5 |
| h. I would be willing to change the way I care for my lawn to improve water quality | 1 | 2 | 3 | 4 | 5 |

26. Please indicate your level of agreement or disagreement with each of the statements below.

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|--|-------------------|----------|----------------------------|-------|----------------|
| e. Water running off from my property (e.g., roof, driveway, parking area) does not have an impact on water quality in local streams | 1 | 2 | 3 | 4 | 5 |
| f. I would be willing to pay more to improve water quality (e.g., through local taxes or fees) | 1 | 2 | 3 | 4 | 5 |
| g. I think more should be done to protect and improve the creeks in this area (Clear and Rhine Creeks or Kent Park Lake) | 1 | 2 | 3 | 4 | 5 |
| h. The quality of life in my community depends on good water quality in local streams, rivers, and lakes | 1 | 2 | 3 | 4 | 5 |

Understanding the Direct Impacts of Flooding on your HOME or PROPERTY.

In this section, we would like to understand the ways flooding may have affected your current home and/or property. Some questions ask you to estimate dollar values, please provide your best estimate.

27. In the past 10 years, approximately how many times has your current home or property been flooded in any way?

[CIRCLE ONE NUMBER]

None 1 2 3 4 5 6 7 8 9 10 More than 10

IF YOUR CURRENT HOME/PROPERTY HAS NOT BEEN FLOODED IN THE LAST 10 YEARS, PLEASE GO TO Q36

28. In the last 10 years, which flood event had the biggest impact on your current home/property? [CHECK ONLY ONE]

May/June 2008 April 2013 Other (month/year) _____

29. During this flood, what was the primary source of flooding on your home/property: [CHECK ONLY ONE]

Rain River/creek/lake overflow (flood waters)
 Rising groundwater Water seeping through walls/floor in foundation/basement from outside
 Sewer backup Other (please specify) _____
 Snowmelt

30. How severe was the damage to your home from this flood?

- No damage [GO TO Q34]
 Minor damage
 Moderate damage
 Major damage

31. If you had any damage, approximately how much did it cost to repair your home?
 [PLEASE PROVIDE YOUR BEST ESTIMATE]

\$ _____

32. What sources of funding did you use to pay for repairs to your home? [CHECK ALL THAT APPLY]

- | | |
|--|--|
| <input type="checkbox"/> Own bank account/cash/check/debit | <input type="checkbox"/> Bank Loans |
| <input type="checkbox"/> Money from family | <input type="checkbox"/> Put on Credit Card |
| <input type="checkbox"/> Money from friends | <input type="checkbox"/> Government Assistance |
| <input type="checkbox"/> Money from co-workers | <input type="checkbox"/> Non-profit/Church/Charity |
| <input type="checkbox"/> Insurance Settlement | <input type="checkbox"/> Crowd-funding (e.g. GoFundMe) |
| <input type="checkbox"/> Other (please specify) _____ | |

33. Did you or anyone in your household lose any of the following in this flood: [CHECK ALL THAT APPLY]

- Pictures
 Pets
 Irreplaceable objects such as memorabilia and family heirlooms

34. Which of the following changes, if any, did you or anyone in your household make to better prepare for or prevent future flooding? [CHECK ALL THAT APPLY]

- | | |
|---|---|
| <input type="checkbox"/> Made no changes | <input type="checkbox"/> Started a phone tree with neighbors |
| <input type="checkbox"/> Bought flood insurance | <input type="checkbox"/> Made a household flood response plan |
| <input type="checkbox"/> Bought groundwater insurance | <input type="checkbox"/> Other (please specify) _____ |

35. Did you, or anyone in your household, make improvements to your home or property to better prepare for or prevent future flooding?

If YES, how much do you estimate this improvement cost you and others in your household?
 [PLEASE PROVIDE YOUR BEST ESTIMATE]

| | No | Yes → | If YES, how much do you estimate this improvement cost you and others in your household? [PLEASE PROVIDE YOUR BEST ESTIMATE] | | | | | | |
|--|--------------------------|--------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | \$0 | \$1 to \$999 | \$1,000 to \$4,999 | \$5,000 to \$9,999 | \$10,000 to \$19,999 | \$20,000 to \$35,000 | Over \$35,000 |
| Earth moving/landscaping | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tiling or drainage management | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Structural changes to your home | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Structural changes to other buildings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Enrolling in conservation programs (e.g. EWP, CRP) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Understanding the Indirect and Unseen Impacts of Flooding .

A flood affects a whole community. In this section, we would like to understand the ways flooding may have affected you or others in your household indirectly. The questions in this section are for everyone, even if your current home was not directly impacted by flooding. Some questions ask you to estimate dollar values, please provide your best estimate.

36. Have you ever evacuated your home due to a flood or flood threat?

- Yes No [GO TO Q40]

37. If YES, what caused or prompted you to evacuate? [CHECK ALL THAT APPLY]

- I received an evacuation notice There was water in my residence
 I was worried I would be stuck/stranded There was water threatening my residence
 Other (please specify) _____

38. When you evacuated your home due to flooding, where did you stay? [CHECK ALL THAT APPLY]

- Designated shelter (church, etc.) Hotel
 With local family With a friend
 With family outside the community With a co-worker
 Other (please specify) _____

39. Approximately, how long was it before you returned to your home permanently? _____ days [GO TO Q41]

40. IF YOU did not evacuate, why did you stay? [CHECK ALL THAT APPLY]

- I did not feel threatened I did not know where to go
 Minimal water was in my residence I wanted to protect my property
 It was not safe to leave I have special health needs
 I was worried about my pets Others I live with have special needs
 Other (please specify) _____

41. Thinking only about where you are currently living, in the last 10 years, which flood event had the biggest impact on you and those you live with in any way? (e.g., different route to work, closed school/work/childcare, property damage, loss of utility services)? [CHECK ONLY ONE]

- Neither I, nor a member of my household, have been affected by a flood event in the last 10 years while living in my current residence. (GO TO Q51)
 May/June 2008 April 2013 Other (month/year) _____

42. What was your approximate annual household income from all sources in the year when the flooding occurred?

- Less than \$15,000
 \$15,000 to less than \$25,000
 \$25,000 to less than \$35,000
 \$35,000 to less than \$50,000
 \$50,000 to less than \$75,000
 \$75,000 to less than \$100,000
 \$100,000 to less than \$150,000
 \$150,000 or more

43. How many adults and children lived in your household when the flooding occurred? [IF NONE, ENTER "0"]

_____ adults (18 years or older) _____ children (less than 18 years old)

44. Because of this flood, did you or others in your household drive alternate routes or more than usual due to closed or impacted roads?

Yes No [GO TO 45]

44a. In total, approximately how many more miles did you and others in your household have to drive? _____ miles

44b. How much, if any, do you estimate these additional miles cost you and others in your household?

\$0 Less than \$10 \$10-\$99 \$100-199 \$200-\$499 \$500-\$999 Over \$1,000

45. Because of this flood, were you or others in your household unable to work for any period of time?

Yes No [GO TO 46]

45a. In total, approximately how many hours of work did you and others in your household miss? _____ hours

45b. How much, if any, do you estimate these missed hours of work cost you and others in your household?

\$0 Less than \$10 \$10-\$99 \$100-199 \$200-\$499 \$500-\$999 Over \$1,000

46. Because of this flood, did you or others in your household experience any changes in childcare arrangements?

Yes No [GO TO Q47]

46a. Was this a result of a school closure or childcare facility closure?

Yes No

46b. How much, if any, do you estimate these changes in childcare cost you and others in your household?

\$0 Less than \$10 \$10-\$99 \$100-199 \$200-\$499 \$500-\$999 Over \$1,000

| 47. Because of <u>this flood</u> , did you or anyone in your household experience any of the following flood-related impacts? | No | Yes → | If YES, how much do you estimate this loss cost you and others in your household? [PLEASE PROVIDE YOUR BEST ESTIMATE] | | | | | |
|---|--------------------------|--------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | \$<10 | \$10 to \$99 | \$100 to \$199 | \$200 to \$499 | \$500 to \$999 | Over \$1,000 |
| Loss of business | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Loss of rental income | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Changes in eating habits, food shopping habits or food availability | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Loss or change in utility services (power/electricity, phone coverage, water, garbage collection, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Impacts on health or wellness (doctor visits, medications, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

For questions 48 through 50, please consider all adults and children in your household including yourself.

48. How many adults and children, if any, experienced a negative physical health impact – through injury or illness – related to flooding?

48a. Number of adults who experienced a negative physical health impact [IF NONE, ENTER “0”] _____

48b. Number of children who experienced a negative physical health impact [IF NONE, ENTER “0”] _____

49. How many adults and children, if any, experienced a negative mental or emotional health impact related to flooding for which they sought treatment?

49a. Number of adults who experienced a negative mental health impact [IF NONE, ENTER “0”] _____

49b. Number of children who experienced a negative mental health impact [IF NONE, ENTER “0”] _____

50. How many adults and children, if any, experienced changes in normal behavior – such as loss of sleep, change in diet/appetite – related to flooding?

50a. Number of adults who experienced changes in normal behavior [IF NONE, ENTER “0”] _____

50b. Number of children who experienced changes in normal behavior [IF NONE, ENTER “0”] _____

Finally, we would like to ask some general questions about you.

51. Would you describe yourself as...

Male Female In another way

52. What is your age? _____

53. What is the highest grade or level of education that you have completed?

- Some high school or less
- High school diploma (includes GED)
- Vocational or technical diploma/certificate
- Some college but no Bachelor's Degree
- B.A., B.S., or equivalent
- Graduate Degree, Master's, Ph.D., M.D., etc.

54. Which of the following best describes your current employment situation?

- Employed or self-employed full-time (at least 30 hours per week)
- Employed or self-employed part-time (less than 30 hours per week)
- Seeking employment
- Stay-at-home parent/homemaker
- Retired
- Student
- Disabled, not working

55. What is your current approximate annual household income from all sources?

- Less than \$15,000
- \$15,000 to less than \$25,000
- \$25,000 to less than \$35,000
- \$35,000 to less than \$50,000
- \$50,000 to less than \$75,000
- \$75,000 to less than \$100,000
- \$100,000 to less than \$150,000
- \$150,000 or more

56. Which of the following best describes where you live?

- On a farm
- In a rural setting, not on a farm
- In a rural subdivision outside of city limits
- In a small town of less than 5,000 people
- In a larger town of 5,000 to less than 25,000 people
- In a city of 25,000 or more people

57. How many people currently live in your household?

Number of adults (18 years of age or older) _____

Number of youth (younger than 18 years of age) _____

58. Are you of Hispanic, Latino, or Spanish origin?

- Yes No

59. Which one or more of the following best describes your race? [CHECK ALL THAT APPLY]

- White
- Black or African American
- Asian
- Native Hawaiian or Other Pacific Islander
- American Indian or Alaska Native
- Other (please specify) _____

60. What is your ZIP Code? _____

61. In what City or Town do you live? _____

If you were impacted by flooding in Iowa in any way and would be willing to talk more about your experience, please check this box and send an email to CSBR@UNI.edu or call 319-273-2105 with your contact info (name, email and/or phone number). PLEASE DO NOT put your name or contact information on this questionnaire.

