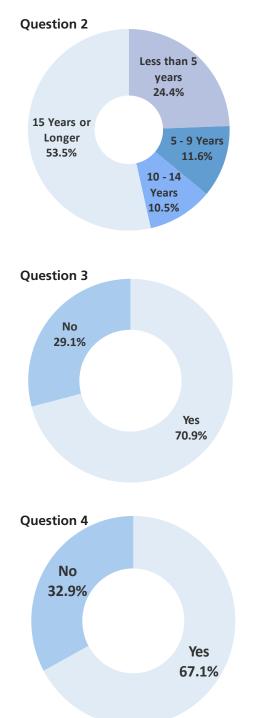
Hayes Township Waterfront Survey Summary

Since the 1990's, Hayes Township has had regulations that pertain to waterfront property owners. To better understand the level of awareness that property owners have of these regulations and explore options for future consideration, the planning commission developed a survey for waterfront property owners and township residents in the winter/spring of 2017. A total of 86 waterfront property owners on either Susan Lake, Lake Charlevoix, or Lake Michigan completed the survey. In addition, 9 members of the general public completed the survey. Below is a detailed summary of the survey results pertaining to waterfront property owners. There were not enough respondents from the general public to analyze the results.



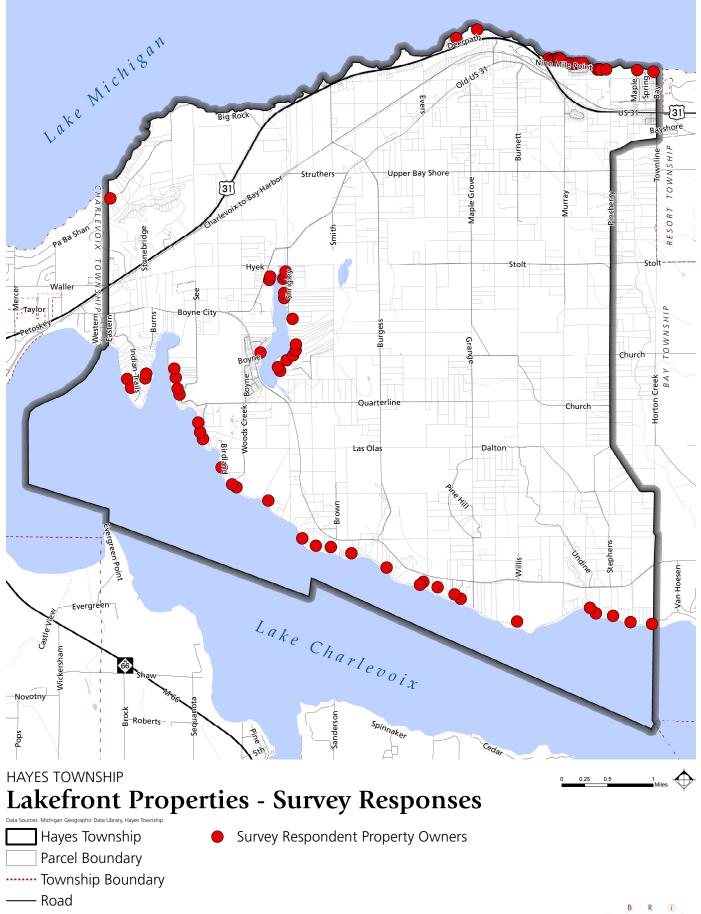
Question 1: There are a total of 329 individuals in Hayes Township who own property and received a survey - 155 on Lake Charlevoix, 66 on Lake Susan, and 108 on Lake Michigan. The first question had respondents identify which Lake they live on. The map on page 2 summarizes the locations of where respondents own property. Note that only waterfront property owners are included in this map.

Question 2: The next question asked respondents how long they had owned property at their current location. As depicted in the pie chart to the left, over half of the respondents owned their waterfront property for 15 years or more.

Question 3: This question asked about respondent's familiarity with the existing zoning ordinance, stating, "According to Section 3.14 of the Zoning Ordinance, Waterfront Regulations, waterfront property owners have an added responsibility regarding the preservation and protection of these natural resources, water quality and community scenic and recreational values. Are you aware of this provision of the Zoning Ordinance?" As shown in the pie chart to the left, the majority of respondents were familiar with this section of the ordinance.

Question 4: The next question asked about respondent's familiarity with a specific setback provision in the zoning ordinance, stating "Further, Section 3.14 requires waterfront properties to have a shoreland protection strip that includes all of the land area located within fifty (50) feet of the high water mark. Are you aware of this provision of the Zoning Ordinance?" As shown in the pie chart to the left, again, the majority of respondents were familiar with this provision.

Question 5: Next, respondents were asked to rate their level of agreement regarding a number of statements about the shoreland protection strip. The table on page 3 shows the total number of people who agreed and disagreed with each statement. Respondents were most supportive of keeping septic tanks and filtration fields out of the shoreland protection strip, requiring the removal of invasive species, and prohibiting the use of pesticides, herbicides, and fertilizers. In contrast, there was less support for prohibiting the pruning of trees, shrubs or other native vegetation is within the protection strip. Fifty of the 85 people who responded either disagreed or strongly disagreed with that statement.

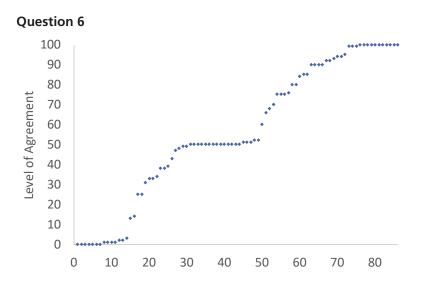


Beckett&Raeder

Question 5

| Please indicate your level of agreement with the following statements that pertain to how the shoreland protection strip should be used. | Strongly Agree | Agree | Neutral | Dis- agree | Strongly Dis- agree | Rating Average |
|--|-------------------|-------|---------|---------------|---------------------------|-------------------|
| No structures, except for launching ramps and docking facilities including steps and retaining walls, shall be allowed within one hundred (100) feet of the shoreline on Lake Michigan and Lake Charlevoix, and within eighty (80) feet of Susan Lake. | 23 | 17 | 9 | 18 | 19 | 2.92 |
| The use of asphalt, concrete, wood or other similar surfaces shall be limited to walkways or stairs necessary for water ac- cess, and shall not exceed four (4) feet in width. | 26 | 19 | 14 | 13 | 14 | 2.65 |
| The use of pesticides, herbicides and fertilizers should be pro- hibited. | 46 | 24 | 7 | 6 | 3 | 1.79 |
| Leaves, grass clippings and similar yard/garden wastes should not be burned or stored. | 33 | 17 | 13 | 14 | 8 | 2.38 |
| Neither septic tanks nor septic system filtration fields should be located within the shoreland protection strip. | 60 | 20 | 2 | 1 | 3 | 1.45 |
| Natural vegetation cover, including trees, shrubs or herbaceous plants shall be maintained on at least eighty percent (80%) of the lake or stream frontage within the shoreland protection strip. | 24 | 19 | 9 | 20 | 14 | 2.78 |
| Pruning of trees, shrubs or other native vegetation is prohibited within the shoreland protection strip, except for the removal of dead portions of trees, shrubs or other vegetation. | 14 | 8 | 13 | 20 | 30 | 3.52 |
| When dead trees, shrubs or other vegetation that are removed, root systems shall be left in place for shoreline stabilization. | 27 | 31 | 8 | 10 | 9 | 2.33 |
| Invasive species should be removed. | 55 | 20 | 9 | 1 | 1 | 1.52 |

Question 6: Next, respondents were asked to rate their overall level of agreement on a scale of 1 to 100 with the following statement: "Currently, the Zoning Ordinance will allow one (1) mooring, or one (1) slip, or one (1) dock space per each 100 feet of lake frontage measured at the normal high water mark. (Note: this pertains only to a single boat powered by an engine or a sailboat power with an auxiliary engine, not rowboats, dinghies, rubber boats, canoes, kayaks, or small sailboats without engines.) As shown in the plot to the right, respondents were fairly split, with approximately 1/3 in agreement, 1/3 neutral, and 1/3 in opposition.



Question 7: Next, respondents were asked to provide feedback on whether or not the Township should require planting only native species. The question stated, "The Township is considering a modification to Section 3.24 Landscaping. This section requires plant materials that are 'hardy to Charlevoix County' which could include invasive species. Alternative zoning language would require using a plant list for northwest Michigan published by the Northwest Michigan Invasive Species Network; a collaborative effort of Northwest Michigan conservation districts and watershed councils. Please select from the following statements."

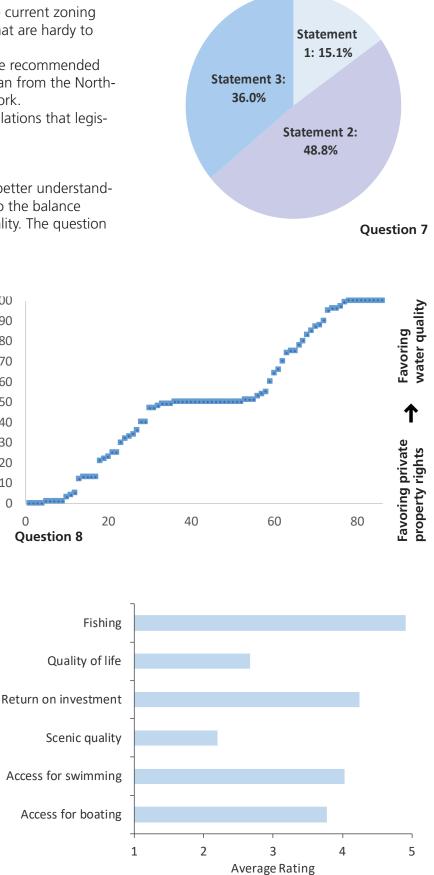
The three statements were as follows:

- Statement 1: I would prefer using the current zoning ordinance language and use plants that are hardy to Charlevoix County.
- Statement 2: I would prefer to use the recommended • native plant list for northwest Michigan from the Northwest Michigan Invasive Species Network.
- Statement 3: Not in favor of any regulations that legislates waterfront landscaping.

Question 8: The next question was aimed at better understanding the ideology respondents held in regards to the balance between private property rights and water quality. The question posed: "Actions to protect water quality are sometimes in conflict with private property rights. Please indicate your viewpoint on this situation by 100 using the sliding scale to represent 90 your position on this matter." Similar 80 to question 6, respondents could use 70 a sliding scale, with 0 indicating that measures to protect private property 60 rights are very important, 50 indi-50 cating a preference for a balance 40 between water quality and private 30 property rights, and 100 meaning 20 that measures to protect water quali-10 ty are very important. 0

As shown in the plot to the right, about half of the respondents indicated a preference for balancing water quality and private property rights, while about 25% noted a preference for protecting private property rights and the other 25% favored protecting water quality more strongly.

Question 9: This question aimed to better understand what makes people live on the lake, asking: "As a waterfront property owner please indicate the reason(s) why you decided to locate on Lake Michigan, Lake Charlevoix or Susan Lake." A rating of 1 indicates the highest priority, while a rating of 5 indicates the lowest priority. In general, the biggest reasons for living on the lake were scenic beauty and quality of life.

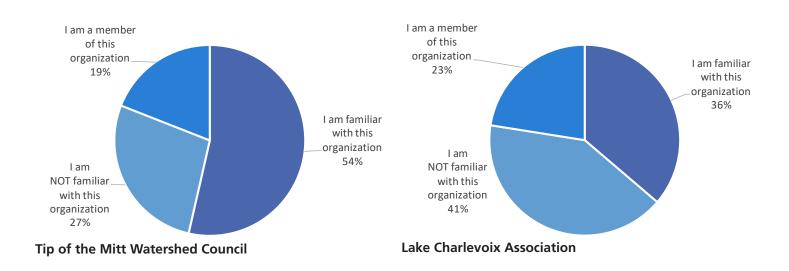


Question 9

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Question 10: This question served as a follow-up to Question 9, asking respondents if there were other reasons for locating on the lake. Others reasons given included privacy and seclusion, being near friends or family, and wildlife. The full compilation of responses can be accessed as an appendix to this report.

Question 11: The purpose of this question was learn more about the impact and awareness of two local water stewardship organizations: Tip of the Mitt Watershed Council and Lake Charlevoix Association. As shown in the pie charts, there is general awareness of both organizations, although slightly greater awareness of Tip of the Mitt.



Question 12: The final question asked respondents to provide additional input on how the Township should protect water quality and how property is developed along Lake Michigan, Lake Charlevoix, and Lake Susan. Pictured to the right is a word cloud that depicts words that came up most frequently in response to Question 12. The full compilation of responses can be accessed as an appendix to this report.

Trying Increased Beach Enhance Lake Michigan Beauty Lake Charlevoix Watershed and Lake Property Owners Septic Systems Township Access Waterfront Property Question 7 Water Quality Pollution Susan Lake Efforts Homeowners Given Invasive Species