

Lake Eau Claire Planning Survey Report



**Sarah Braun
Citizen Science Director
19 May 2010**



INTRODUCTION

The Lake Eau Claire Association contracted with the Beaver Creek Reserve Citizen Science Center to develop and conduct a sociological survey of lake residents as part of the development of the Lake Eau Claire Aquatic Plant Management Plan. The purpose of the survey was to determine (1) patterns of and opinions about recreation on the lake, (2) opinions about fishing and wildlife, (3) opinions about and knowledge of the aquatic plant community, (4) the knowledge of and action in regards to aquatic invasive species (including thoughts about the effectiveness of the Clean Boats, Clean Waters program on Lake Eau Claire), (5) thoughts about erosion and sedimentation into the lake, (6) opinions about the water quality of the lake, (7) the knowledge of the relationship between shoreline restoration, water quality, and watershed management and (8) overall thoughts about the value of the lake to lake users.

Lake Eau Claire was created in 1936 when a dam was built on the Eau Claire River, which created the 2-mile long and 1/2-mile wide impoundment lake. Lake Eau Claire is 897 acres and has a maximum depth of 25 feet (Lake Eau Claire Mapping Project 2007-2008). Lake Eau Claire is located north of Augusta, WI in T26N R6W, in the cities/towns of Bridge Creek, Ludington, Wilson, Fairchild, Eau Claire, and Augusta.

METHODS

The Lake Eau Claire Planning Survey was developed by Kirsten Cahow-Scholtes, Eau Claire County Land Conservationist, in conjunction with Sarah Braun, Beaver Creek Reserve Citizen Science Center Director, Rod Zika and Marlo Orth of the Lake Eau Claire Association (LECA), and Buzz Sorge of the Wisconsin Department of Natural Resources (WDNR). Input about early drafts of the survey was solicited from LECA board members. Jordan Petchenik, Research Scientist with the Science Information Services Section of the WDNR, reviewed the later drafts of the survey to ensure that questions were well organized and properly worded. The survey contained four open-ended questions, 55 multiple-choice questions, 17 Likert-scale questions with the following scale: Strongly Agree, Agree, Strongly Disagree, Disagree and Unsure, and three questions of other styles.

RESULTS

The survey was mailed on May 29, 2009 to 347 people living on or near Lake Eau Claire. Lake Association members also handed out an additional set of surveys at the Lake Eau Claire Clear Water Mini Triathlon and Picnic on June 13, 2009 and supplied the Eau Claire Rod and Gun Club with surveys to hand out to their members and constituents, although the number of surveys handed out is through these channels is unknown. The total number of surveys distributed (for calculations in this study) is 347. Of the surveys distributed, 152 (44%) were returned. "It is important to note that with a usable return rate of 44%, we cannot say the results represent with statistical accuracy the target population of Lake [Eau Claire] property owners and users. The results represent the opinions and experiences of those who responded to the survey. Results, however, do provide us with a level of insight previously unknown, and will be used with discretion to help inform the Lake [Eau Claire] planning process," (Petchenik 2009, pers. comm.). A copy of the survey, including the results, is included at the end of this report (Appendix A).

Respondent Profiles

Nearly three-quarters of the surveys returned were from people who had waterfront property on Lake Eau Claire (109 respondents, 72%), while 25% (38 respondents) were from people without waterfront property. Only 3% (5 respondents) of the respondents did not answer the question. A blank question from a respondent was tallied as “Null”. Just over a quarter of respondents (26%) have a permanent residence on Lake Eau Claire, while over a third (39%) have a part-time residence, 7% other, and 28% of the surveys were not answered (null). Zero percent of the responses came from businesses. A little over a quarter of respondents (27%) indicated that they have had their permanent or part-time residence for more than 20 years, 20% for 11-20 years, 11% for 6-10 years, 11% for 1-5 years, 1% for less than a year, and 30% were null. Just over a quarter of the respondents (28%) own or rent property on Lake Eau Claire, 2% own or rent property outside the watershed but in Eau Claire County, 3% not on the lake but in the lake watershed, 1% outside of Eau Claire County, and 66% did not answer the question. Thirteen percent of respondents indicated that they did NOT own or rent property on Lake Eau Claire and have been visiting or recreating on Lake Eau Claire for more than 20 years, 3% for 11-20 years, 5% for 6-10 years, 3% for 1-5 years, and 1% for less than a year. Seventy-four percent of respondents did not answer the question.

Lake Frontage

Two questions on the survey referenced lake frontage (Questions 5 and 6). The majority of respondents (88) indicated that natural vegetation best described their lake frontage, followed by rocks added for stabilization (31 respondents), lawn (25 respondents), planted trees or shrubs (16 respondents), masonry retaining wall (7 respondents), and wood retaining wall (3 respondents). Nearly half of respondents (46%) indicated that their property includes an adequate buffer strip while 12% indicate their property did not. Twelve percent of respondents were unsure and 30% of respondents did not answer the question.

Overall Value of the Lake

One open-ended question was asked about the overall value of Lake Eau Claire to lake users, specifically, what does the lake mean to them (Question 8). Results were tallied into the following categories (listed from most to least common response): fish (36 respondents), relax/rest (32 respondents), home (28 respondents), family (27 respondents), recreation (non-boat specific) (24 respondents), beauty/scenery (16 respondents), vacation home (11 respondents), friends (10 respondents), boating (10 respondents), wildlife/nature (5 respondents), camp (4 respondents), hunting (4 respondents), and null (31 respondents). The categories were developed from the responses provided for Question 8. The results presented here reflect responses given on 4 or more surveys and reflect some interpretation of responses. For example, the Relax/Rest category encompasses responses such as “peace”, “tranquility”, “stress relief” and “happy”, among others, while the Beauty/Scenery category includes responses such as “beauty”, “great view”, etc. Unique responses to Question 1 are not necessarily included in these results. For example, one survey participant indicated that they think they think the clubhouse is nice and while important to note, a category was not created for this specific response because it was unique to one respondent.

Recreation

Twelve questions on the survey pertained to recreation on Lake Eau Claire (Questions: 9-15 (two question 13's and two question 14's) and 33q). Most respondents (80 respondents) indicated that they use Lake Eau Claire year round, followed by May-August (76 respondents), September-November (42 respondents), March-April (17 respondents), and December-February (11 respondents). Question 10 referred to the areas of Lake Eau Claire that respondents use regularly. The West section of the lake was marked most often (175 X's), followed by the Northcentral West section (156 X's), Northcentral

East (148 X's), Southcentral East (126 X's), Northeast (121 X's), Southcentral West (101 X's), and the Southeast (98 X's). The most common recreational activities on Lake Eau Claire include (1) spending time with family (127 respondents), (2) peace and tranquility (122 respondents), (3) enjoying scenery (121 respondents), (4) fishing (open water) (119 respondents), and (5) spending time with friends (118 respondents). When asked to rank their top three recreational activities, most respondents selected motor boating (119 respondents), fishing (open water) (52 respondents), and spending time with family (24 respondents). Two-thirds of respondents (66%) strongly agreed (20%) or agreed (46%) with the statement "I am concerned about recreational safety on Lake Eau Claire." Over three-quarters of respondents (79%) often see or hear other people on Lake Eau Claire. The majority of respondents (82%) indicated that the noise and activities of others rarely (43%) or sometimes (39%) disturbs them. The majority of respondents (83%) indicated that there is sufficient public access to Lake Eau Claire. Just over half of respondents (53%) felt that public access does NOT contribute to crowding on Lake Eau Claire, while just under half (42%) felt that it does. Two-thirds of respondents (66%) strongly agreed (20%) or agreed (46%) with the statement "I am concerned about recreational safety on Lake Eau Claire".

Fishing and Wildlife

Fourteen questions on the survey pertained to Lake Eau Claire wildlife and fishing (Questions 16-28 (Question 17 had 2 parts). Just under half of the respondents have more than 20 years of fishing experience on Lake Eau Claire (46%). Respondents that fish open water on Lake Eau Claire do so either once or twice a month (28%), weekly (26%), or only a few times a year (22%). Only 1 respondent indicated that they fish Lake Eau Claire daily. Just under half of respondents (45%) indicated that they did NOT ice fish during the 2008/2009 season, followed by a few times a year (16%) and once or twice a month (15%). The majority of respondents (64%) indicated that their fishing experiences on Lake Eau Claire were either average (39%) or fair (25%). Nearly three-quarters of respondents (72%) indicated that they catch fish most times they go out (36%) or sometimes when they go out (36%). Just over half of respondents indicated that some fish are big enough to keep (59%). Approximately one-third of respondents (33%) believe the quality of fishing has declined over the past 5 years while nearly one-third of respondents (30%) believe it has stayed the same. Algae was most often indicated (42 respondents) as contributing to the decline in fishing quality, followed by overfishing (36 respondents) and loss of aquatic habitat (28 respondents). When asked about coarse woody debris, just over a third of respondents (35%), indicated that they were unsure if there was an adequate amount of coarse woody habitat in the lake for fish and other aquatic organisms while nearly the same percent (32%) indicated that the lake DID provide enough and 30% indicated that the lake did NOT provide enough. Just under half of respondents (44%) felt that the fish community would improve if more coarse woody debris was added to the lake while 40% were unsure. Just under a third of respondents (29%) indicated that they would be willing to add trees as coarse woody habitat to their waterfront property. Nearly three-quarters of respondents (71%) indicated that it is very important for them to see wildlife when they use Lake Eau Claire. Just over half of respondents (56%) believe the quality of the wildlife habitat around Lake Eau Claire has stayed the same over the past five years. The majority of respondents did not answer the question about what factors may have contributed to a change in wildlife habitat (115 respondents) while a handful indicated boat traffic (5 respondents) or land use changes (5 respondents).

Aquatic Plant Community

Four questions on the survey pertained to the aquatic plant community (Questions 29, 33i, 33j, and 33k.). When asked about their opinion about the amount of aquatic plants in Lake Eau Claire (NOT algae), just under half of respondents indicated that there was a dense growth of plants (42%). Nearly a third of respondents (30%) were not sure. Nearly all respondents (88%) strongly agreed (50%) or

agreed (38%) with the statement “Native aquatic plants are important to maintaining a healthy lake ecosystem.” Just over half of respondents (56%) strongly disagreed (25%) or disagreed (31%) with the statement “Removal of aquatic plants improves water clarity,” while 18% were unsure. More than half of respondents (60%) strongly disagreed (33 respondents, 22%) or disagreed (38%) with the statement “I dislike any/all aquatic plants along my shoreline property,” while 13% agreed, 10% (15 respondents) were unsure and 16% did not respond to the question.

Aquatic Invasive Species

Eleven questions on the survey pertained to aquatic invasive species (Questions 30, 31, 32, 33a, 33b, 33c, 33d, 33e, 33f, 33g, and 33h). Thirty-five percent of respondents were unsure if they believe aquatic invasive species are a problem in Lake Eau Claire, while 26% of respondents believe they are a moderate problem and 21% believe they are a small problem. Newspapers and magazines (116 respondents), television (105 respondents), and newsletters (84 respondents) were the outlets through which most respondents have heard about aquatic invasive species. The majority of respondents (82%) strongly agreed (26%) or agreed (56%) that the Clean Boats, Clean Waters program is an effective way to keep aquatic invasive species from spreading to uninfested lakes.

Just under half of all respondents (47%) boat only on Lake Eau Claire and 32% of respondents indicated that they always inspect their boat and trailer and remove aquatic plants and other debris from them when they leave the lake. An equal percentage of respondents agreed with (37%) as were unsure (37%) about the statement “Aquatic invasive species are non-native organisms that are spreading in Lake Wisconsin and displacing or otherwise threatening native organisms.” A similar percentage of respondents agreed with (34%) as were unsure about (35%) the statement “Aquatic invasive species have a negative impact on the economy of the lake region (ie. Towns of Bridge Creek, Ludington, Wilson, Fairchild, Eau Claire and Augusta). Just over half of respondents (60%) strongly agreed (23%) or agreed (37%) with the statement “Aquatic invasive species have a negative impact on the aesthetics of the lake” while 26% were unsure. Nearly three-quarters of respondents (73%) are concerned about Eurasian water milfoil and the damage it can do to the ecology of Lake Eau Claire. Nearly all respondents (91%) strongly agreed (52%) or agreed (39%) with the statement “Invasive species should be controlled whenever possible.” Just over half of respondents (65%) would like additional information about how to control invasive species and nearly three-quarters of respondents (77%) would like additional information about how to identify invasive species.

Shoreline Restoration

Two questions on the survey pertained to shoreline restoration (Questions: 33L and 33m). The majority of respondents (81%) strongly agreed (31%) or agreed (50%) with the statement “Shoreline restoration projects improve the aesthetics of Lake Eau Claire.” A similar percent of respondents (77%) strongly agreed (29%) or agreed (48%) with the statement “Shoreline restoration prevents phosphorous, other nutrients, and soil from washing out of lawns and into the lake.”

Erosion and Sedimentation

The majority of respondents (81%) believe that sedimentation in Lake Eau Claire is having a negative impact on the lake. Over half of respondents (69%) feel that the amount of sedimentation in Lake Eau Claire has increased in the last five years, while 15% were not sure and 11% felt it stayed the same. Over half of respondents (55%) think that bank erosion upstream is contributing most to sedimentation in the lake while 18% were unsure.

Water Quality

Nine questions on the survey pertained to water quality (Questions: 33n, 33o, 33p, and 37-42). Most respondents thought the overall water quality of Lake Eau Claire was either “fair” (50%) or “good” (32%). Respondents generally thought the water quality has remained the same over the last 5 years (45%) or declined (34%). Only 7% of respondents felt the water quality improved. Thirteen respondents felt that nutrient management contributed to the improvement of the water quality and 12 respondents felt water quality improved due to improvements in agricultural practices. Respondents felt the water quality declined due to (1) excess algae (54 respondents), (2) soil erosion (47 respondents), and (3) excess sedimentation (46 respondents). If current land practices continue, just over half of respondents (55%) believe that the future outlook of the lake will worsen while 19% believe it will remain the same and 18% don’t know. The majority of respondents (83%) strongly agreed (47%) or agreed (36%) with the statement “Too much phosphorous in a lake can lead to algae blooms.” Nearly all respondents (92%) strongly agreed (43%) or agreed (49%) with the statement “Property owners and users of Lake Eau Claire have a responsibility to try to improve the lake ecology.” Nearly the same percentage of respondents (93%) strongly agreed (49%) or agreed (44%) that users of Lake Eau Claire have a responsibility to try to improve the lake ecology. If the lake was restored to a healthier condition, 60% of respondents indicated that they would use the lake more, while 23% indicated that they would not.

Watershed Land Management

Eight questions on the survey pertained to watershed land management (Questions 43-50). Just under half of respondents (43%) indicated that they do not use fertilizer anywhere on their property while 25% indicated they do and 32% did not answer the question. Sixteen percent of respondents indicated that they use fertilizer on their lawn, followed by 7% on their garden. The majority of respondents (76%) did not answer the question. Twenty-three percent of respondents indicated that they area they fertilize is less than one acre and only 2% fertilize an area between 1-5 acres. The majority of respondents (75%) did not answer the question. A small percentage of respondents (12%) fertilize once per year and a similarly small percentage (11%) 2-5 times per year. The majority of respondents (74%) did not answer the question. Only 4% of respondents indicated that they use fertilizer that contains phosphorous, while 19% indicated that they do not and 76% did not answer the question. Fewer than half (37%) of the respondents indicated that their septic system was installed 11 or more years ago, followed by 14% 6-10 years ago, 5% 3-5 years ago, and 5% 0-2 years ago. A small percentage of respondents (3%) indicated that they do not have a septic system and 36% of respondents did not answer the question. Just under half of respondents (46%) had their septic system maintained 0-2 years ago, followed by 7% 11 or more years ago and 6% 3-5 years ago. Just over a third of respondents (38%) did not answer the question. The main motivators for respondents to change how they use and manage their land to improve the quality of the lake were: (1) improving water quality (74 respondents), (2) providing better habitat for fish and wildlife (73 respondents), (3) increasing the natural beauty of their property (60 respondents), and (4) increasing their property value (56%).

Decision-making and values

Nine questions on the survey referred to decision-making and values (Questions 51-59). Just over a third (39%) of respondents feel that the present land use regulations protect habitat in the lake fairly adequately, followed by 20% who feel that the land use regulations are not too adequate. Just over half of respondents (59%) feel that the present land use regulations are only fairly adequate (28%) or not too adequate (31%) for protecting water quality in the lake. Most respondents feel that lake shoreland owners (131 respondents) should be involved with making management decisions for Lake Eau Claire,

followed by lake shoreland residents (90 respondents), university professionals or other experts (88 respondents), and County agencies (81 respondents). Half of the respondents (50%) indicated that water quality has a major impact on their perceived value of Lake Eau Claire and 38% indicated that it had some impact. Just under half of respondents (44%) indicated that water quality has a major impact on their personal enjoyment of Lake Eau Claire and the same percentage (44%) indicated that it has some impact. A third of respondents (33%) indicated that publicly owned land around Lake Eau Claire greatly enhances the overall quality of their lake experience, while 36% indicated that it somewhat enhances their experience. Only 7 respondents indicated that public land detracts from the overall quality of their experience on the lake (Question 57) and the reasons why were unique to each respondent. The majority of respondents (145) did not answer the question. Just under half of respondents (47%) indicated that Lake Eau Claire is very important to have available for public use/enjoyment followed by slightly important (21%) and moderately important (20%).

Respondents would like to receive information on planning and management activities for Lake Eau Claire in the following ways: mailings (100 respondents), from a lake group (55 respondents), from a website (42 respondents) or via email (40 respondents).

Survey time

In all, survey participants contributed 64.8 hours (3888 minutes) to completing the Lake Eau Claire Planning Survey.

SUMMARY

Respondents to the Lake Eau Claire Planning Survey overwhelmingly indicated that Lake Eau Claire was valuable to them for fishing, relaxing and resting, for their home and their family and for recreation. Responses to questions about recreation on the lake indicated that motor boating, fishing, and spending time with family are the types of activities most often enjoyed by lake users. Many respondents use the lake year round or during the summer season from May through August. Many respondents are concerned about recreational safety on Lake Eau Claire. The availability of the recreational activities that are most enjoyed by respondents is strongly linked to water quality and half of the respondents considered the water quality of Lake Eau Claire to be fair. Fishing was considered by most respondents to be fair or average. Improving water quality was one of the more common responses (after “other” or “null”) as to how recreational experiences could be maintained or improved on Lake Eau Claire. Concerns about the water quality of Lake Eau Claire were primarily attributed to excess algae, soil erosion, and excess sedimentation.

Most users indicated an understanding of the link between large amounts of phosphorous and low water quality (as it relates to algae blooms). The majority of respondents seemed to understand that shoreline restoration can prevent large amounts of nutrients from flowing into the lake. Most respondents described their lake frontage as natural vegetation and nearly half believe they have an adequate buffer strip. Only a quarter of respondents indicated that they use fertilizer on their property and most only fertilize once or twice a year on a very small area. Most respondents indicated they believe sedimentation is having a negative impact on Lake Eau Claire and that it is mainly due to bank erosion upstream.

Lake Eau Claire survey respondents indicated that they understand the link between water quality and the aquatic plant community. The vast majority of respondents agreed that native aquatic plants are

important to maintaining a healthy lake ecosystem and disagreed or strongly disagreed with the statement “removal of aquatic plants improves water clarity”. Many residents were unsure about the benefits coarse woody debris might have on aquatic organisms but believe it is important to see wildlife when they recreate on the lake.

The same percentage of respondents indicated an understanding of what aquatic invasive species are as indicated that they were unsure of the definition of aquatic invasive species. Nearly three-quarters of respondents would like to receive more information about how to identify and how to control aquatic invasive species. Those who have heard about aquatic invasive species before indicated newspapers/magazines, television, and newsletters as the places they’ve most often received their information. Many respondents were unsure whether aquatic invasive species have a negative impact on the economies of the communities surrounding the lake or have a negative impact on the aesthetics of the lake. Most respondents are concerned about Eurasian water milfoil and believe that invasive species should be controlled wherever possible. More education should be conducted to help respondents understand aquatic invasive species and the potential for invasion of Lake Eau Claire.

The Clean Boats, Clean Waters program was believed by respondents to be an effective way to keep aquatic invasive species from spreading to uninfested lakes. Most respondents only boat on Lake Eau Claire and only a third of respondents practice Clean Boats, Clean Waters steps by removing aquatic plants and other debris from their boat and trailer when they leave the lake.

The respondents to this survey overwhelmingly indicated that mailings were the way they would like to receive information on planning and management activities for the lake followed distantly by receiving information from a lake group. Lake newsletters and the newspaper may be the best way to reach Lake Eau Claire survey respondents with further information about the lake.

APPENDIX A

** For each question on the survey, the option with the highest percent of respondents is highlighted in gray. If the respondent did not answer the question, their response was marked as “null”.*

Lake Eau Claire Association Citizen Survey

This survey is being sent to you by the Citizen Science Center at Beaver Creek Reserve under contract with Lake Eau Claire Association and the Eau Claire County Land Conservation Department to ask you for your ideas, concerns, knowledge and interests regarding Lake Eau Claire.

Why are we conducting this survey?

This survey is being conducted as part of a Lake Planning grant received by the Eau Claire County Land Conservation Department to assess lake users values (**your** values) about water quality, recreational use and aquatic invasive species on Lake Eau Claire.

How will the survey results be used?

The results of this survey will be used to define goals for lake management plan being developed for Lake Eau Claire. While there may be publications as a result of this study, your identity will be completely anonymous.

Why is it important for me to fill out this survey?

In order for the survey to provide us with a representative picture of who uses Lake Eau Claire and their values about the lake, we need to hear from as many lake area residents and users as possible. Even if you have very little experience with the lake, your opinions matter. By participating in this survey you are directly informing decision makers for Lake Eau Claire of your needs and values about the Lake Eau Claire lake community. These decisions will play a key role in developing the aquatic plant and other management plans for the lake, which will directly affect all lake users and improve the ability of the plan to meet your needs.

Who should I contact if I have questions?

Sarah Braun

Citizen Science Director

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Kirsten Cahow-Scholtes

Eau Claire County Land Conservation Supervisor

715-839-4788

Kirsten.Cahow-Scholtes@co.eau-claire.wi.us

The time you spend completing this survey may be used to offset grant obligations. Please note the time at which you start the survey. At the end of this survey you will be asked to record the number of minutes it took you to complete the survey.

Instructions

Please answer the questions below by checking the answers that apply to you.



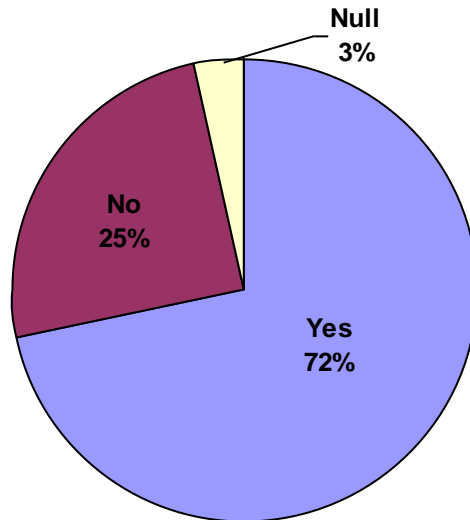
**Citizen Survey of
Lake Eau Claire
2009**



****About You****

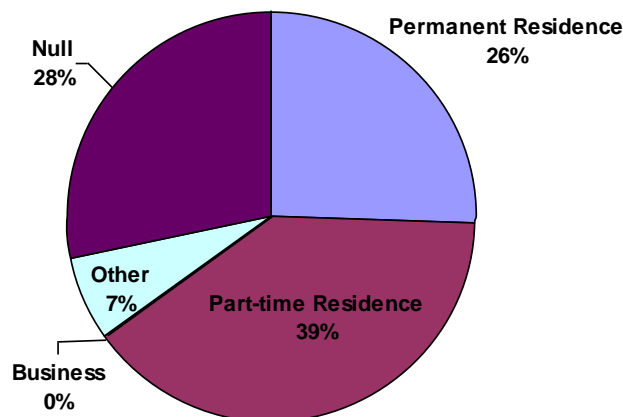
1. Do you own or rent waterfront property on Lake Eau Claire? If you answer No, please go to question #7.

- Yes (109, 72%) No (38, 25%) Null (5, 3%)



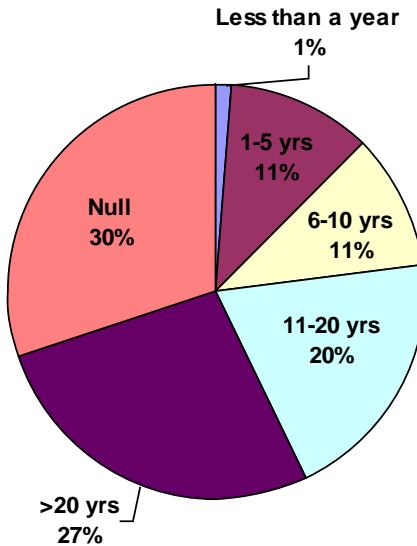
2. If you answered Yes to question #1, is the property on Lake Eau Claire your permanent residence, a part-time residence (such as a vacation home, etc.), a business or other? *If you own multiple properties on Lake Eau Claire, please describe in the space below.

- Permanent residence (39, 26%) Part-time residence (60, 39%) Business (0, 0%)
 Other (Please specify below) (10, 7%) Null (43, 28%)



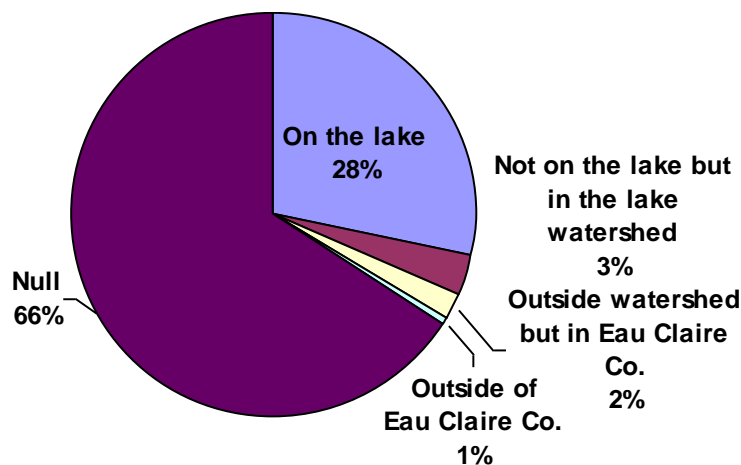
3. If you have a permanent or part-time residence or business on Lake Eau Claire, how many years have you had your property? Please round to the nearest year. (If you have multiple properties, please answer this question thinking of the property you have had the longest).

- Less than a year (2, 1%) 1-5 years (17, 11%) 6-10 years (16, 11%)
- 11-20 years (30, 20%) More than 20 years (41, 27%) Null (46, 30%)



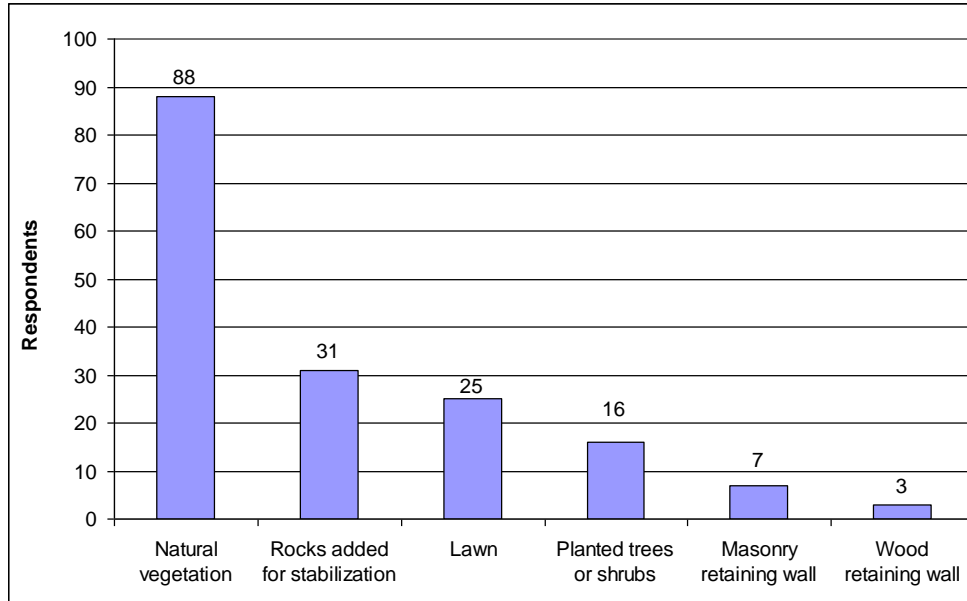
4. If you don't live on Lake Eau Claire, but own or rent property in the vicinity of the Lake, where is your property or rental located? See attached map. Then skip to question #8.

- On the lake (43, 28%)
- Outside watershed but in Eau Claire Co. (3, 2%)
- Not on the lake but in the lake watershed (5, 3%)
- Outside of Eau Claire Co. (1, 1%)
- Null (100, 66%)



5. Which of the following best describes your lake frontage? Check all that apply.

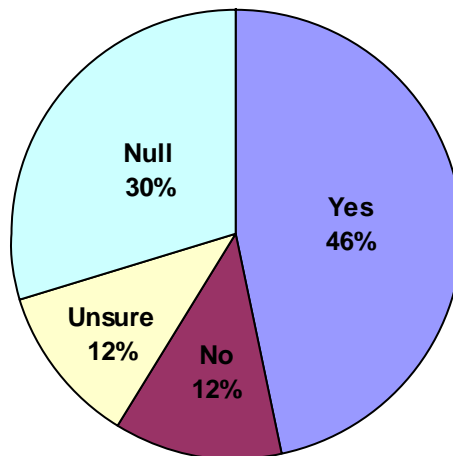
- Masonry retaining wall (7 respondents)
- Lawn (25 respondents)
- Wood retaining wall (3 respondents)
- Natural vegetation (88 respondents)
- Planted trees or shrubs (16 respondents)
- Rocks added for stabilization (31 respondents)



6. Riparian buffer strips are strips of land along the shoreline that are planted in native vegetation incorporating the natural herb, shrub and tree layers. Buffers are designed to intercept pollutants and sediment running off the landscape, as well as slow the flow or runoff to the lake.

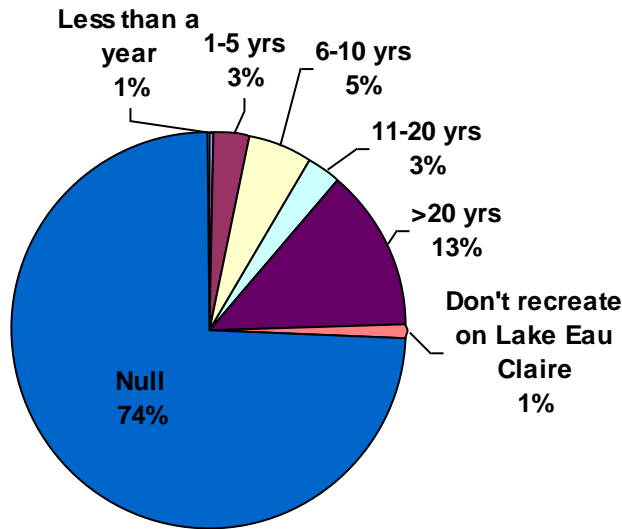
If you own or rent property on Lake Eau Claire, would you say your property includes an adequate buffer strip?

- Yes (71, 46%)
- No (18, 12%)
- Unsure (18, 12%)
- Null (45, 30%)

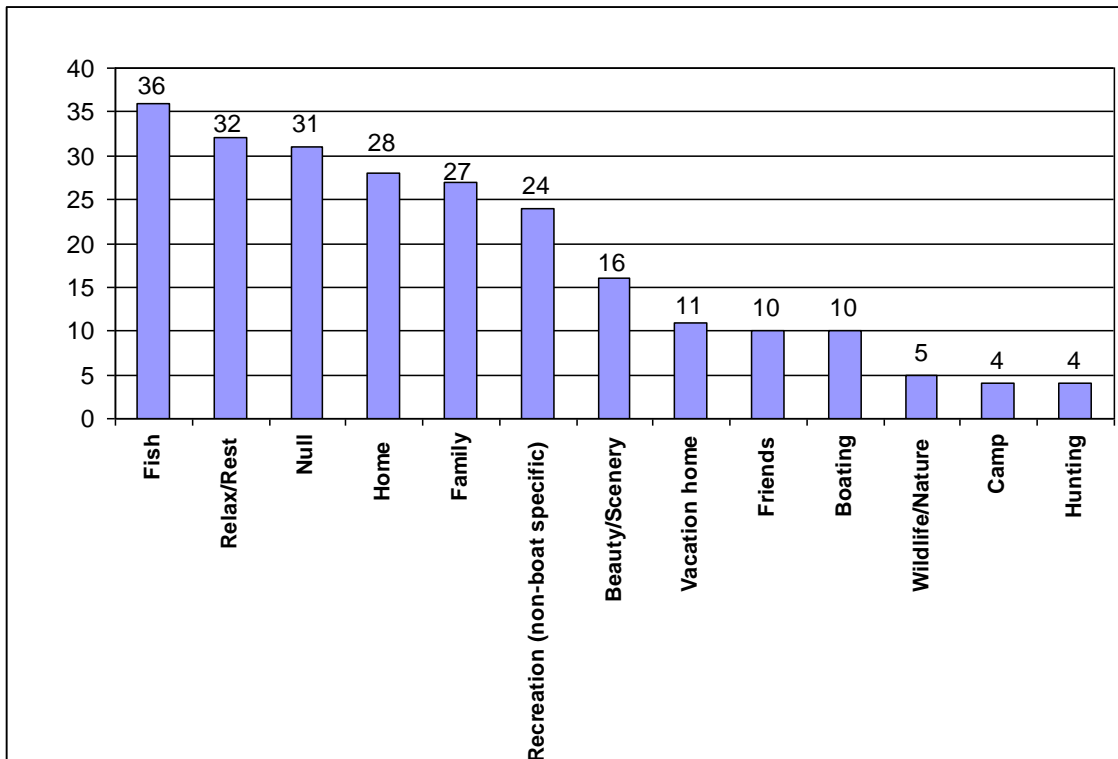


7. If you DO NOT own or rent property on Lake Eau Claire, how long have you been visiting or recreating on the lake?

- Less than a year (1, 1%)
- 1-5 years (4, 3%)
- 6-10 years (8, 5%)
- 11-20 years (4, 3%)
- More than 20 years (20, 13%)
- Don't recreate on Lake Eau Claire (2, 1%)
- Null (112, 74%)



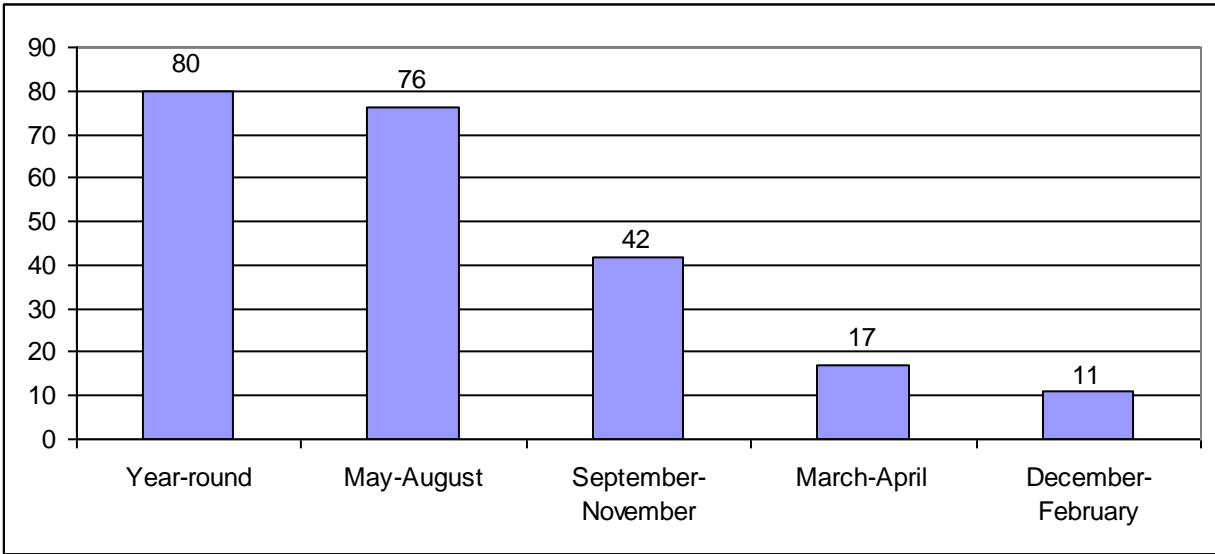
8. What does Lake Eau Claire mean to you? Write your response in the space below.



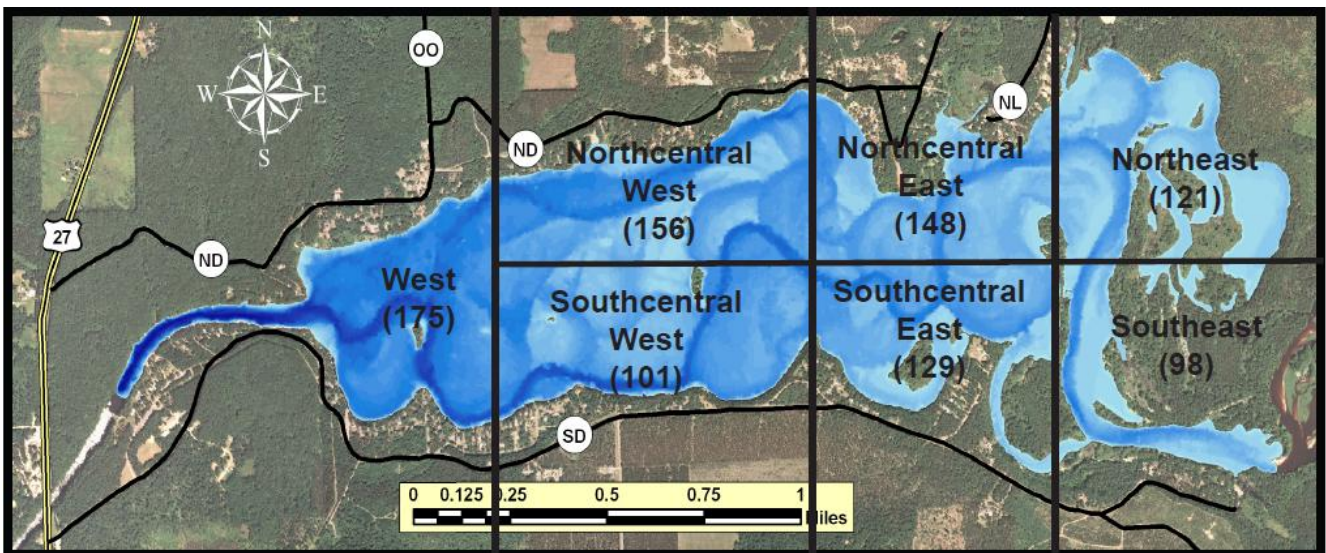
****Recreation****

9. What time of the year do you generally use Lake Eau Claire? Check all that apply.

- March - April (17 respondents)
- May - August (76 respondents)
- September - November (42 respondents)
- December - February (11 respondents)
- Year-round (80 respondents)

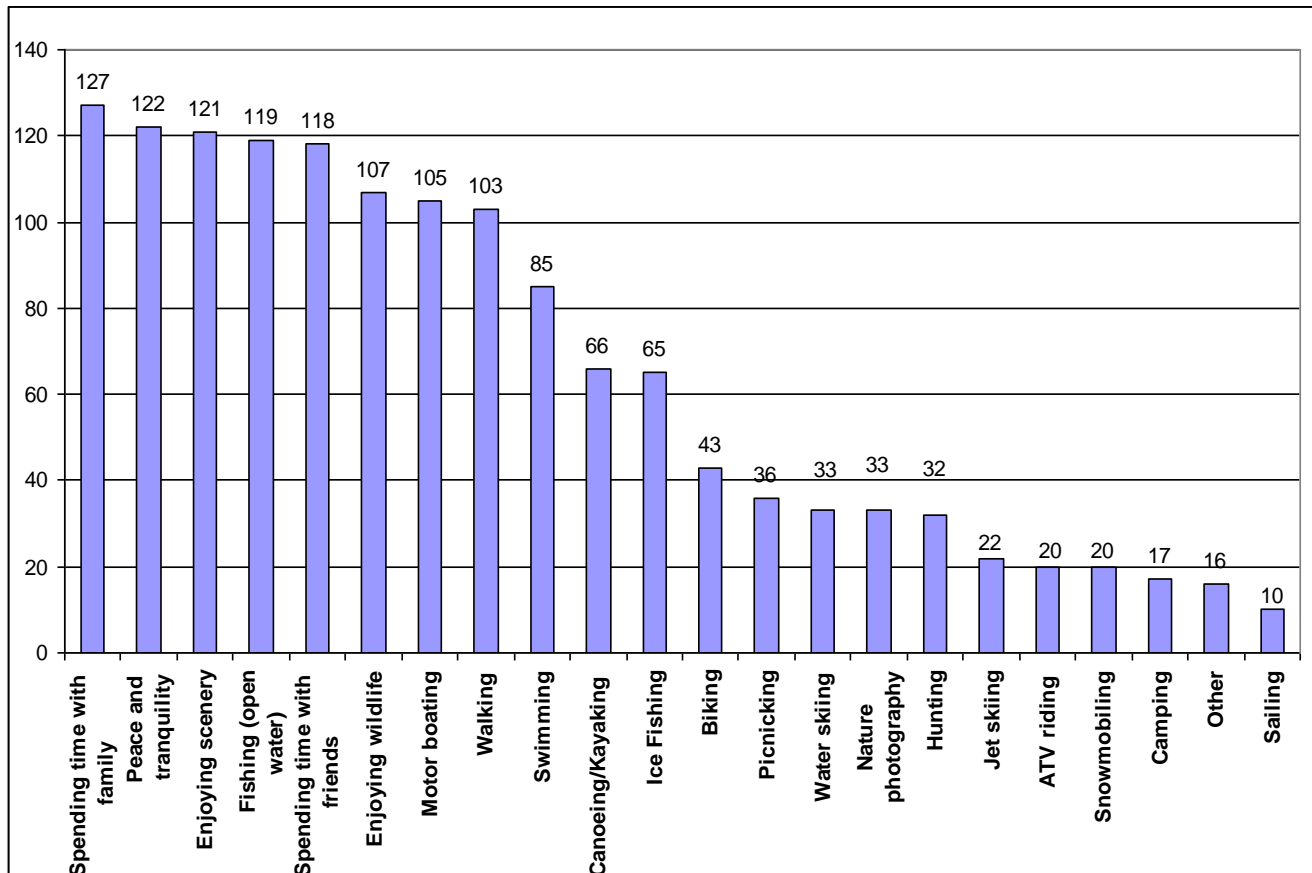


10. On the attached map of Lake Eau Claire, please place an “x” on the lake or shoreline areas that you use regularly. (Number refers to # of check marks in a given section)



11. What activities do you enjoy at/on Lake Eau Claire? Check all that apply.

- Hunting (32 respondents) Swimming (85 resp.) Walking (103 respondents)
- Jet skiing (22 respondents) Biking (45 respondents) Enjoying scenery (121 resp.)
- Motor boating (105 resp.) Sailing (10 respondents) Nature photography (33 resp.)
- ATV riding (20 resp.) Camping (17 respondents) Picnicking (36 respondents)
- Water skiing (33 resp.) Canoeing/Kayaking (66 resp.) Enjoying wildlife (107 resp.)
- Snowmobiling (20 resp.) Fishing (open wat.) (119 resp.) Peace/tranquility (122 resp.)
- Spending time with friends (118 respondents) Ice fishing (65 respondents)
- Spending time with family (127 respondents) Other (16 respondents)

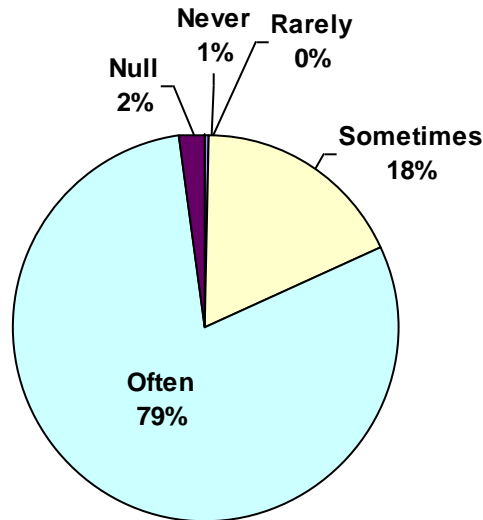


12. Of the activities listed in question 11, list the three you value the most.

- 1) **Motor boating (119 respondents)**, Fishing (open water) (52 respondents), Spending time with family (24 respondents)
- 2) **Fishing (open water) (25 respondents)**, Spending time with family (20 respondents), and Motor boating, Peace and tranquility, Spending time with friends, Null (13 respondents each)
- 3) **Motor boating (22 respondents)**, Peace and tranquility (20 respondents), Spending time with family (19 respondents)

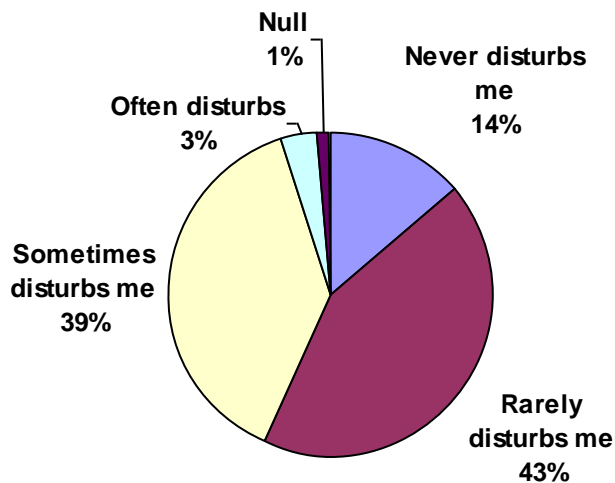
13. How often do you encounter other people on Lake Eau Claire?

- I never see or hear another person (1, 1%)
- I rarely see or hear another person (0, 0%)
- I sometimes see or hear other people (27, 18%)
- I often see or hear other people (121, 79%)
- Null (3, 2%)



14. How does the presence of other people on or around Lake Eau Claire affect your experience on the lake?

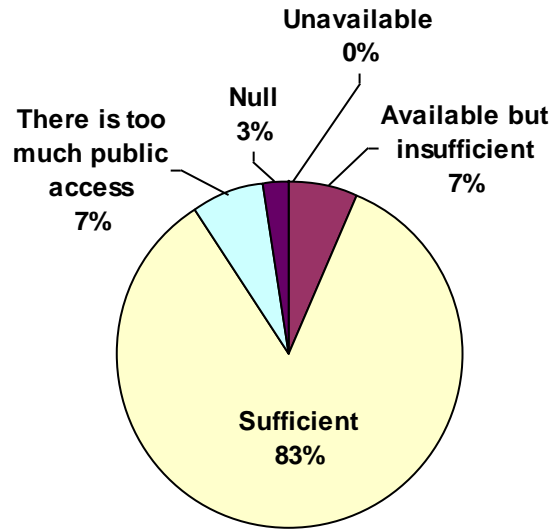
- The noise and activities of others never disturbs me (21, 14%)
- The noise and activities of others rarely disturbs me (65, 43%)
- The noise and activities of others sometimes disturbs me (59, 39%)
- The noise and activities of others often disturbs me (5, 3%)
- Null (2, 1%)



13. In your opinion, which statement best describes current public access to Lake Eau Claire?

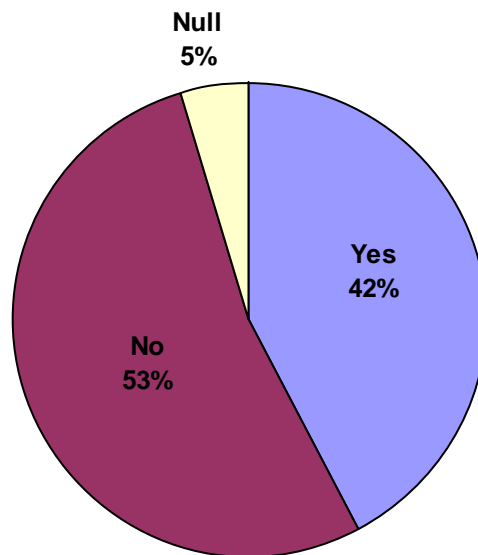
Check ONLY one.

- Public access is unavailable (0, 0%)
- Public access is available but insufficient (10, 7%)
- Public access is sufficient (128, 83%)
- There is too much public access (10, 7%)
- Null (4, 3%)

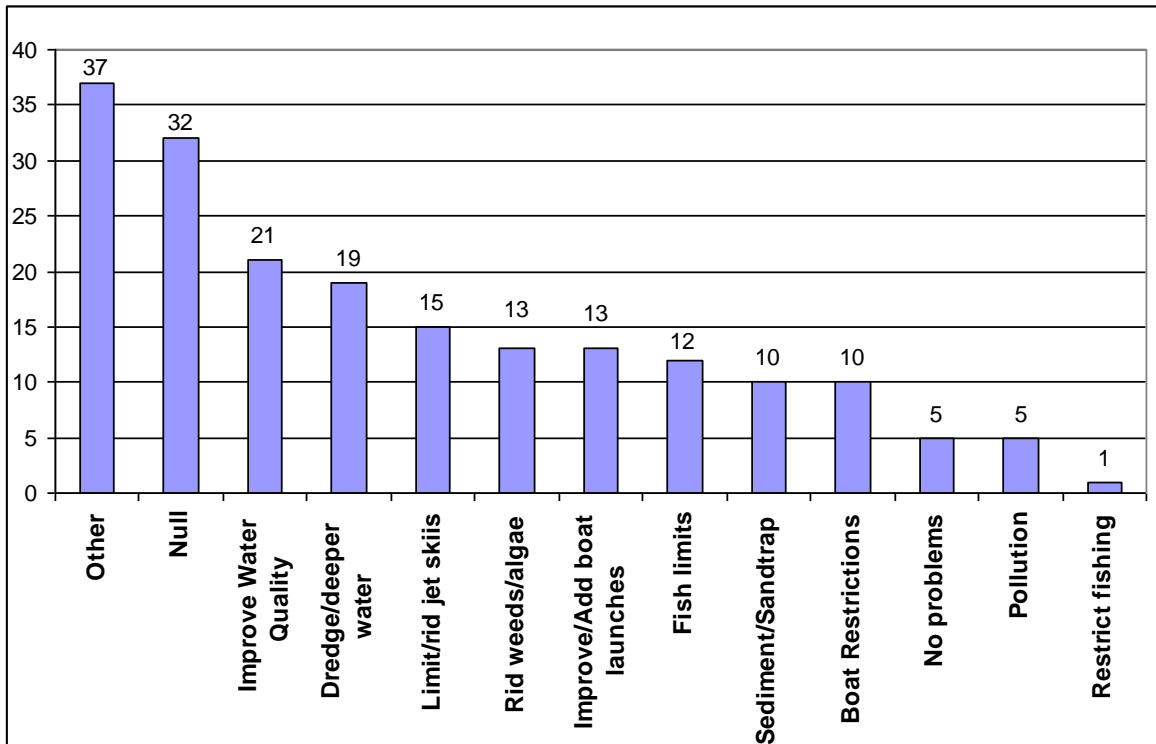


14. In your opinion, does public access on Lake Eau Claire contribute to crowding on the lake?

- Yes (64, 42%)
- No (81, 53%)
- Null (7, 5%)



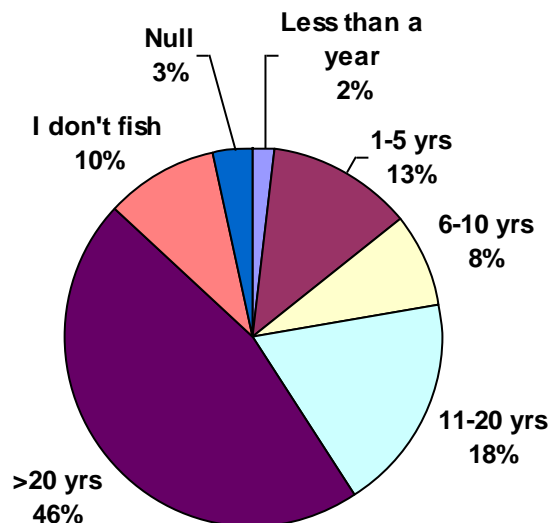
15. In your opinion, what could be done to maintain or improve your recreational experience on Lake Eau Claire?



****Fishing & Wildlife****

16. How many years of fishing experience do you have on Lake Eau Claire?

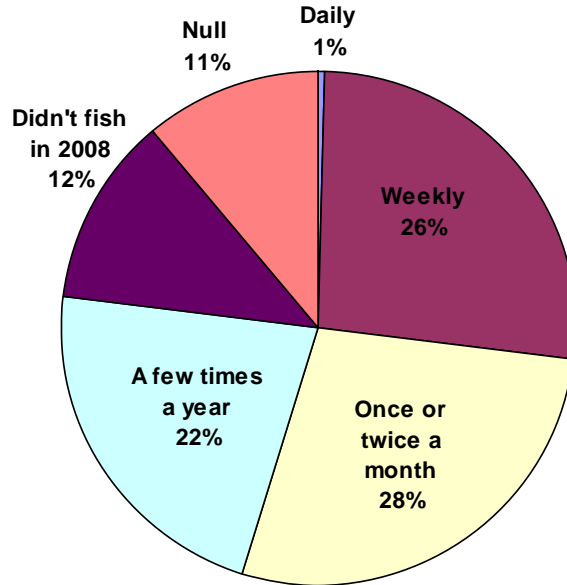
- Less than a year (3, 2%)
- 1-5 years (19, 13%)
- 6-10 years (12, 8%)
- 11-20 years (28, 18%)
- More than 20 years (70, 46%)
- I don't fish (go to question 23) (15, 10%)
- Null (5, 3%)



17. In 2008, how often did you fish Lake Eau Claire?

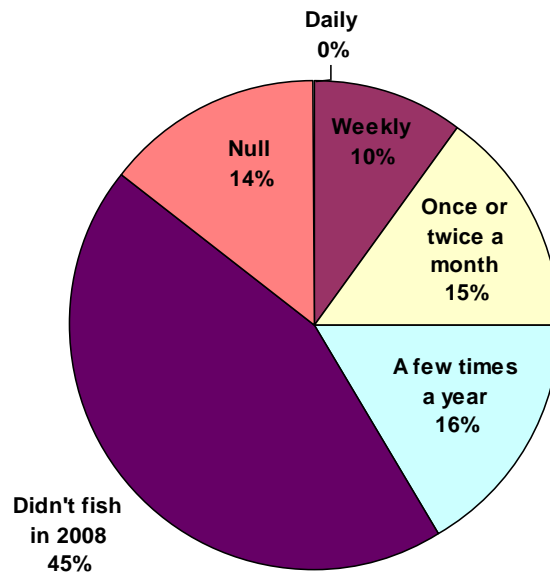
Open water:

- Daily (1, 1%)
- Once or twice a month (42, 28%)
- Didn't fish in 2008 (18, 12%)
- Weekly (40, 26%)
- A few times a year (34, 22%)
- Null (17, 11%)



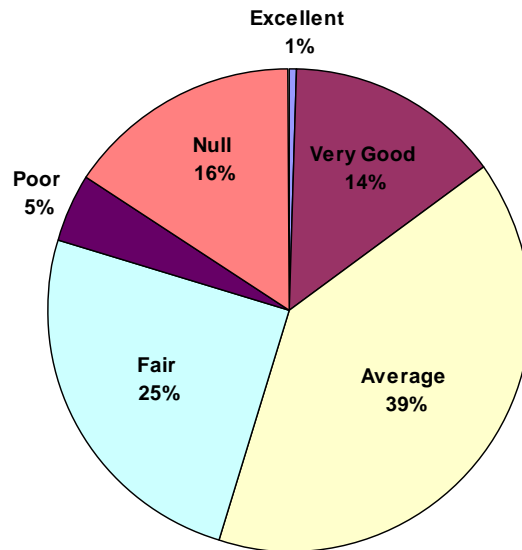
Ice fishing:

- Daily (0, 0%)
- Once or twice a month (23, 15%)
- Didn't fish in 2008/2009 (67, 45%)
- Weekly (15, 10%)
- A few times a year (25, 16%)
- Null (22, 14%)



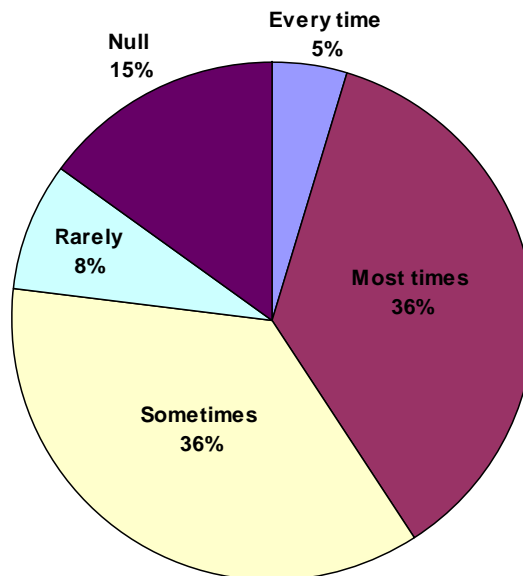
18. How would you rate your OVERALL fishing experiences on Lake Eau Claire?

- Excellent (1, 1%)
- Very Good (22, 14%)
- Average (60, 39%)
- Fair (38, 25%)
- Poor (7, 5%)



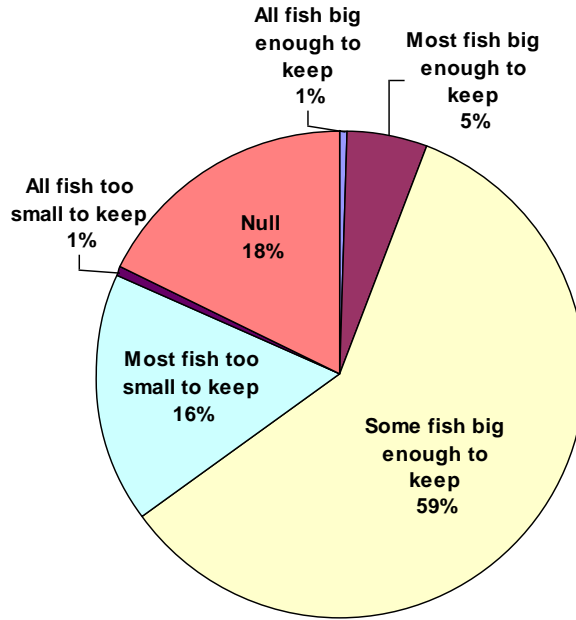
19. OVERALL, how would you describe the frequency with which you catch fish on Lake Eau Claire?

- I catch fish every time I go out (7, 5%)
- I catch fish most times I go out (55, 36%)
- I sometimes catch fish (55, 36%)
- I rarely catch fish (12, 8%)
- Null (23, 15%)



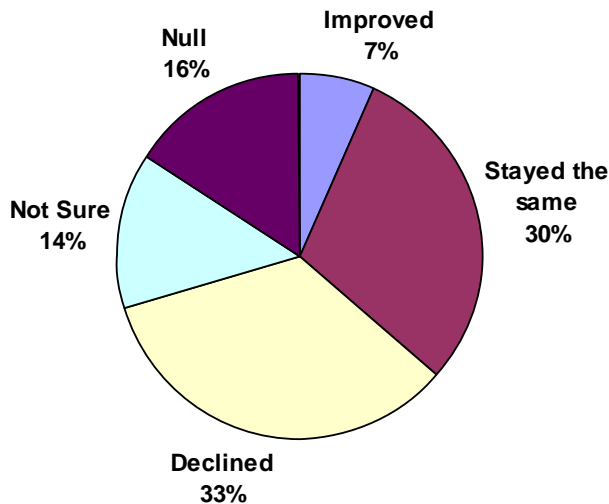
20. OVERALL, how would you describe the size of the fish you catch in Lake Eau Claire?

- All fish are big enough to keep (1, 1%)
- Most fish are big enough to keep (8, 5%)
- Some fish are big enough to keep (90, 59%)
- Most fish are too small to keep (25, 16%)
- All fish are too small to keep (1, 1%)
- Null (27, 18%)



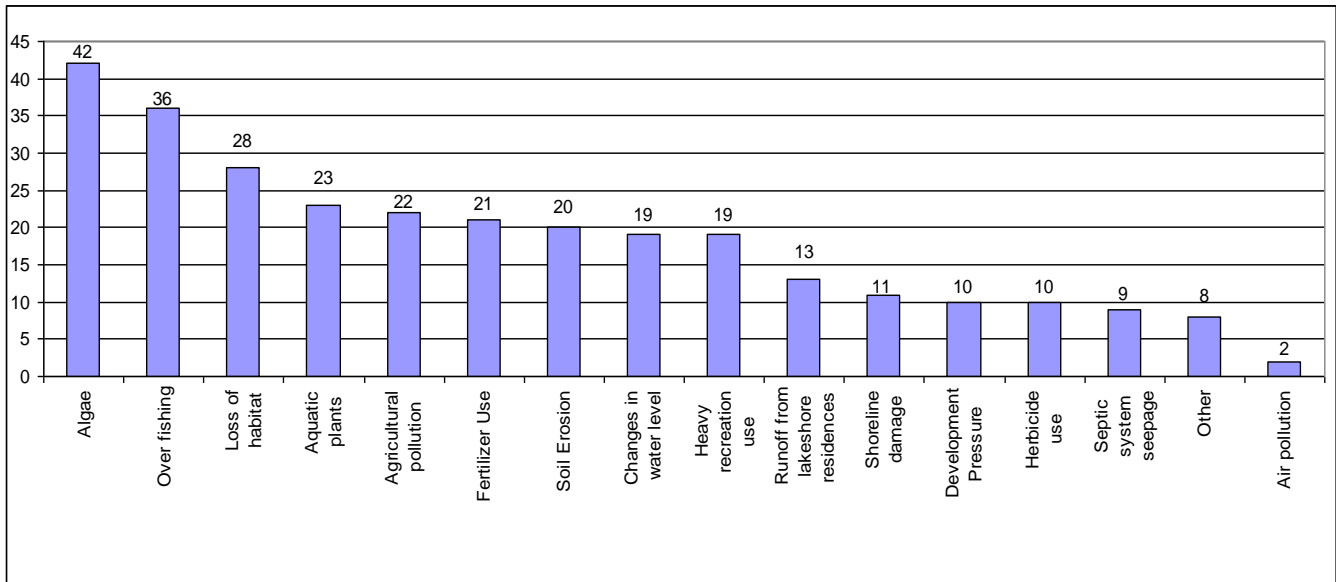
21. If you have visited the lake over the past 5 years, how do you think the quality of fishing has changed over those years?

- Improved (10, 7%)
- Stayed the same (45, 30%)
- Declined (51, 33%)
- Not Sure (21, 14%)
- Null (24, 16%)



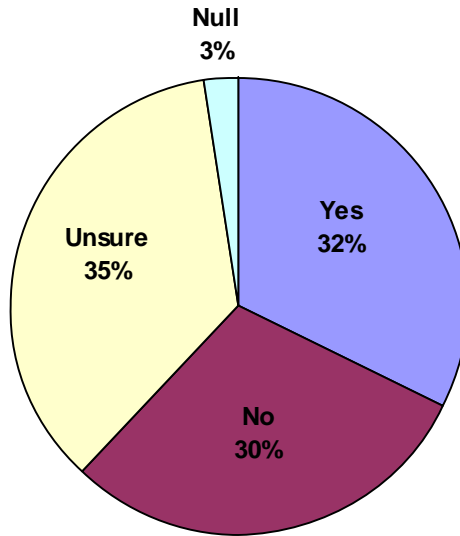
22. If you indicated that fishing quality has declined, what do you believe has contributed to the decline? Check all that apply.

- Loss of habitat (28 respondents)
- Over fishing (36 respondents)
- Soil erosion (20 respondents)
- Development pressure (10 resp.)
- Septic system seepage (9 resp.)
- Agricultural pollution (22 resp.)
- Aquatic plants (23 respondents)
- Air pollution (2 respondents)
- Shoreline damage (11 respondents)
- Fertilizer use (21 respondents)
- Other (8 respondents)
- Heavy recreation use (19 respondents)
- Herbicide use (10 respondents)
- Runoff from lakeshore residences (13 respondents)
- Algae (42 respondents)
- Changes in water level (19 respondents)



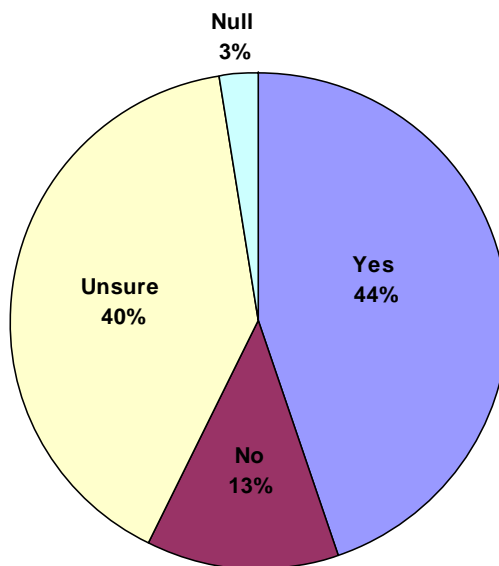
23. Coarse woody habitat is defined as trees, or portions of, that have fallen into the lake and can be either attached or lying on the bottom. Do you feel that the current amount of coarse woody habitat in the lake provides adequate habitat for fish and other aquatic organisms?

- Yes (49, 32%)
- No (45, 30%)
- Unsure (54, 35%)
- Null (4, 3%)



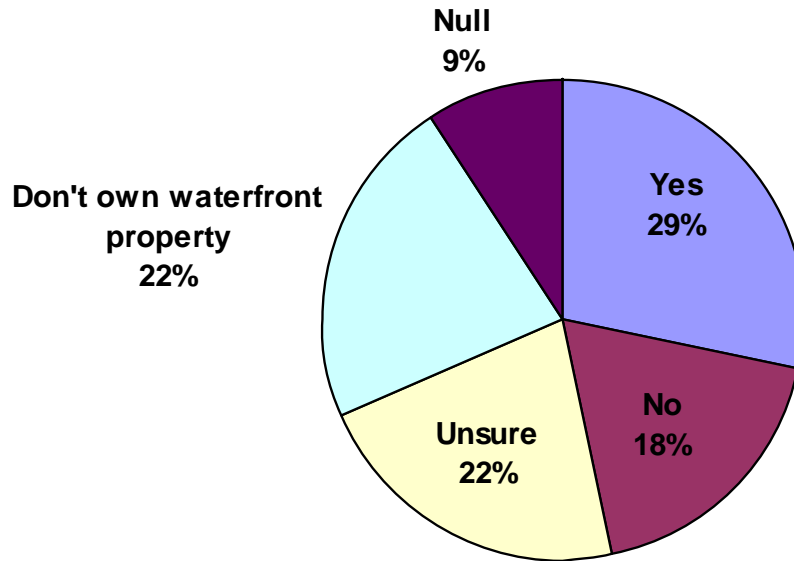
24. Do you feel the fish community would improve if more coarse woody habitat was added to the lake?

- Yes (68, 44%)
- No (19, 13%)
- Unsure (61, 40%)
- Null (4, 3%)



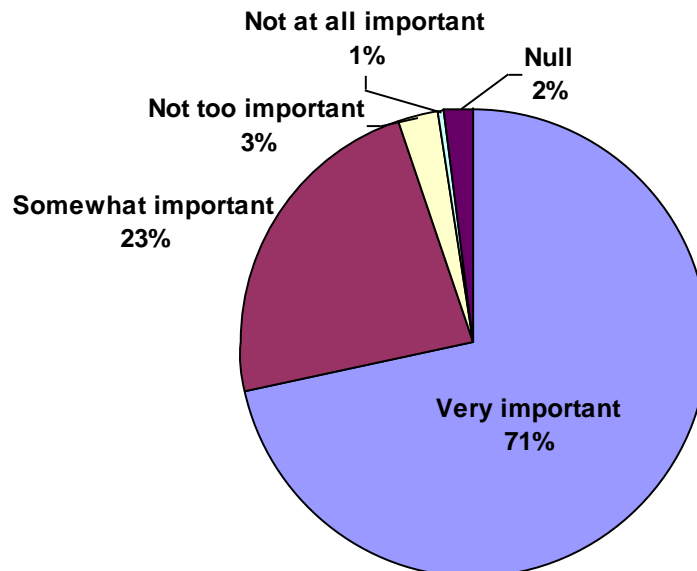
25. If you OWN waterfront property, would you be willing to add trees as coarse woody habitat to the lake along your property?

- Yes (43, 29%)
- No (28, 18%)
- Unsure (33, 22%)
- Do not own waterfront property (34, 22%)
- Null (14, 9%)



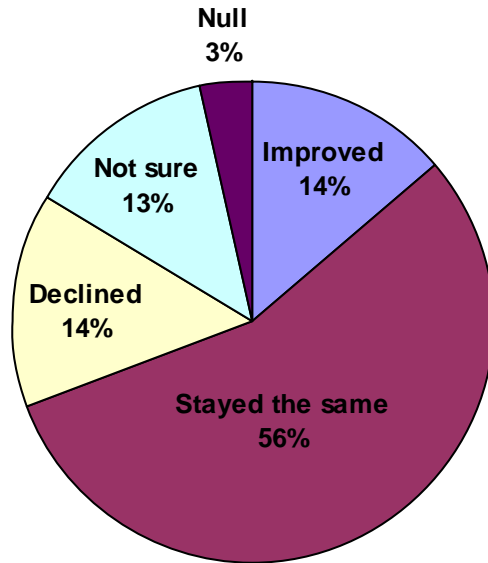
26. How important is it for you to see wildlife (ducks, geese, squirrels, songbirds, frogs, turtles, etc) when you use Lake Eau Claire?

- Very important (109, 71%)
- Somewhat important (35, 23%)
- Not too important (4, 3%)
- Not at all important (1, 1%)
- Null (14, 2%)

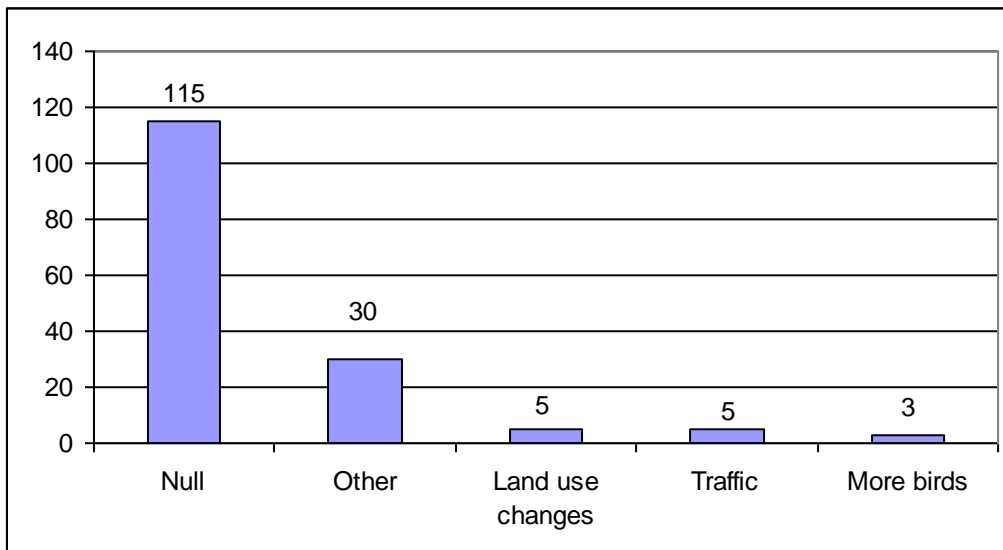


27. If you have visited Lake Eau Claire in the past 5 years, how do you think the quality of the wildlife habitat around the lake has changed during that time?

- Improved (21, 14%)
- Stayed the same (84, 56%)
- Declined (22, 14%)
- Not sure (20, 13%)
- Null (5, 3%)



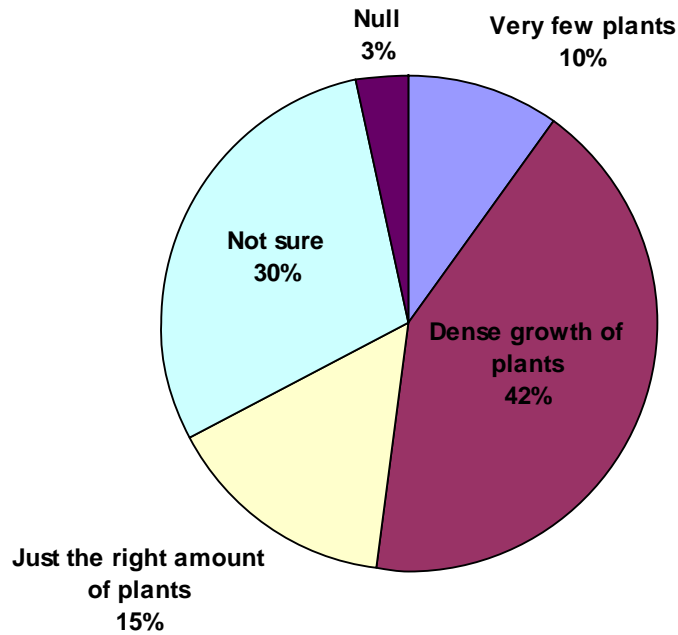
28. If you feel the quality of the wildlife habitat has changed, what factors do you feel have contributed to this change?



****Aquatic Plants ****

29. In your opinion, which statement best describes the amount of aquatic plants (NOT algae) in Lake Eau Claire?

- Very few plants (15, 10%)
- Dense growth of plants (64, 42%)
- Just the right amount of plants (23, 15%)
- Not Sure (45, 30%)
- Null (5, 3%)

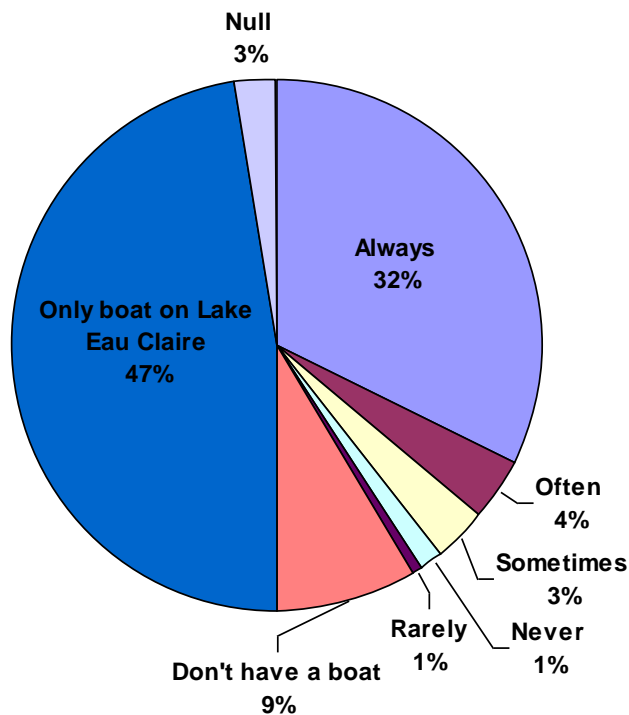


****Aquatic Invasive Species ****

Aquatic Invasive Species (AIS) include both plant and animal species. They are non-native species that live in, on, or next to water and whose presence is, or is likely to be, detrimental to the economy, environment, or human health.

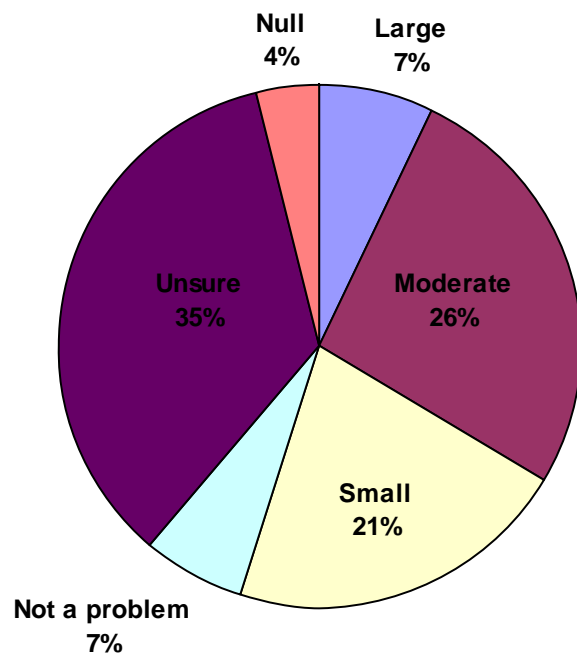
30. How often do you clean your boat, trailer, and fishing equipment and empty live wells and tanks before using them in Lake Eau Claire after they have been used in another lake?

- Always (49, 32%)
- Often (6, 4%)
- Sometimes (5, 3%)
- Never (2, 1%)
- Rarely (1, 1%)
- Don't have a boat (13, 9%)
- Only boat on Lake Eau Claire (72, 47%)
- Null (4, 3%)



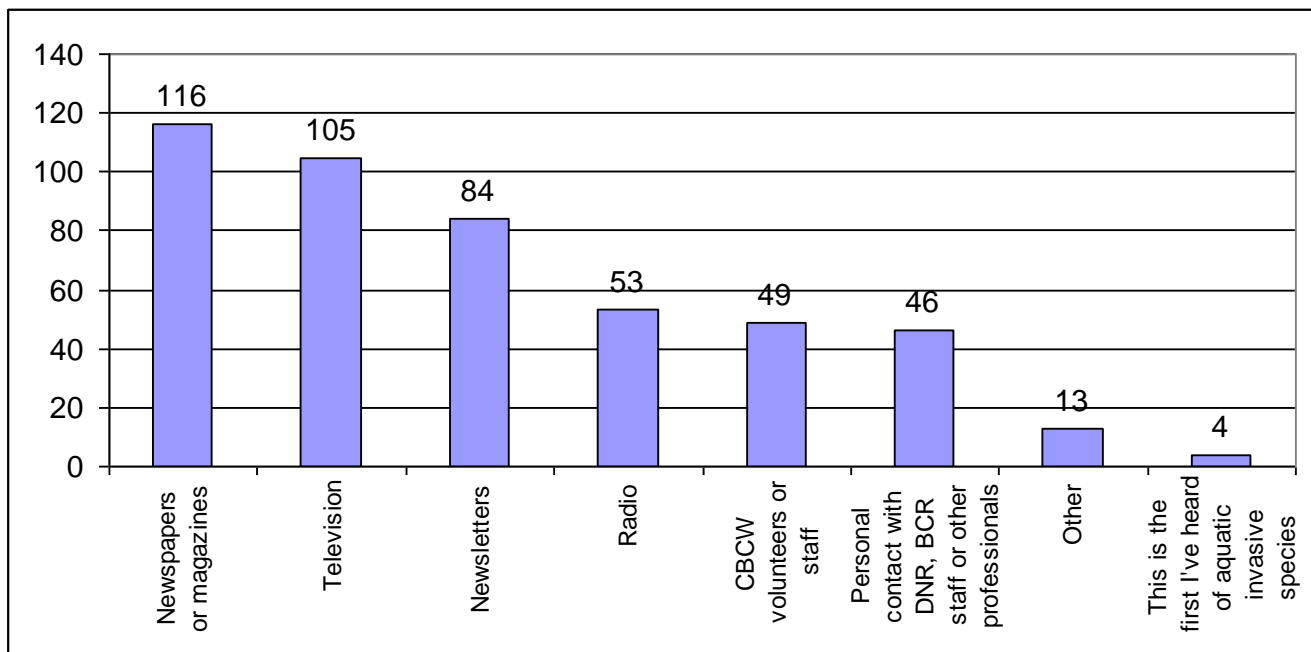
31. How much of a problem, if at all, do you believe aquatic invasive species are in Lake Eau Claire?

- Large (11, 7%)
- Moderate (40, 26%)
- Small (32, 21%)
- Not a problem (10, 7%)
- Unsure (53, 35%)
- Null (6, 4%)



32. Other than this survey, where have you heard about aquatic invasive species? Check all that apply.

- This is the first I've heard of aquatic invasive species (4 respondents)
- Newsletters (84 respondents)
- Newspapers or magazines (116 respondents)
- Television (105 respondents)
- Clean Boats, Clean Waters volunteers or staff (49 respondents)
- Radio (53 responses)
- Personal contact with DNR, Beaver Creek Reserve, or other professionals (46 respondents)
- Other (13 respondents)



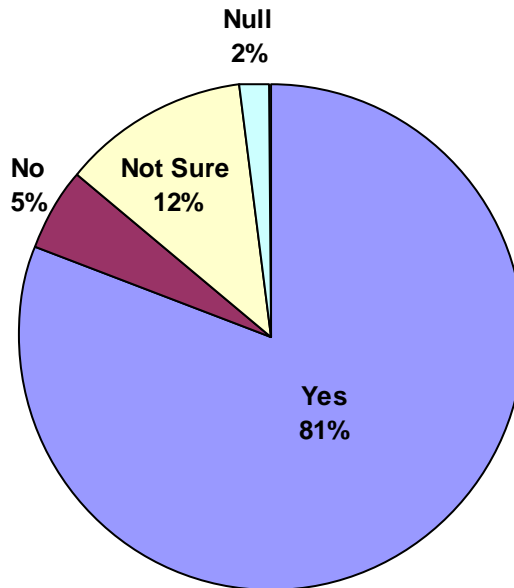
33. Please place an X in the column next to each statement below indicating whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or are Undecided (U).

33.	Statement	SA	A	D	SD	U	Null
a.	Aquatic invasive species are non-native organisms that are spreading in Lake Eau Claire and displacing or otherwise threatening native organisms.	17 11%	56 37%	11 7%	4 3%	57 37%	7 5%
b.	Aquatic invasive species have a negative impact on the economy of the lake region (ie. Towns of Bridge Creek, Ludington, Wilson, Fairchild, Eau Claire and Augusta).	23 15%	51 34%	14 9%	4 3%	54 35%	6 4%
c.	Aquatic invasive species have a negative impact on the aesthetics of the lake.	35 23%	56 37%	13 9%	2 1%	40 26%	6 4%
d.	I am concerned about the damage Eurasian watermilfoil can do to the ecology of the lake.	50 33%	61 40%	4 3%	0 0%	32 21%	5 3%
e.	Invasive species should be controlled whenever possible.	79 52%	60 39%	0 0%	0 0%	6 4%	7 5%
f.	I believe the Clean Boats, Clean Waters program is an effective way to keep aquatic invasive species from spreading to uninfested lakes.	40 26%	85 56%	4 3%	0 0%	18 12%	5 3%
g.	I would like more information about how to CONTROL invasive species.	28 18%	72 47%	13 9%	2 1%	24 16%	13 9%
h.	I would like more information about how to IDENTIFY invasive species.	39 26%	78 51%	12 8%	0 0%	11 7%	12 8%
i.	Native aquatic plants are important for maintaining a healthy lake ecosystem.	77 50%	59 38%	1 1%	1 1%	7 5%	7 5%
j.	I dislike all aquatic plants along my shoreline property.	2 1%	20 13%	58 38%	33 22%	15 10%	24 16%
k.	Removal of aquatic plants improves water quality.	6 4%	19 13%	48 31%	38 25%	28 18%	13 9%
l.	Shoreline restoration projects improve the aesthetics of Lake Eau Claire.	47 31%	77 50%	5 3%	4 3%	12 8%	7 5%
m.	Shoreline restoration prevents phosphorous, other nutrients, and soil from washing out of lawns and into the lake.	44 29%	74 48%	7 5%	3 2%	17 11%	7 5%
n.	Too much phosphorous in a lake can lead to algae blooms.	72 47%	55 36%	1 1%	0 0%	17 11%	7 5%
o.	Property owners on Lake Eau Claire have a responsibility to try to improve the lake ecology.	65 43%	76 49%	0 0%	0 0%	4 3%	7 5%
p.	Users of Lake Eau Claire have a responsibility to try to improve the lake ecology.	75 49%	67 44%	0 0%	0 0%	3 2%	7 5%
q.	I am concerned about recreational safety on Lake Eau Claire.	31 20%	69 46%	21 14%	8 5%	14 9%	9 6%

****Erosion & Sedimentation****

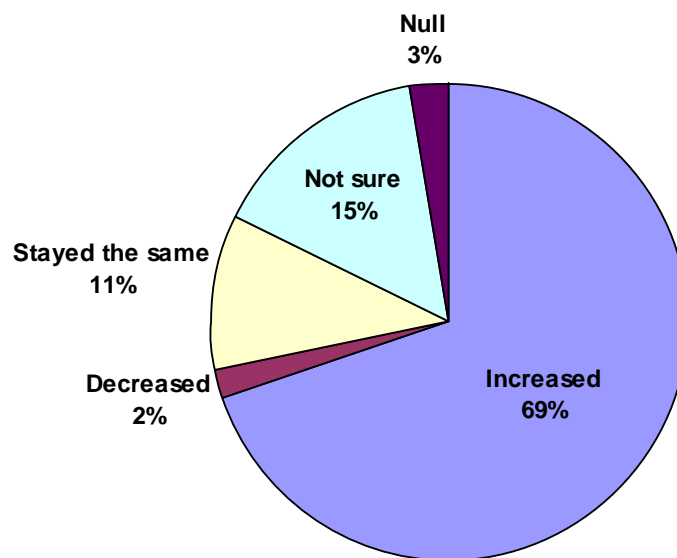
34. Sedimentation is the process by which particles, such as sand, clay, silt, pebbles and organic material, suspended in water settles to the bottom of the lake. Do you believe sedimentation in Lake Eau Claire is having a negative impact on the lake?

- Yes (123, 81%) No (8, 5%) Not sure (18, 12%)
 Null (3, 2%)



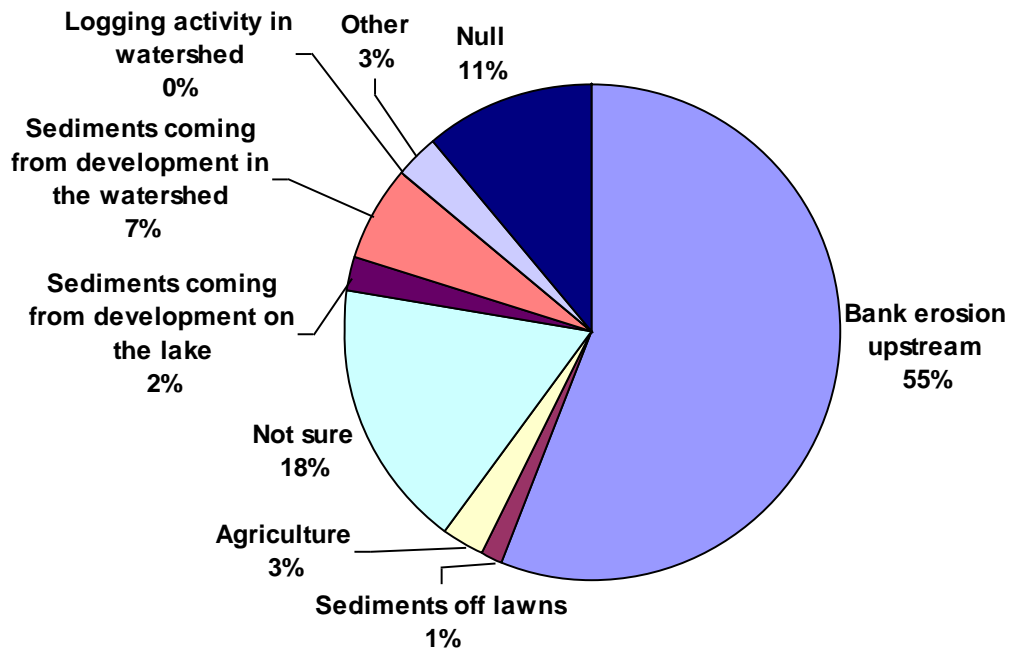
35. In general, do you feel the amount of sedimentation in Lake Eau Claire has changed in the last five years? If so, how has it changed?

- Increased (106, 69%) Decreased (3, 2%) Stayed the same (16, 11%)
 Not sure (23, 15%) Null (4, 3%)



36. If you think sedimentation is increasing, what do you think is contributing most to the sedimentation in the lake (Check only ONE)?

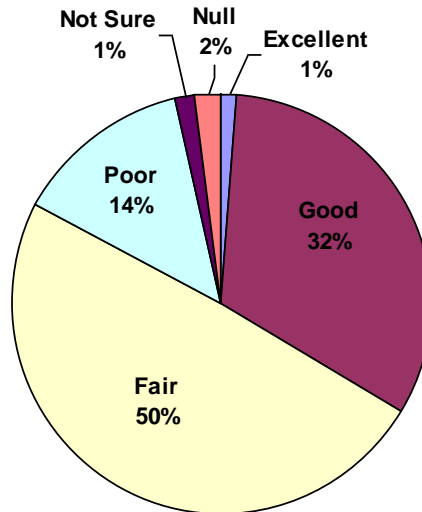
- Bank erosion upstream (85, 55%)
- Sediments coming from development on the lake (3, 2%)
- Sediments coming from development in the watershed (10, 7%)
- Sediments off lawns (2, 1%)
- Agriculture (4, 3%)
- Logging activity in watershed (0, 0%)
- Not sure (27, 18%)
- Other (4, 3%)
- Null (17, 11%)



****Water Quality****

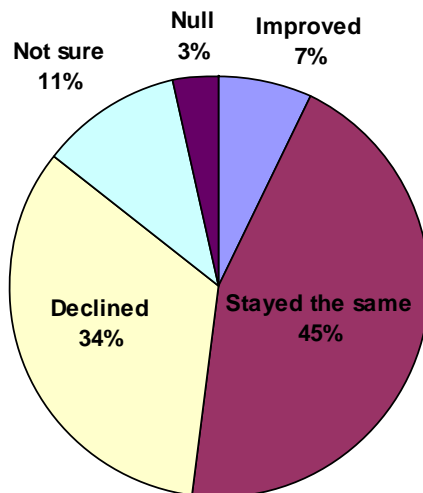
37. In your opinion, which statement best describes the current water quality in Lake Eau Claire?

- Excellent (2, 1%)
- Good (49, 32%)
- Fair (75, 50%)
- Poor (21, 14%)
- Not Sure (2, 1%)
- Null (3, 2%)



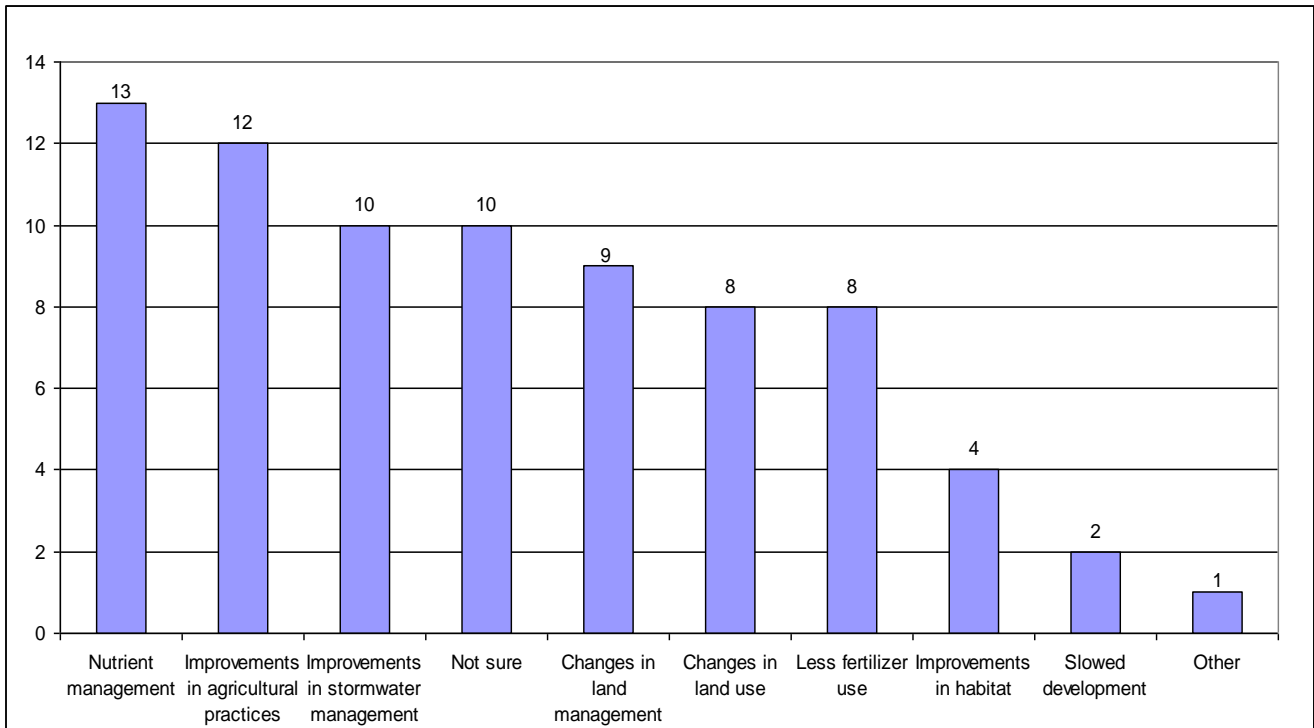
38. In general, how do you feel the water quality of Lake Eau Claire has changed in the last five years?

- Improved (11, 7%)
- Stayed the same (68, 45%)
- Declined (51, 34%)
- Not Sure (17, 11%)
- Null (5, 3%)



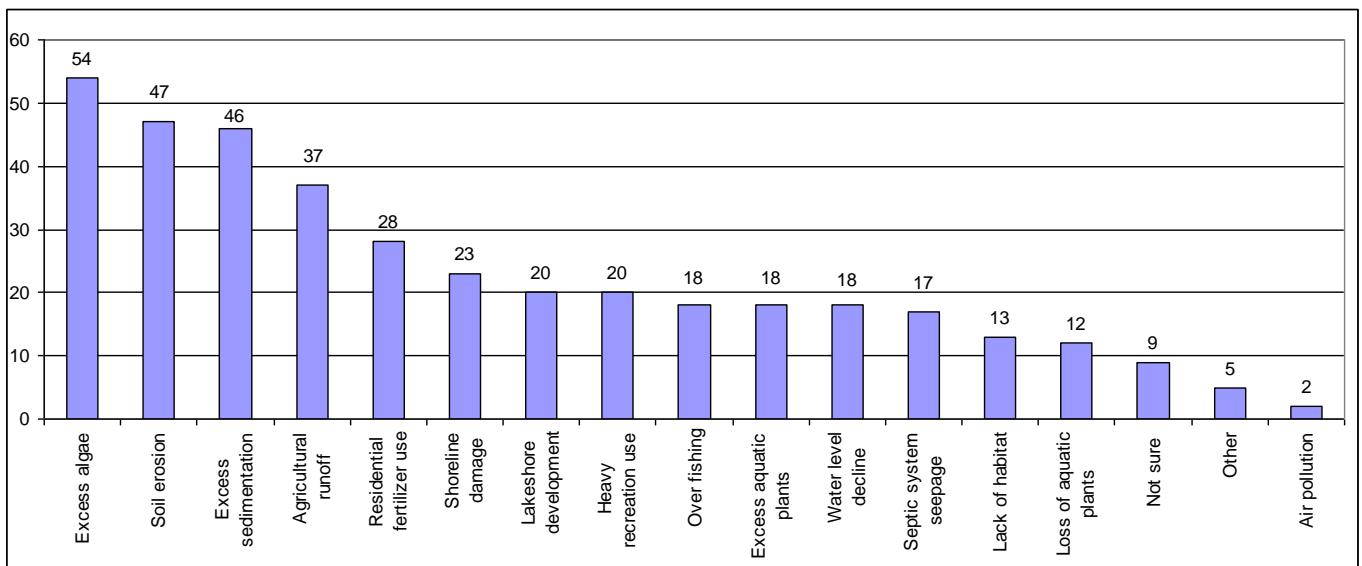
39. If it has improved, what do you feel has contributed to this? Check all that apply.

- Improvements in habitat (4 respondents)
- Changes in land management (9 respondents)
- Changes in land use (8 respondents)
- Slowed development (2 respondents)
- Nutrient management (13 respondents)
- Less fertilizer use (8 respondents)
- Improvements in stormwater management (10 respondents)
- Improvements in agricultural practices (12 respondents)
- Not sure (10 respondents)
- Other (1 respondents)



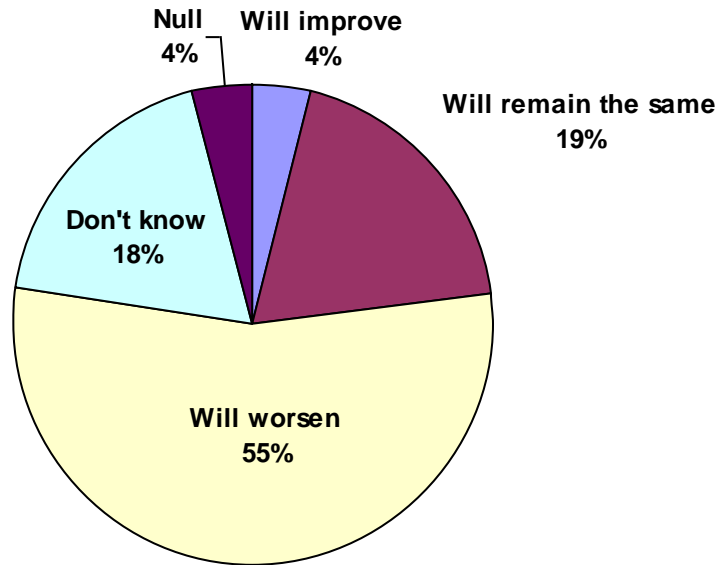
40. If it has declined, what in your opinion are the primary causes? Check all that apply.

- Loss of aquatic plants (12 respondents)
- Lack of Habitat (13 respondents)
- Shoreline damage (23 respondents)
- Over fishing (18 respondents)
- Lakeshore development (20 respondents)
- Heavy recreation use (20 respondents)
- Septic system seepage (17 respondents)
- Soil erosion (47 respondents)
- Excess sedimentation (46 respondents)
- Residential fertilizer use (28 respondents)
- Agricultural run off (37 respondents)
- Air pollution (2 respondents)
- Excess aquatic plants (18 respondents)
- Excess algae (54 respondents)
- Water level decline (18 respondents)
- Not sure (9 respondents)
- Other (5 respondents)



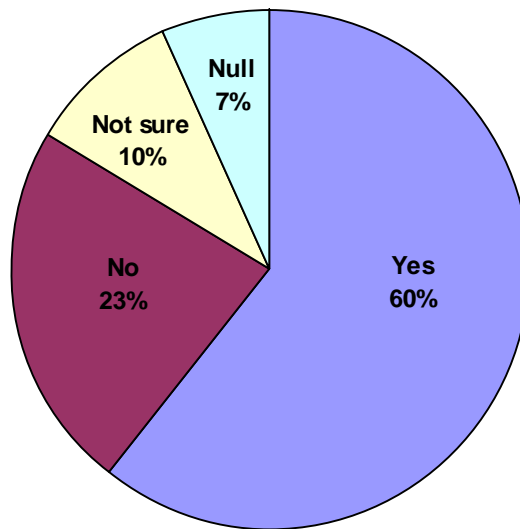
41. If current land use practices continue, how would you describe the future outlook of the lake?

- Will improve (6, 4%)
- Will remain the same (29, 19%)
- Will worsen (83, 55%)
- Don't know (28, 18%)
- Null (6, 4%)



42. If the lake was restored to a healthier condition, would you use it more?

- Yes (92, 60%)
- No (35, 23%)
- Not sure (15, 10%)
- Null (10, 7%)

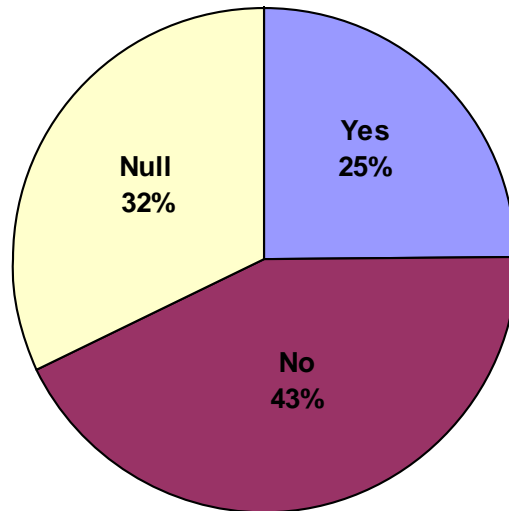


****Watershed Land Management****

Please answer questions 43 to 50 only if you live in the Lake Eau Claire watershed as outlined on the map enclosed. The watershed is all the land that drains to the lake and the land that is within that watershed. How the land in the watershed is used and managed determines the water quality of Lake Eau Claire.

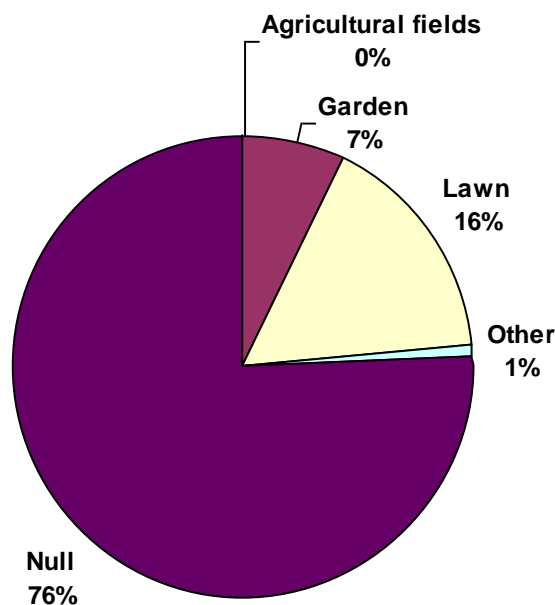
43. Do you use fertilizer anywhere on your property? If no, go to question 48.

- Yes (38, 25%) No (65, 43%) Null (49, 32%)



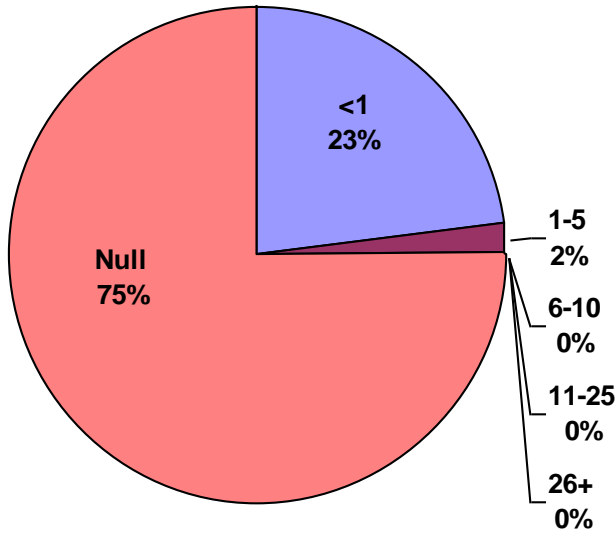
44. If yes, where?

- Agricultural fields (0, 0%) Garden (11, 7%) Lawn (25, 16%) Other (1, 1%)
 Null (115, 76%)



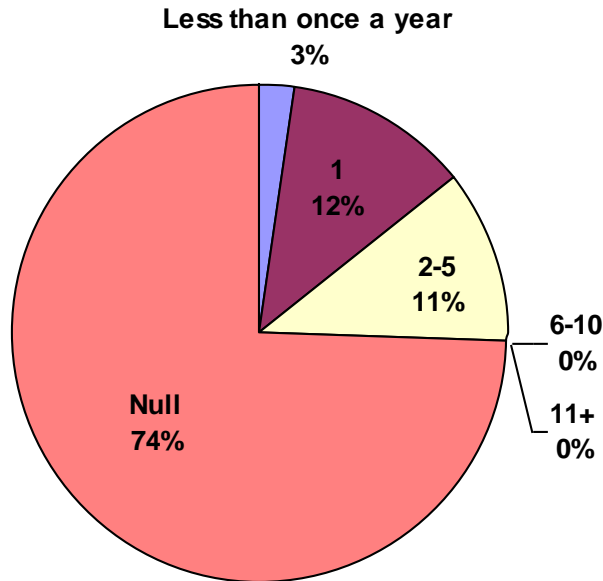
45. What is the size of the total area that is fertilized?

- Less than one acre (35, 23%)
- 1-5 acres (3, 2%)
- 6-10 acres (0, 0%)
- 11-25 acres (0, 0%)
- 26+ acres (0, 0%)
- Null (114, 75%)



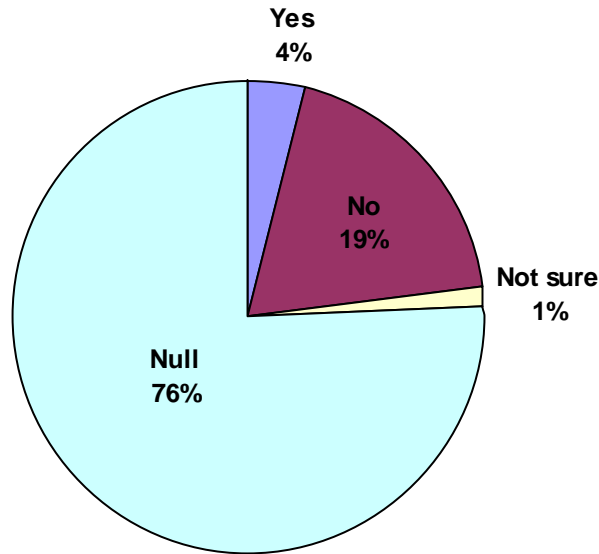
46. How many times per year do you apply fertilizer?

- Less than once a year (4, 3%)
- 1 time (18, 12%)
- 2-5 times (17, 11%)
- 6-10 times (0, 0%)
- 11+ times (0, 0%)
- Null (113, 74%)



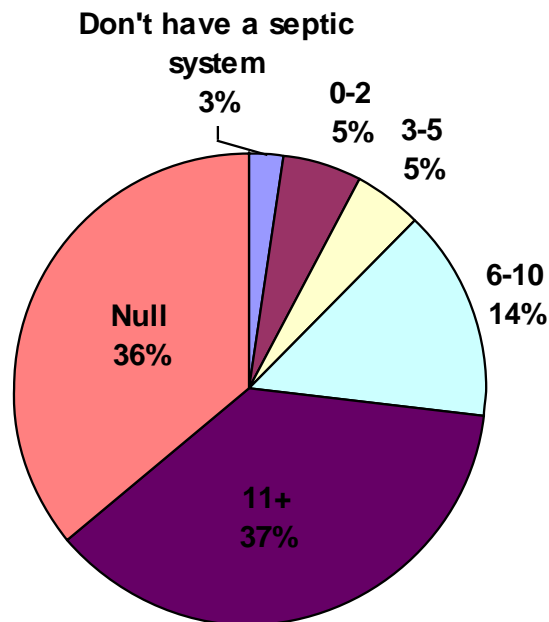
47. Do you use fertilizer that contains phosphorus?

- Yes (6, 4%)
 No (29, 19%)
 Not sure (2, 1%)
 Null (115, 76%)



48. If you have a septic system, when was it installed? (Don't have a septic system? Go to question 50).

- Don't have a septic system (4, 3%)
 0-2 years ago (8, 5%)
 3-5 years ago (7, 5%)
 6-10 years ago (22, 14%)
 11+ years ago (56, 37%)
 Null (55, 36%)



49. If you have a septic system when was it last maintained?

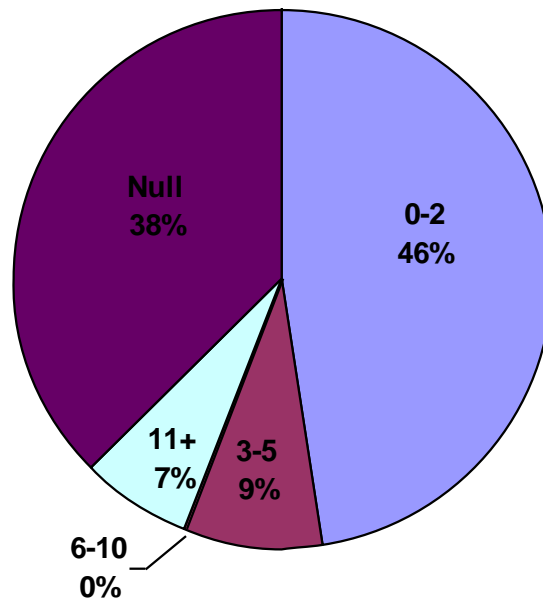
0-2 years ago (72, 46%)

3-5 years ago (13, 6%)

6-10 years ago (0, 0%)

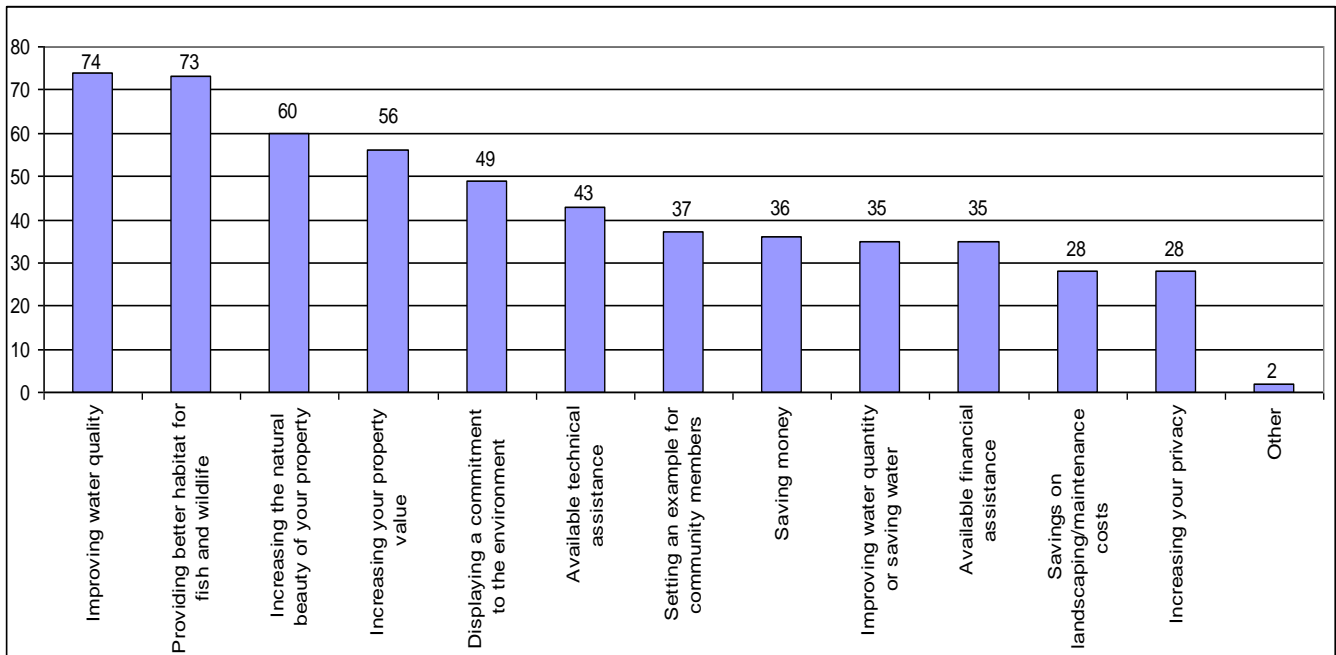
11+ years ago (10, 7%)

Null (57, 38%)



50. If changing how you use and manage your land would improve the quality of the lake, what might motivate you to change how you manage your land? Check all that apply.

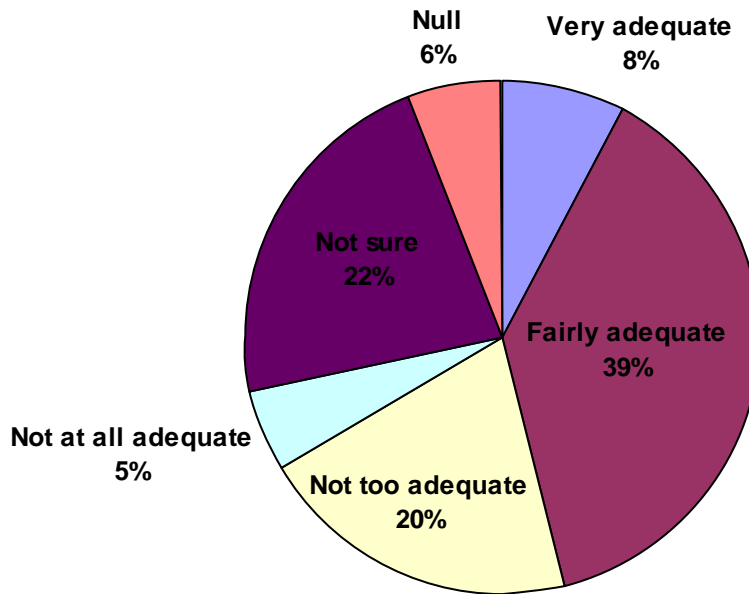
- Improving water quality (74 resp.)
- Improving water quantity or saving water (35 respondents)
- Providing better habitat for fish and wildlife (73 respondents)
- Increasing the natural beauty of your property (60 respondents)
- Displaying a commitment to the environment (49 respondents)
- Available financial assistance (35 respondents)
- Available technical assistance (43 resp.)
- Setting an example for community members (37 respondents)
- Savings on landscaping/maintenance costs (28 respondents)
- Increasing your privacy (28 resp.)
- Increasing your property value (56 resp.)
- Saving money (36 respondents)
- Other (2 respondents)



****Decision-making and values****

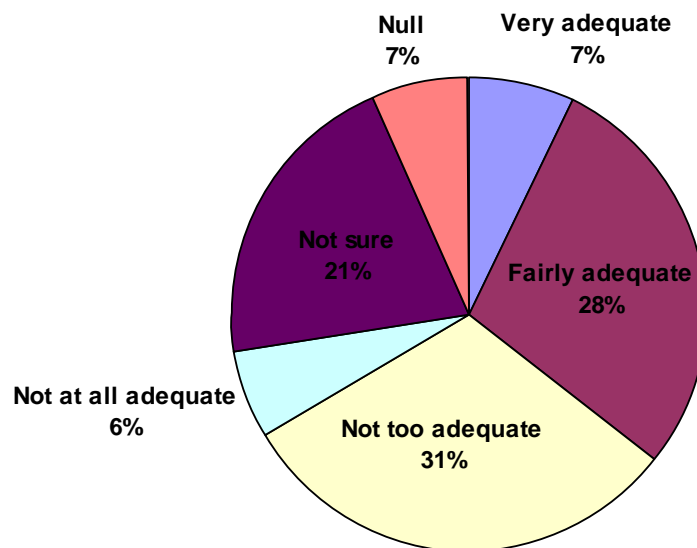
51. How adequately do you feel the present land use regulations protect HABITAT in the lake?

- Very adequate (12, 8%)
- Fairly adequate (58, 39%)
- Not too adequate (31, 20%)
- Not at all adequate (8, 5%)
- Not sure (34, 22%)
- Null (9, 6%)



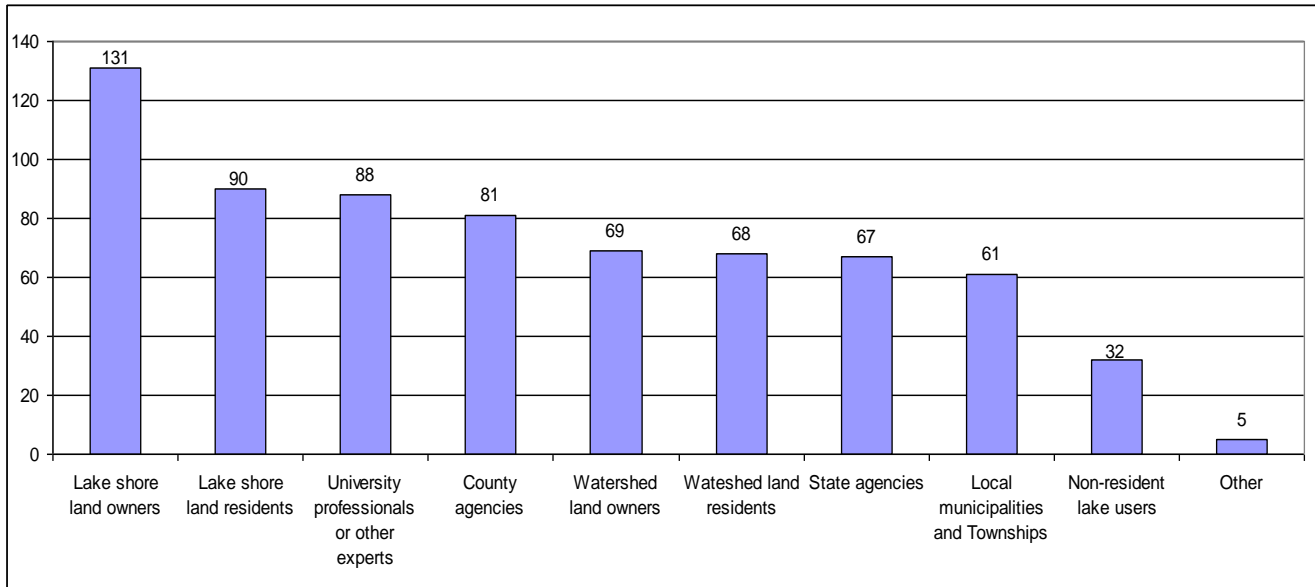
52. How adequately do you feel the present land use regulations protect WATER QUALITY in the lake?

- Very adequate (11, 7%)
- Fairly adequate (43, 28%)
- Not too adequate (47, 31%)
- Not at all adequate (9, 6%)
- Not sure (32, 21%)
- Null (10, 7%)



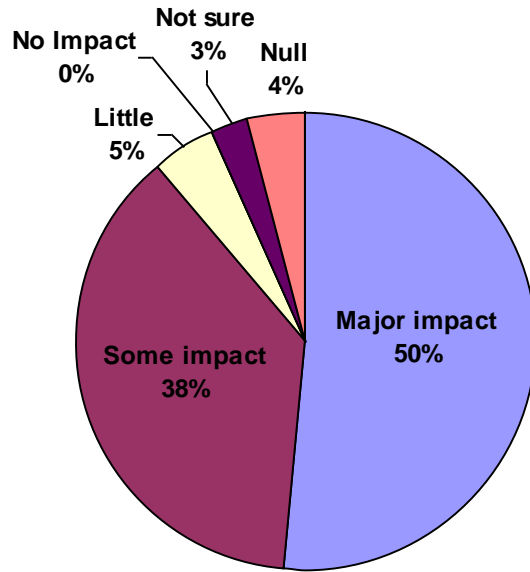
53. In your opinion, who should be involved in making management decisions for Lake Eau Claire? Check all that apply.

- Lake shoreland owners (131 resp.)
- Lake shoreland residents (90 respondents)
- Non-resident lake users (32 respondents)
- Watershed land owners (69 respondents)
- Watershed land residents (68 resp.)
- Local municipalities & Townships (61 resp.)
- County agencies (81 responses)
- State agencies (67 respondents)
- University professionals or other experts (88 respondents)
- Other (5 respondents)



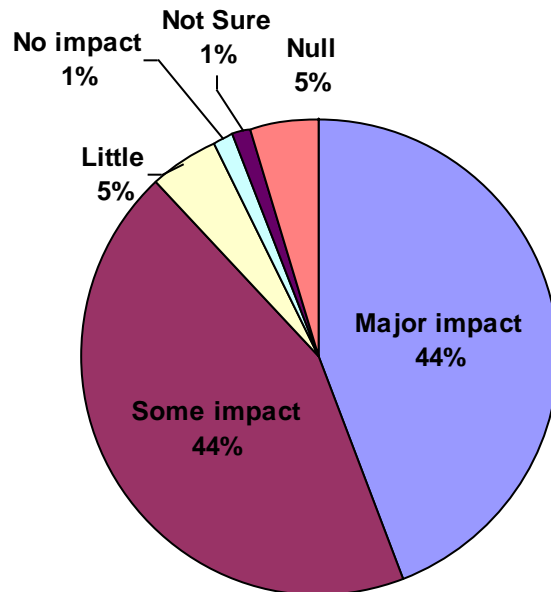
54. How much impact does the water quality have on your perceived economic value of Lake Eau Claire?

- Major impact (78, 50%) Some impact (57, 38%) Little (7, 5%)
- No impact (0, 0%) Not sure (4, 3%) Null (6, 4%)



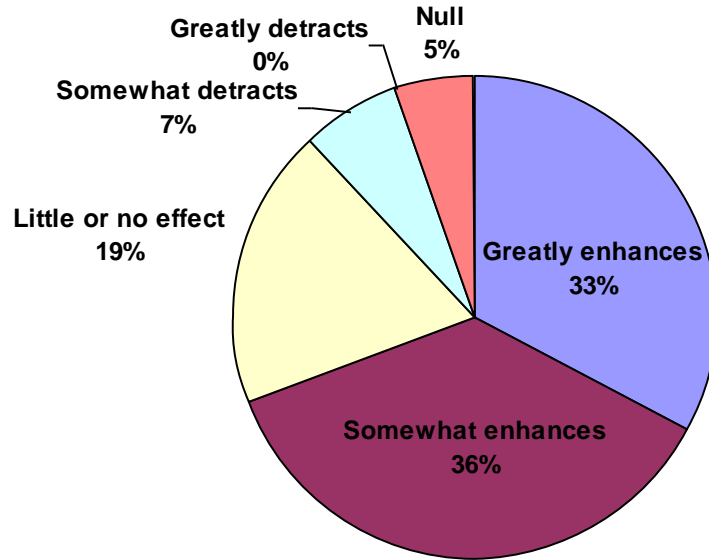
55. How much impact does the water quality have on your personal enjoyment of Lake Eau Claire?

- Major impact (67, 44%) Some impact (67, 44%) Little (7, 5%)
- No impact (2, 1%) Not sure (2, 1%) Null (7, 5%)

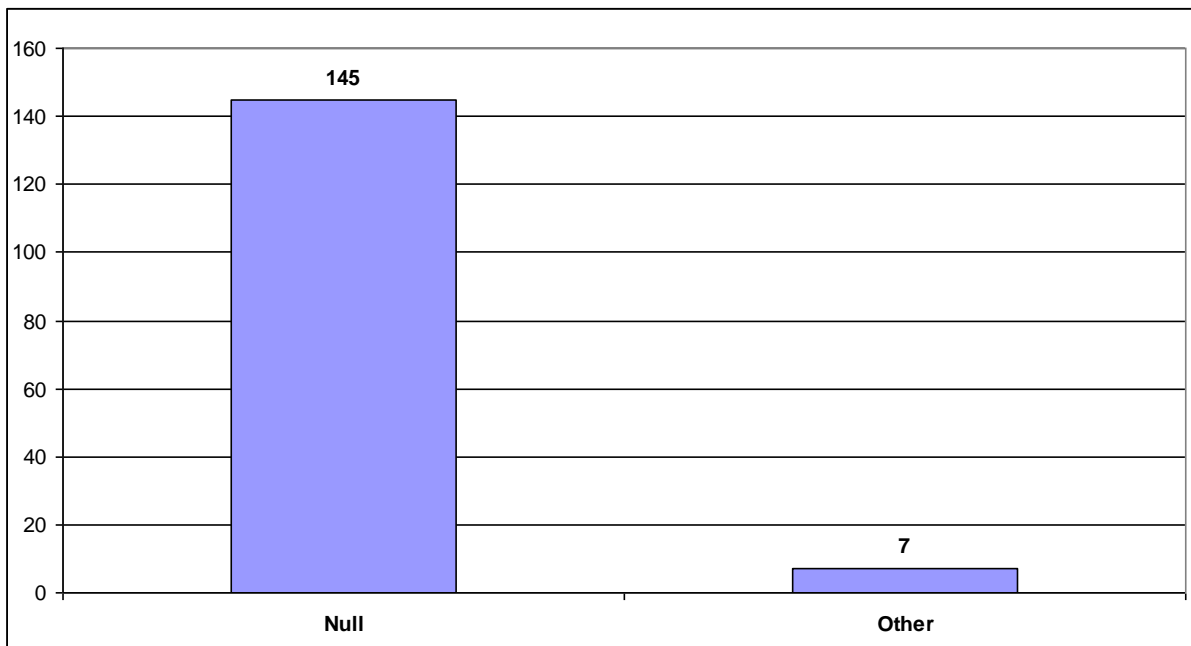


56. To what extent does the publicly owned land around Lake Eau Claire enhance the overall quality of your lake experience?

- Greatly enhances (50, 33%)
- Somewhat enhances (55, 36%)
- Little or no effect (29, 19%)
- Somewhat detracts (10, 7%)
- Greatly detracts (0, 0%)
- Null (8, 5%)

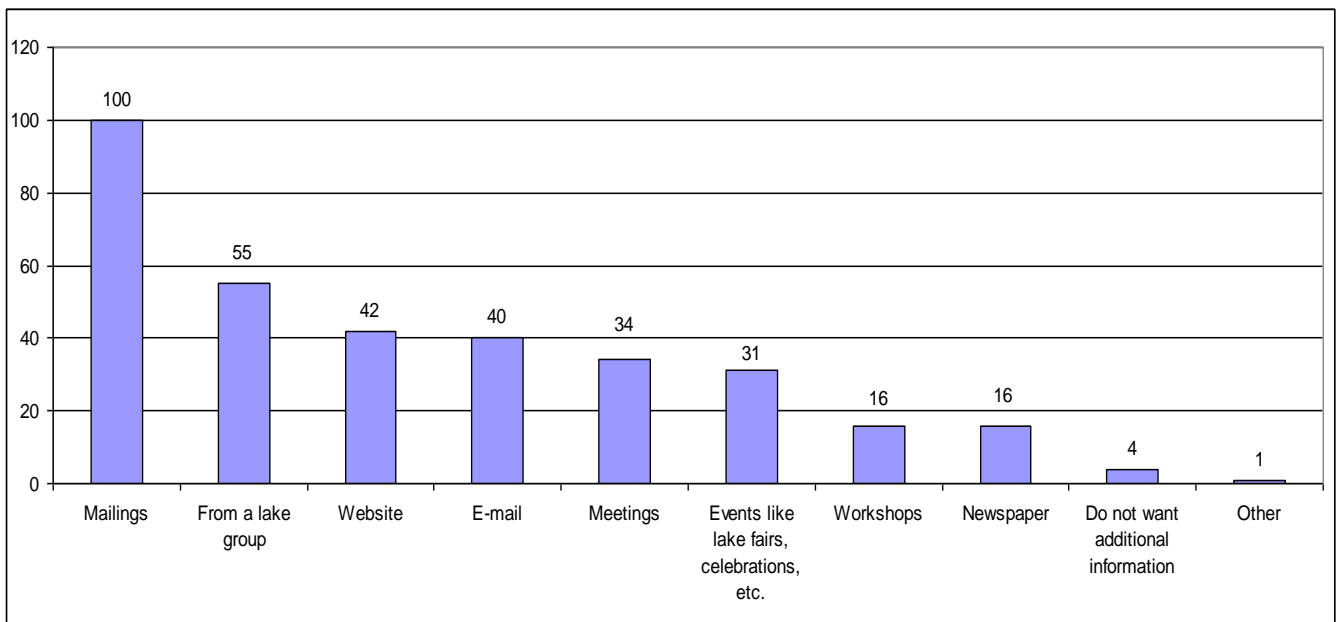


57. If you feel it detracts from the overall quality, please indicate how it detracts.



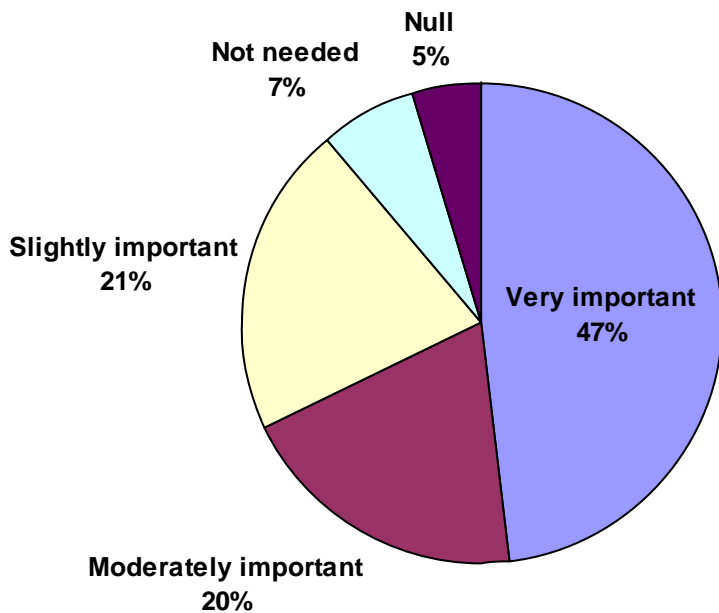
58. How would you like to receive information on planning and management activities for Lake Eau Claire? (Check all that apply)

- Meetings (42 respondents)
- Workshops (16 respondents)
- Mailings (100 respondents)
- Newspaper (16 respondents)
- Website (42 respondents)
- Website (42 respondents)
- E-mail (40 respondents)
- Events like lake fairs, celebrations, etc. (31 respondents)
- From a lake group (55 respondents)
- Do not want additional information (4 respondents)
- Other (1 respondent)



59. In your opinion, how important is it to have Lake Eau Claire available for public use/enjoyment?

- Very Important (73, 47%)
- Slightly Important (32, 21%)
- Moderately Important (30, 20%)
- Not Needed (10, 7%)
- Null (7, 5%)



See Back for Last Page!

60. How many minutes did it take you to complete this survey? 3888 minutes = 64.8 hours. Also, please specify the date on which you completed the survey _____.

(Optional: Please provide an e-mail address if you want to receive further lake information in this manner _____).

The Lake Eau Claire Lake Association and Lake Eau Claire Management Plan Steering Committee thank you for your time and participation in this process. Your opinions and values are very important to us and will be used to help develop management goals for Lake Eau Claire in the future. Please **return your questionnaires in the self addressed and stamped envelope** to the Beaver Creek Reserve Citizen Science Center, S1 Cty Rd K, Fall Creek, WI 54742 by **July 1, 2009**. If you have any questions about the survey, please contact Kirsten Cahow-Scholtes, Eau Claire County Land Conservation Supervisor, at 715-839-4788 or Sarah Braun, Citizen Science Director, at 715-877-2212.

