
Lake Lemon Conservancy District

Freeholder Survey Report

July 2015



Stephen A. Wolter
Executive Director

L. Kate Wiltz
Project Manager

Austin Hochstetler
Project Team

Eppley Institute for Parks & Public Lands
Indiana University
501 N. Morton Street, Suite 101
Bloomington, IN 47404
812.855.3095

DRAFT 7/13/15

INTRODUCTION

Background and Purpose

The Lake Lemon Conservancy District (LLCD) Board of Directors is charged with directing the LLCD lake management activities. In the fall of 2015, the LLCD lake manager contacted the Eppley Institute for Parks and Public Lands to discuss the LLCD's information needs. The Eppley Institute proposed a survey of the District's freeholders in order to determine the community's commitment to enhanced funding and services at Lake Lemon. The Board was specifically interested in the freeholders' opinions regarding increased frequency and breadth of management activities such as lake dredging, as well as funding options to support these management activities.

Approach and Methodology

The Lake Lemon Conservancy District Freeholder Survey was designed and conducted during the spring and summer, 2015. Eppley Institute staff met with an LLCD survey subcommittee, first to ascertain the guiding questions for development of a questionnaire, and again to review and edit the questionnaire items. In addition to gauging freeholders' perceptions of the Lake environment generally and collecting demographic information, three areas of interest emerged from the conversations. The resulting questionnaire was designed to inform these topics:

- Lake Management Activities:
 - Dredging
 - Drawdown
 - Environmental Constraint Overlay
- Lake Management Issues:
 - Safety
 - Water quality
 - Aquatic vegetation
 - Bank erosion / sedimentation
 - Dock access
 - Open lake access
- Financial Issues
 - Tax assessment increases
 - Fee increases
 - Revenue generation options

The pilot questionnaire was administered with 20 individuals and received 17 responses. Only minor changes were made as a result of the recommendations and results of the pilot test, including clarifying instructions and wording changes on particular items. The LLCD Board reviewed and approved the questionnaire pending pilot revisions.

The revised questionnaire was administered online, and invitation postcards were mailed during the first week of May 2015. The mailing list comprised all LLCD freeholders' permanent addresses. These addresses were compiled from three lists provided by the

LLCD office, an internal directory and public files from Brown and Monroe County Assessor’s offices. The resulting frame totaled 519 households to which invitation postcards were mailed. The cards included information about the survey, the website, and unique access code for the online questionnaire, and contact information for requesting printed questionnaires.

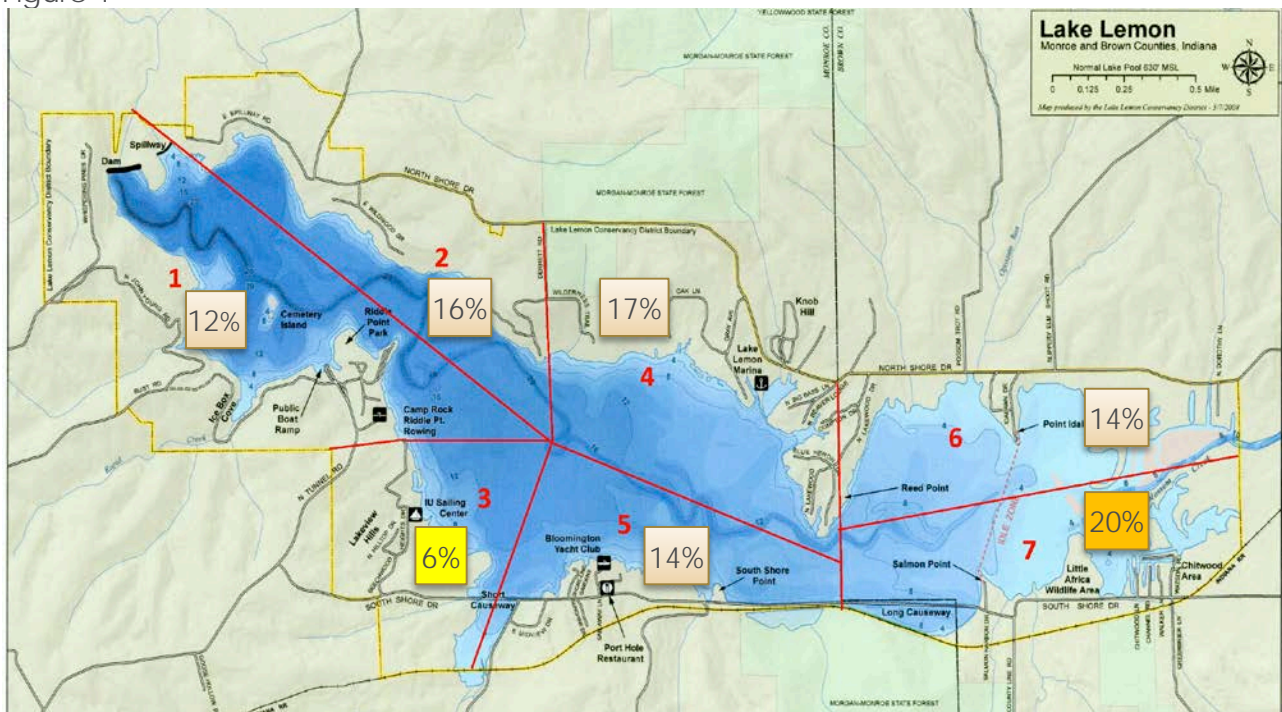
The online questionnaire was open for a total of four and a half weeks, during which two follow-up postcards were mailed to freeholders who had not yet responded. (The original close date was extended by one week, to accommodate delays in mailing from IU.) Sixteen questionnaire packets were requested and mailed to freeholders.

Response and Demographics

The freeholder survey used a census rather than sampling; that is, every freeholder was invited to participate. This methodology supports a democratic and participatory approach to informed decision-making. Of the 519 freeholders, 260 responses were received, for an overall rate of 50%. After the data were cleaned, total usable responses numbered 234. The usable response rate was 45%. A comparison of early and late responses indicates that non-respondents are similar to the respondents.

Responses were relatively well distributed geographically. Figure 1 shows the percent of distribution of the responses across the LLCD sub-areas.

Figure 1



More information regarding the respondent demographics can be found at the end of the Findings section.

FINDINGS

The results of the LLCDC Freeholder Survey are presented below and are organized as they were presented in the questionnaire. Each section lists the items from the questionnaire and the corresponding responses followed by a brief statement on any findings of interest or significance. For individual items, the response categories with higher frequencies have been highlighted for ease of review.

Management Activities: Dredging

Dredging the lake is done to maintain and increase access and usability. The current equipment used by the LLCDC is limited in its ability to reach the fingers and coves along the lake. In addition to dredging the main lake area, the equipment provides additional benefits such as shoreline erosion control and lake debris removal. In order to expand the areas accessible by the dredging equipment, the LLCDC has begun the process of purchasing smaller dredging equipment.

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
The current amount of dredging done at Lake Lemon is sufficient.	30%	19%	14%	14%	9%	6%	8%
I would support an increase in the county tax assessment to expand dredging.	26%	16%	7%	10%	17%	10%	14%
I think more dredging is needed, but the LLCDC should find ways to fund it that don't increase the taxes for freeholders.	5%	7%	6%	24%	19%	13%	25%
Dredging funded by the LLCDC should only address main lake boating areas and safety zones.	31%	14%	11%	8%	12%	8%	16%
The LLCDC should provide lake access to every individual resident dock on the lake.	19%	11%	10%	14%	13%	12%	20%
It is important for the LLCDC manager and staff to have the equipment they need to maximize recreation and lake access.	4%	5%	4%	12%	22%	25%	28%

The responses to dredging items indicate a significant difference between the opinions of freeholders in sub-area seven (and at times six) and the other sub-areas. Sub-area seven's respondents, and to a lesser extent sub-areas three and six, expressed more disagreement with the current amount of dredging being sufficient. Seven also indicated significantly more agreement with supporting an increase in the tax assessment to support dredging. Six and seven disproportionately disagreed with the



statement that dredging should only address main lake boating areas and safety zones, while they more often supported the statement that the LLCD should provide lake access to every individual on the lake. Interestingly, sub-areas one and two indicated more agreement with this statement as well.

Management Activities: Drawdown

Each year the LLCD decides whether or not to release water from the lake, lowering the water level during the winter months. This annual drawdown has several potential benefits including increased access to food sources for game fish populations, reducing nuisance aquatic vegetation, and minimizing the effect of shifting ice on dock and shoreline structures. However, benefits are not guaranteed and must be weighed against risks such as oxygen depletion, fish kill, increased erosion, and the possibility of a drought year following a drawdown. This past winter, 2014-15, the lake drawdown was 3.5 feet. In previous winters the lake drawdown has been as much as six feet.

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
The annual drawdown is critical to the management of Lake Lemon.	4%	3%	4%	11%	15%	27%	38%
The annual drawdown provides a valuable opportunity for me to do maintenance on my shoreline and structures.	5%	2%	3%	15%	15%	26%	35%
I think the water level should be lowered enough to protect shoreline and personal property.	6%	3%	3%	8%	14%	27%	38%
The lake drawdown this past winter was appropriate for my property.	14%	9%	10%	17%	16%	22%	12%
I would prefer that there be no annual draw down on the lake.	60%	17%	5%	7%	3%	3%	4%
The lake drawdown is detrimental to the proper management of the lake.	50%	18%	8%	13%	3%	3%	5%

The ideal number of feet to lower the water level for winter is...

0	1	2	3	4	5	6	7
3%	1%	2%	20%	31%	19%	18%	5%

Preference: the lake drawdown should occur every ____ year(s).

1	2	3	Other
75%	12%	5%	6%

- “Other” Comment Summary:
- several unqualified to answer
 - most indicating annual drawdown, with concerns about damage and efficacy

The freeholders are generally supportive of annually lowering the lake level between three and six feet, and agree that the drawdown is important to lake management and property maintenance.

Management Activities: Environmental Constraint Overlay

The LLCDC could regulate new construction within the district beyond the Brown and Monroe County requirements (existing properties would be exempt). These regulations would address erosion control and water quality, as well as zoning to limit the types and locations of future development. Examples of these regulations might include setting a maximum slope for lakefront property to prevent erosion or requiring that septic systems meet certain standards to prevent runoff.

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
It is important to control erosion around the lakeshore.	2%	0%	0%	2%	9%	29%	57%
Lakefront properties should be required to meet certain standards to prevent runoff and erosion into the lake.	3%	2%	4%	8%	14%	25%	45%
New construction in the LLCDC should meet standards to minimize ecologic impacts and maintain water quality.	4%	3%	2%	4%	13%	22%	53%
Lake management should become more aggressive in monitoring septic contamination.	5%	3%	5%	11%	17%	19%	40%
All freeholders should have their septic systems tested to protect the lake’s water quality.	10%	5%	7%	20%	15%	17%	27%

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would support septic system testing for all lakefront properties if the costs were covered by the LLCD.	19%	6%	5%	20%	9%	17%	22%
If the LLCD offered septic system inspections to its freeholders, I would participate.	10%	4%	4%	17%	14%	21%	29%
Freeholders need to take more personal responsibility in protecting the water quality of the lake.	1%	1%	1%	9%	16%	24%	48%

Statements supporting control of erosion and sedimentation, and protecting water quality (see below as well) are strongly supported by the respondents and can be viewed as areas of agreement among the freeholders. However the items regarding septic systems seem to indicate less agreement about testing systems on LLCD properties.

Lake Management Issues

Ranking of issues the LLCD must consider in the management of the Lake:

Issue	Mean Rank
Water quality	2.5
Aquatic vegetation control	3.6
Adequate main lake depth	3.8
Bank erosion	4.5
Freeholder lake access	4.9
Sediment health	5.2
Fishery health	5.7
Keeping costs low	5.8

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I am satisfied with the current management practices being used at the Lake.	6%	7%	12%	25%	29%	14%	7%
The LLCD should be doing more conservation efforts at the Lake.	3%	4%	9%	33%	20%	18%	13%
The LLCD should be doing more to increase recreational opportunities on the Lake.	8%	11%	16%	35%	14%	7%	9%

Respondents are supportive of managing toward conservation goals; however, have less agreement around the idea of recreational goals. This viewpoint is reinforced by the responses to the last item in the next section (comparing statements on spending for management activities and recreation).

Financial Issues

For each of the following pairs of statements, the one with which respondents agree most and how much they agree with the statement was requested.

Boating Fees:

Boating fees should remain at current levels.	Boating fees should be raised.
46%	54%

How much do you agree with the statement you chose?

Not Much		Somewhat		Very Much	
0%	1%	41%	17%	41%	

There is no significant difference in the strength of opinion ("how much do you agree?") between those agreeing with either statement.

Benefits Tax

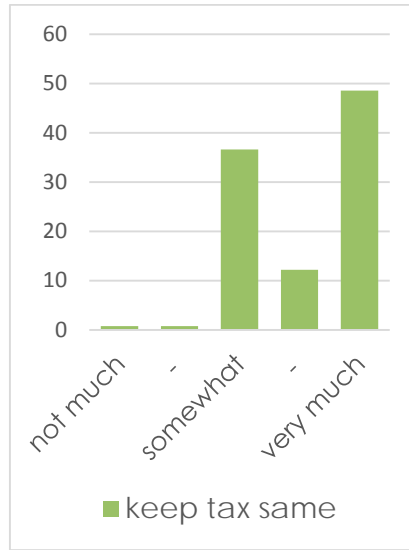
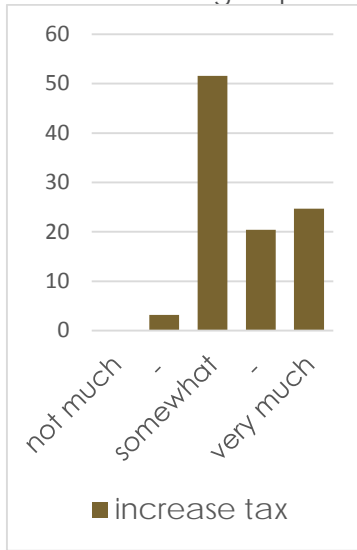
The current LLCD special benefits tax should be increased.	The LLCD special benefits tax should stay the same.
43%	57%

How much do you agree with the statement you chose?

Not Much		Somewhat		Very Much	
0%	2%	44%	16%	39%	

There is a difference in how much respondents in each group agree with the statements.

Frequency tables for each group:



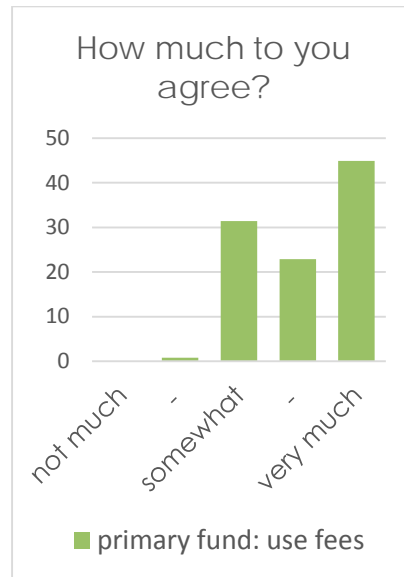
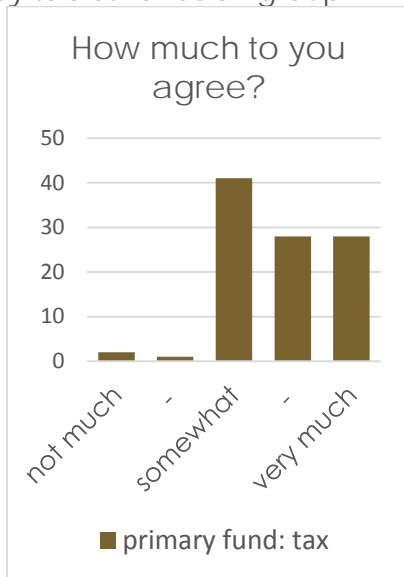
Lake Management – Financial

Managing the lake should primarily be funded by freeholder taxes, and supplemented by use fees.	46%
Managing the lake should primarily be funded by use fees, and supplemented by freeholder taxes.	54%

How much do you agree with the statement you chose?

Not Much		Somewhat		Very Much
1%	0%	36%	25%	37%

Frequency tables for each group:



Lake Management

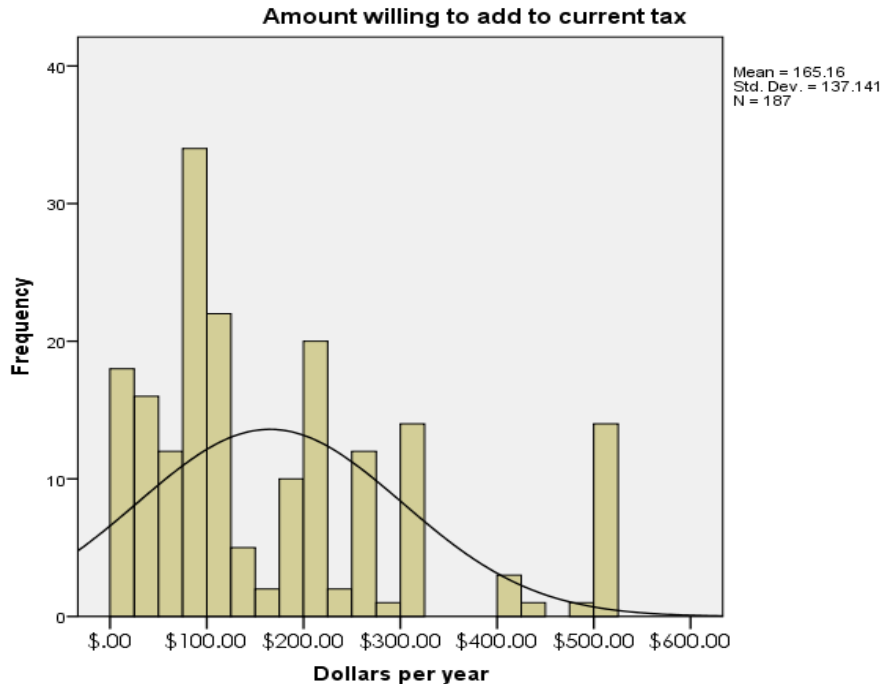
Doing less lake management (dredging/ vegetation control) in order to develop more services/events at the lake is a good idea.	We should not forego any lake management (dredging/vegetation control) to develop more services/events at Lake Lemon.
3	97%

How much do you agree with the statement you chose?

Not Much		Somewhat		Very Much
0%	0%	7%	11%	81%

The last paired statement question shows again the high level of freeholder agreement with respect to preference for lake management activities versus recreational services. The paired statements about raising taxes and fees are relatively evenly divided. While relatively even numbers of freeholders endorsed statements on either side of these issues, the strength of their opinions (as recorded by level of agreement with the chosen statement) were different between groups. The frequency tables show how strongly the different opinions are held.

To support lake management, how much more in taxes are freeholders willing to pay per year?

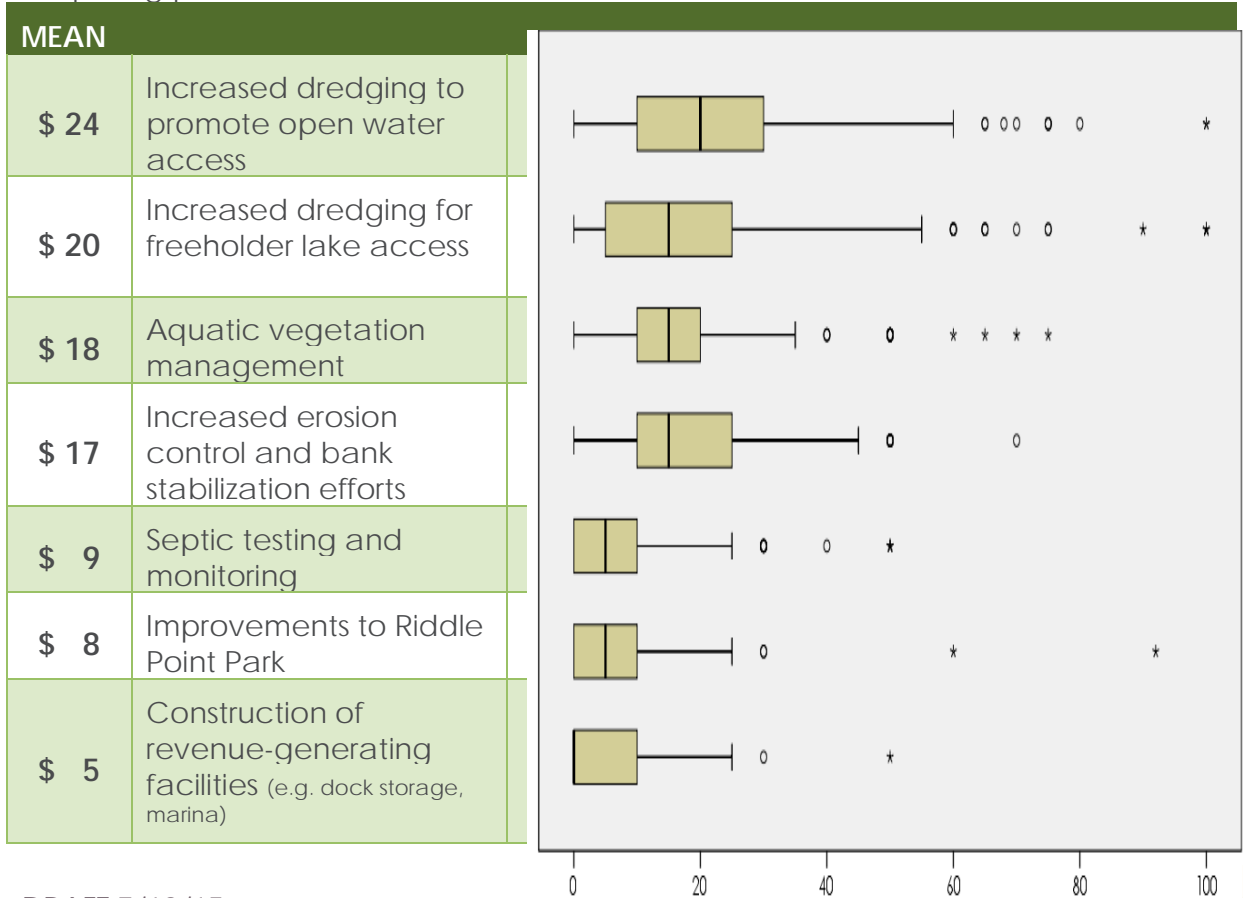


While the average amount indicated by freeholders in the above question is \$165, the distribution of responses shows that more of the respondents would prefer less than that amount.

I would be willing to pay more in taxes to the LLCD...

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
...in order to maintain the Lake conservation measures and improve the Lake's usability.	10%	5%	7%	14%	22%	22%	20%
...if that money was used only to fund activities that improved the water quality and health of the Lake.	10%	6%	9%	19%	22%	19%	16%
...if that money was used only to fund increased lake access.	29%	22%	14%	14%	8%	7%	6%
...if that money was used only to fund main lake dredging.	15%	12%	9%	19%	16%	15%	14%
...to establish activities or services (boat rental, event hosting) at the Lake that might ultimately generate income for lake management.	26%	14%	12%	18%	17%	8%	4%

Given \$100 in taxpayer monies, how would you divide your budget among these competing priorities at Lake Lemon?



The chart and graph above show the average amount indicated for each of the listed management priorities. Increasing open lake dredging would receive the most money (\$24 of \$100) in this hypothetical balance sheet, while investing in the construction of facilities received the least (\$5 of the \$100). These average amounts are listed next to a plot of the range of responses. The mean is indicated by the center line in each box plot and outliers are shown as the markers. The ranges for the top rated management priorities are substantial.

Revenue Options

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
I would like to see more events and recreational opportunities on the LLCDC property.	17%	14%	13%	29%	12%	9%	7%
Hosting fishing tournaments is a good way to generate revenue to support the management of Lake Lemon.	7%	7%	5%	18%	25%	22%	16%
Expanding the services offered at Riddle Point would be a good way to generate revenue to support the management of Lake Lemon.	7%	9%	5%	23%	23%	19%	14%

Which of the following services would you like to see at Riddle Point?

Percent of respondents selecting this option:	Service
58%	Fishing Tournaments
49%	Concessions/gas
37%	Public Events
33%	Camping
32%	Winter boat storage
21%	Slip rental/Wet slips
21%	Boat rental
18%	Other

Other Suggestions: 1/3 of the suggestions indicated no change in services
 Several suggested: Music and family-oriented events, private events such as weddings, family reunions

While these data indicate that there is disagreement about expanding recreational opportunities, expansion of some activities/services such as fishing tournaments and perhaps concessions/gas received more support.

Freeholder Snapshot (demographics)

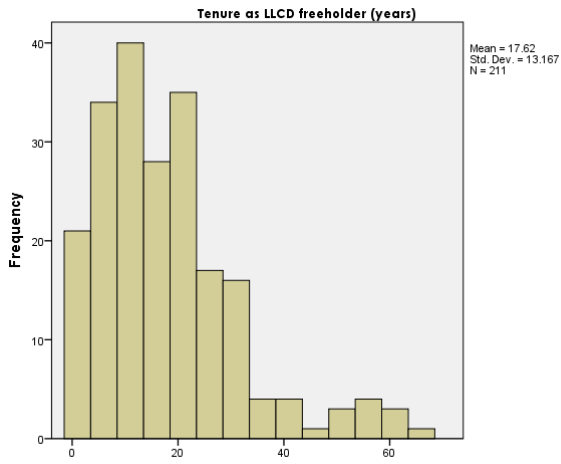
Respondents' participation in activities at Lake Lemon:

Percent of Respondents who Participate:	Activity
82%	Motor boating
75%	Swimming
56%	Bird/wildlife watching
51%	Canoe/Kayaking
50%	Shoreline fishing
38%	Fishing from boat
34%	Jet skiing
30%	Use Riddle Point Park Area
13%	Sailing
12%	Other Activities: hiking/walking; waterskiing/tubing; paddle boarding; enjoying the views; hunting

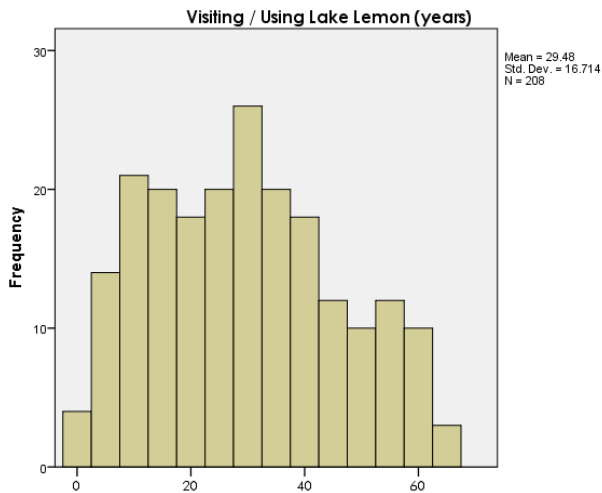
When respondents are at the lake:

Percent of Respondents:	Residency
36%	Year-round full time
23%	Year-round weekends
21%	Seasonal- spring through fall
10%	Seasonal- primarily summer
8%	Seasonal- summer weekends
1%	Not currently visiting/residing

The length of time freeholders have been a part of the Lake Lemon community is indicated below; first by length of time as a freeholder and then by length of time as a user or visitor to the Lake.

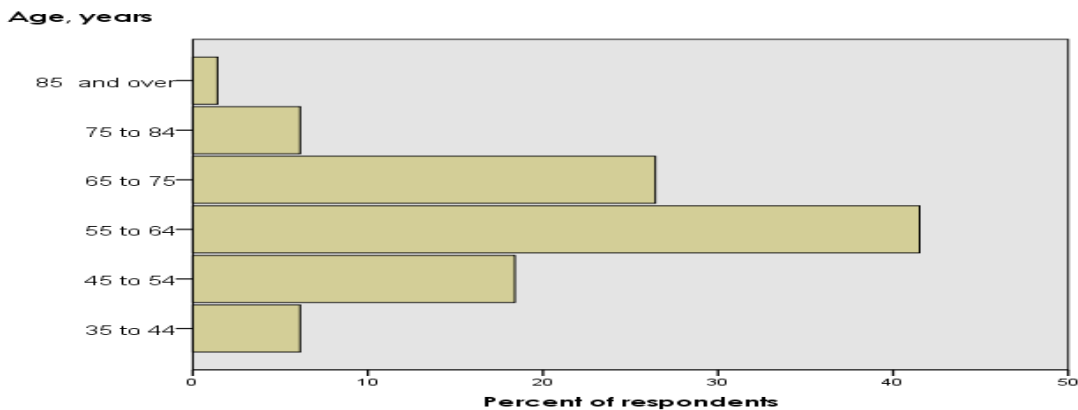


Average numbers of years as an LLCD Freeholder: 18 years

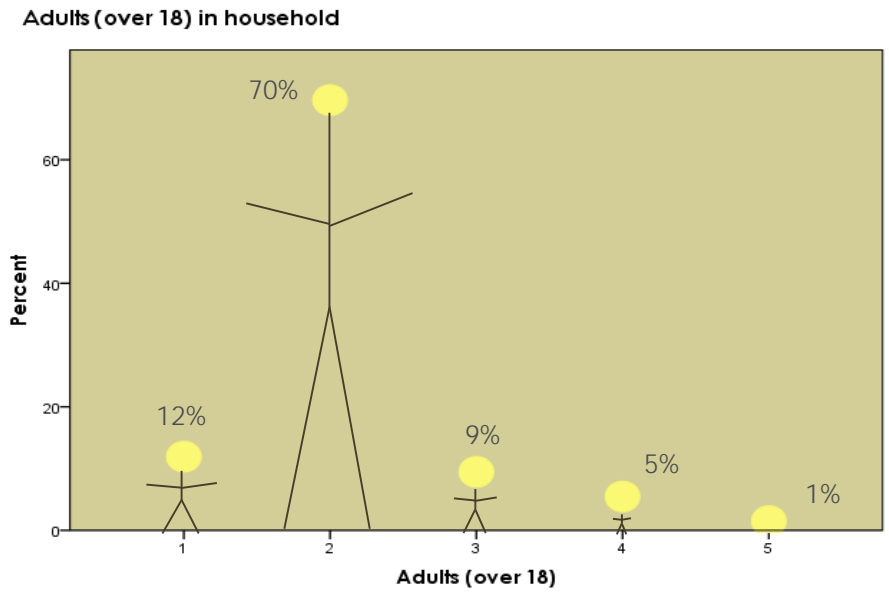


Average number of years as a User/ Visitor of Lake Lemon: 30 years

Age of respondents:



Size of household:



SUMMARY

The Indiana Conservancy Act (IC 14-33) authorizes the organization of conservancy districts, so that communities can assess a tax to address local water resource management issues. The Lake Lemon Conservancy District, in guiding the responsible management of the Lake, affects the environment and quality of life for its freeholders. The LLCB Board represents the interests of the freeholders, and in so doing considers freeholder opinion when making management decisions. To that end, the information from this study should be discussed and interpreted by the Board.

Below are some specific findings regarding freeholders' opinions on the primary areas of interest to the Board.

- Maintaining or improving water quality is a uniting cause among the freeholders. The support for management activities that address water quality, including erosion and sedimentation, is evident throughout the data in the sections on management activities, management issues, and financial issues. The related issue of septic system maintenance is of concern to freeholders. There is support for regulating new construction, as well as a general feeling that systems must be maintained; however, freeholders are somewhat divided when it comes to requiring inspections.
- Dredging emerges as a divisive issue with respect to the amount and purpose of lake dredging activities. While there is much agreement that dredging is a valuable management tool, dredging for open lake access is much more widely supported than the more regionally necessitated dredging to remove sediment for dock access.
- In general, freeholders much prefer directing LLCB funds toward lake management activities as opposed to investing in the expansion of services at the Lake. In several sections of the questionnaire, respondents indicate support for activities that directly support lake health and use (including dredging). These activities receive more support than funding recreational opportunities at the Lake. However, many respondents indicate that expansion of activities at Riddle Point is an acceptable endeavor. These findings, in particular, should be explored in detail to illuminate the differences among endorsed and unendorsed changes in service and activity offerings.

The above areas are listed as areas of opportunity for exploring the data presented in the findings section of the report. The LLCB Board and district freeholders are encouraged to formally review the data as presented and continue to explore the issues raised by these findings. Incorporation of the data into management decisions will require open discussion and the placement of these data in the context of lake health, management and budget constraints, and other influencing factors.

