

Lake User's Perceptions Regarding Impacts of Lake Water Level on Lake Aesthetics and  
Recreational Uses.

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## Executive Summary

As part of the Southwest Florida Water Management District's (SWFWMD) approach for establishing minimum and guidance water levels for lakes, six significant change standards were developed as a means to evaluate significant harm to lakes. Two of the six standards are the *Aesthetics Standard* and the *Recreation/Ski Standard*. These standards are intended to determine at what lowered lake stage (water level), impacts may occur to either aesthetic and scenic values or recreational activities. However, setting standards was difficult because information was limited on what various lake-user groups perceived as preferable water level conditions for these activities. Thus, the current District *Aesthetics Standard* corresponds to the lake elevation that water levels are expected to equal or exceed 90% of the time on a long-term basis and the current *Recreation/Ski Standard* corresponds to recommendations of the United States Coast Guard for safe boating and water skiing. To ascertain if these standards should be changed or modified, the University of Florida designed a survey to determine a representative group of lake users perceptions regarding lake aesthetics, and recreational use in relation to lake stage.

A survey with 60 questions was developed with reviews and comments from SWFWMD staff. To insure a wide range of user groups was given the opportunity to participate, five mailing lists were obtained: Florida Boating Registrations, Florida Freshwater Fishing License Holders, Florida LAKEWATCH Volunteers, Florida Lake Management Society (FLMS) members, and Florida members of the North American Lake Management Society (NALMS). From those lists, random samples of individuals who reside within the boundaries of SWFWMD were sent the survey. There was a total of 2563 survey sent and of those 964 were filled out and returned yielding a return rate of 38%.

Respondents who thought low water levels impaired aesthetic and recreational use of lakes can be separated into three general groups: 1) where respondents disliked exposed muck because of aesthetics, odor and access to a lake; 2) where respondents disliked vegetation (aquatic and terrestrial) that can expand during low water and limit lake visibility and/or access of a lake for recreation; and 3) where respondents disliked the physical limitation that low water puts on lake access and recreational activities.

When water levels were low enough to expose lake bottom (i.e., muck) the majority of respondents (60% to 71%, depending on the individual question) thought that low water impaired the aesthetic and/or recreational use of the lake. Question 27 (support or oppose the Fish and Wildlife Conservation Commission's muck removal program for lakes) confirmed this finding with 74% of the respondents (695 individuals) supporting muck removal projects.

There were many questions in the survey related to aquatic plants, including emergent, floating-leaved, and submersed plants. Respondents generally thought plants are essential to the "health" of a lake and that aquatic plants are needed for fish and wildlife. Most respondents (709 individuals, 78%) considered emergent and floating leaved plants to be wetland plants and 89% (826 individuals) supported preserving wetlands. Respondents generally found no problem with emergent plants growing out to 50 feet from shore and they wished to maintain the current status of aquatic vegetation in their lake. However, when terrestrial, or aquatic plants (all types) extended past 50 feet from shore or if they interfered with recreation respondents considered this

an impairment of aesthetics and/or recreational use of the lake. Supporting this finding, 79% of the survey respondents (735 individuals) supported some type of management of all types of shoreline vegetation (terrestrial and aquatic). Thus, any water level that supports the expansion of vegetation would be considered an impairment of the aesthetics and/or recreational use of a lake, despite respondent's desire to preserve wetlands.

There were also many questions in the survey that asked the respondents about water level in relation to the physical access to the lake for aesthetic and/or recreational activities on a lake. Survey returns indicated respondents were not that concerned about high water conditions unless the water flooded lawns and/or trees for an extended period. The majority of respondents (> 60%) were willing to accept a "high" water level where levels are at a stage equal to or less than levels that occur 80% to 90% of the time during a 2-year, 1-year or 3-month flood event because these levels generally do not flood property. Respondents (55% to 78%, depending on the question) felt that any low water situation that limits access to a lake impairs aesthetic and/or recreational use. However, for natural drought situations the majority of the respondents were willing to accept a low water level where level are at a stage equal to or less than 20% to 30% of the time during a 2-year, 1-year and a three-month drought event. When asked specifically what water level impaired aesthetic and/or recreational use the majority of respondents selected a low water level where level are at a stage equal to or less than 30% to 40% of the time. When asked what long-term water level they most preferred 91% of the respondent (854 individuals) preferred some water level above the long-term median.

While people accepted the concept that some water level fluctuation is good for fish and wildlife in a lake, 60% of respondents (571 individuals) preferred a fluctuation pattern that incorporated a moderate increase or decrease during the year. Survey respondents understand that natural (403 individuals, 43%), or both natural and man caused factors (372 individuals, 39%) are the primary cause of water level fluctuation in their lake. Over half of the respondents (505 individuals, 54%) however, felt that governmental agencies should manage water levels but just enough to minimize flooding and to prevent low water periods.

Thus, results from the Lake User Survey suggest that lake users are willing to accept water level fluctuations where water levels are at a stage that occur equal to or less than 20% of the time up to a stage that occurs equal to or less than 90% of the time. Outside of this range lake users feel that lake aesthetic and/or recreational use are impaired. However, most survey respondents preferred a moderate fluctuation pattern where water levels are at a stage that occur equal to or less than 50% of the time up to a stage that occurs equal to or less than 80% of the time

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## Introduction

Scientists participating in an international workshop on shallow lakes systems suggested that water level fluctuation is the overriding effect on the ecology, functioning and management of shallow lakes (Coops et al. 2003). There are many mechanisms like nutrient loading, color, flushing rate, biotic interactions, aquatic plant abundance and others that are related to water levels changes in a lake that may impact the lake's characteristics (Dillon 1975; Gasith and Hoyer 1992; Brown et al. 2000; Nagid et al. 2001; Havens et al. 2004; Hoyer et al. 2005). These and other process have been used by the Southwest Florida Water Management District (SWFWMD) to establish minimum and guidance levels for lakes because the District is mandated to establish minimum and guidance levels for lakes and to identify water elevations below which significant harm to lake structure and function could occur.

As part of the District's approach for establishing minimum and guidance levels for lakes, six significant change standards were developed as a means to evaluate significant harm to lakes. Two of the six standards are the Aesthetics Standard and the Recreation/Ski Standard. These standards are intended to determine at what lowered lake stage, impacts to aesthetic and scenic values and recreational activities may occur. Although it was the intent of the District to incorporate the findings of previous lake user group studies in the development of these standards, it was found that this information was limited. As a result, the Aesthetics Standard currently corresponds to the elevation that a lake's water levels are expected to equal or exceed ninety percent of the time on a long-term basis. While this elevation may be appropriate to preserve use, the District recognizes that development of the standard may be improved.

Similarly, the Recreation/Ski Standard was developed to take into consideration recreational activities including, boating, swimming, fishing, and water skiing in relation to lake stage change. Again, because information is limited on what various user groups perceive as preferable lake conditions for these activities, the Recreation/Ski Standard currently corresponds to recommendations of the United States Coast Guard for safe boating and water skiing. Additionally, changes in the coverage of herbaceous wetland and submersed/floating vegetation are also evaluated in relation to changes in lake stage, but information is needed on how increases or decreases in the percentages of plant cover may affect the aesthetic values and recreational activities of lake users. Thus, the objective of this study was to conduct a lake user survey to determine user perceptions regarding lake aesthetics, recreation, and coverage of aquatic vegetation in relation to lake stage. Through the use of lake user perceptions the development of the Aesthetics and Recreation/Ski Standards may be more quantitatively supported and refined to better reflect their intent.

## Methods

To determine lake user perceptions about lake conditions in relation to lake water levels, a survey with 60 questions was developed with reviews and comments from SWFWMD staff (Appendix I, notice that there is no Question 44 due to a numbering error when the survey was printed). To insure a wide range of user groups was given the opportunity to participate, the following five mailing lists were obtained: Boating Registrations, Freshwater Fishing License Holders, Florida LAKEWATCH Volunteers, Florida Lake Management Society Members, and



North American Lake management Society members. From those lists, random samples of individuals who reside within the boundaries of SWFWMD were sent the survey.

To insure the highest level of survey returns the following procedure was used for sending the surveys. In October of 2006, an introductory letter describing the survey's intent was sent to all individuals, informing them that a survey would be arriving soon. Approximately seven to 10 day after the introductory letter was sent, the survey was mailed with a self-addressed, postage applied envelope for returning the survey. Two weeks later, a post card was sent to individuals who had not yet returned the survey asking them to please return the survey. Finally, after another two weeks, for those who had not yet returned a survey another survey was mailed.

Upon receiving returned surveys all responses were computerized and proofed using Access. Summary tables were generated using SAS. The summaries are cross tables reporting the numbers and percentages of responses to each question listed by user groups and with a total of all responses. The number of responses for the FLMS and NALMS user groups were small and because they are both similar professional societies they were combined in all cross tables.

## Results

There was a total of 2563 survey sent and of those 964 were filled out and returned yielding a return rate of 38% (Table 1). The lowest percentage of returned surveys was for the fishing license holders with only 21% returns. The highest percentage of returned surveys was for LAKEWATCH volunteers with 58%.

Table 1. Number of surveys sent, returned and percentage of surveys returned listed by user group.

Group	Survey Sent	Surveys Returned	Percent Returned
Boat Registrations	800	255	32
Fishing Licenses	800	169	21
FLMS	106	45	42
NALMS	30	16	53
LAKEWATCH	827	479	58
Total	2563	964	38

The following results sections will be presented by question number with discussions where needed. The cross tables are labeled with the survey question number and all set up the same, with the number of individual responses the top number in a cell and the percentage of responses the bottom number. The Cross Tables were also separated by user group so that the reader could determine if there were any large differences in responses based on different user groups. However, the vast majority of responses for each user group were similar for each question.

Question 1 responses show that a total of 94% individuals responding lived on or visited a lake within the last year. Individuals did not answer question 1 in 12 surveys. All individual groups had similar responses suggesting that the individuals responding to the survey were indeed familiar with the lakes that they were using to respond to the survey questions.

Table of Q1 by Group					
Q1. (1 Have you lived at or visited a lake during the past year?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
No	26 10.32	16 9.52	11 2.34	1 1.64	54 6
Yes	226 89.68	152 90.48	460 97.66	60 98.36	898 94
Total	252	168	471	61	952
Frequency Missing = 12					

Question 2 asked the name of the lake the respondent lived on or visited in the last year. Fifty responses listed no name but the following is a list of 340 lakes that were listed with the number of responses for each lake. This is a large number of lakes and gives a good distribution of lake types for the survey responses.

Lake Name	Number of Responses
Agnes	1
Alafia River	1
Alfred	1
Alice	3
Allen	1
Alligator	1
Alopez Park	1
Angelo	1
Angus	2
Annabelle Reed	1
Annie	1
Anoka	1
Apopka	1
Arbuckle	5
Ariana	3
Armistead	1
Arthur	1
Artillery	1
August	3
Banana	1
Bay	1
Bayshore on the Lake Condos	1
Bell	1
Belle	1
Beresford	1
Bess	2
Big Slivey	1
Bird	2
Blanchester	1
Blue	3
Blue Cove	1
Blue Heron	1
Boca	1
Bonable	1
Bonnet	4
Bonny	2
Boot	1
Brant	4
Brentwood	1
Buffum	2
Bugg Spring, Denham, Harris	1
Burrell	2

Lake Name	Number of Responses
Butler Chain of Lakes	1
Byrd	3
Byster	1
Cake Manatee	1
Calm	2
Carrie	3
Carroll	3
Casey	1
Cave Run	1
Cecil Webb	1
Cedar	1
Cedar West	1
Chapman	2
Charlotte	2
Chinquapin	1
Christina	1
Church	1
Clay	4
Clear	3
Clearview	1
Clermont chain of Lakes	1
Clinch	2
Club House	2
Commiston	2
Como	1
Conley	1
Cortez	1
Cory	1
Cove	1
Cowpen Pond	1
Crenshaw	1
Crescent	6
Crews	3
Crooked	12
Crystal	1
Crystal River	1
Cypress	2
Daisy	2
Damon	1
Davis	2
DeLancy	1
Dead Lady	1
Deer	1
Deerback	1
Deeson/ Gibson	1
Denton	1
Desire	1
Dexter	1

Lake Name	Number of Responses
Diane	1
Dinner	2
Dora	5
Dormie	1
Dorr	1
Dowling	1
Dupree	1
Eagle	5
Eagles Landing	1
East	1
East Crooked	1
Easy	1
Eatons Beach	1
Eckles	3
Edison college	1
Edward Medard Reservoir	6
Egypt	1
Eldorado	1
Elizabeth	1
Ellen	1
Eloise	6
Emma	2
Erie	1
Estes	1
Eustis	12
Eva	1
Evert	1
Flora	1
Floral	1
Floral City	9
Florence	2
Flynn	1
Forest	1
Fountain	1
Francis	4
Garden	1
Garfield	1
Gasden Park	1
Gaskin's Cut	1
George	3
Gertrude	1
Gibson	8
Glass	1
Goose Neck	1
Grady	2
Grasshopper	1
Grassy	5
Griffin	14

Lake Name	Number of Responses
Gum	1
Haines	4
Halfmoon	2
Hamilton	4
Hampton	1
Hancock	1
Harle Pond	1
Harris	10
Harris chain	1
Hartridge	3
Heather	1
Hemon	1
Henderson	15
Henry	3
Hermosa	1
Hernando	8
Hiawatha	1
Hickory Hammock	1
Hidden	2
Hill	2
Hillsborough River	1
Hobbs	1
Hollingsworth	11
Hollingsworth, Bowana, Scott	1
Howard	1
Huckleberry	2
Hunter	7
Hunter/ Long Pond	1
Hunters	6
Hunters-Rosseau	1
Huntley	3
Ieis	1
Inverness	1
Ioln	1
Isis	1
Island	1
Istokpoga	15
Jackson	9
Jackson and Little Jackson	1
James	1
Jerome	1
Jessie	2
Joanna	2
Joe	1
John	1
Josephine	5
Josephine East	2
Josephine West	2

Lake Name	Number of Responses
Jovita	2
Juliana	1
June	15
Katherine	1
Keene	5
Kerr	3
Kerr and Weir	1
Keystone	3
King	2
Kingsley	1
Kirkland	1
Kissimmee	12
Kissimmee Chain	3
Lazy	1
Letta	3
Lettuce	3
Lillian	2
Lindsey	1
Lipsey	2
Little Banana	1
Little Black	1
Little Henderson	1
Little Jackson	1
Little Moon	1
Little Weir	1
Little Wilson	1
Loch Haven	1
Loch Leven	2
Lochloosa	3
Lorraine	1
Lotela	3
Lou	2
Louisa	2
Lowery	1
Lucy	1
Lulu	2
Luly	1
Lutz	2
Lynn	1
Magdalene	4
Maggiore	1
Maggorie	1
Maggorie and Crescent	1
Mamee	1
Manatee	7
Mary Holland Park	1
Mary Jane	1
Mathews	1

Lake Name	Number of Responses
Maurine	2
McCoy	2
Mcload	1
Meron	1
Middle	1
Midlake	1
Mill Dam	1
Minnehaha	2
Minneola	4
Miona	1
Mirror	7
Moon	1
Morton	2
Mound	1
Mountain	2
Myakka	10
Myakka River	1
Ned	1
New Ryan	1
Noname	1
Norbert	3
Noreast	4
North	2
Okahumpka	1
Okeechobee	6
Oliver	1
Olivia	1
Orange	3
Orange and Lochloosa	1
Orchid	1
Osceola	3
Padgett	2
Palakataha	1
Panasoffkee	11
Panasoffkee, Weir	1
Panasofkee	1
Pano	1
Pansy	1
Park	2
Parker	10
Parker and Gibson	1
Pasadena	1
Patrick	1
Peanut Pond	1
Pearl	2
Persimmon	1
Pierce	5
Pine	2



Lake Name	Number of Responses
Placid	9
Pollock	2
Pretty	1
Princess	1
Private	2
Private lake near gainesville	1
Rainbow	3
Red Beach	1
Redwater	1
Reedy	7
Reinheimer	2
Roberta	1
Rochelle	1
Rosalie	5
Rose Hell	1
Rosealie	1
Ross	1
Rotonda canal	1
Rotonda west	1
Round	2
Rousseau	11
Roy	2
Saddle Creek	1
Saddlebags	2
Santa Fe	1
Sawmill	1
Saxon	3
Scrub Jay	1
Sears	1
Sebring	2
Seminole	4
Serenity	1
Shangri-La	1
Sherwood	1
Shipp	8
Silver	6
Silver glen springs	1
Silver, Panasoffkee	1
Simmons	2
Sims	1
Sirena	2
Spivey	3
Spring	1
St. Charlotte	1
St. John River	1
Stafford	1
Starvation	1
Strawberry	1

Lake Name	Number of Responses
Subdivision ponds	1
Subset	1
Summit	3
Sumner	1
Sunset	1
Sunshine	1
Suwannee River	1
Suzy	1
Symphony	1
Tampa Bypass Canal	1
Tarpon	31
Tavares	1
Taylor	2
Ten Mile	1
Tennessee	1
Tenoroc	2
Thakka State Park	1
Thomas	3
Thonotasassa	1
Thonotosassa	16
Thonotossassa	1
Todd	2
Tohopekaliga	3
Tracy	1
Treasure	1
Trout	3
Tsala Apopka	15
Tsala Apopka Chain	3
Tsi	1
Tulane	1
Turkey	1
Turkey Creek Reservoir	1
Turkey Ford	1
Turtle	1
Twin	6
Unity	1
Upper Myakka	1
Valrico	1
Valrico Middle	1
Viola	2
Virginia	1
WFWI	1
Wales	3
Walsingham Park	1
Webb	1
Weir	14
Weir and Little Weir	1
Weohyakapka	3

Lake Name	Number of Responses
Weohyakapkar	1
West Meadows	3
West Meadows-15	1
White Trout	4
Wildcat	1
Wilson	3
Wimauma	1
Winter Haven Chain of Lakes	4
Winterset	2
Wolf	1
Worrell	1
Yale	2
Zephyr	1
Total	914

Question 3 asked the respondents to rate the beauty of the lake they named. The majority of responses (77%) from all user groups thought that the lake in question was either moderately beautiful (350 individuals, 38%) or very beautiful (364 individuals, 39%). These data suggest that most people are generally pleased with the beauty of their lake or the lakes that they visit.

Table of Q3_Lake_beauty_lookup by Group					
Q3_Lake_beauty_lookup (3 Given the lake named in Q2, how beautiful would you rate it?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Not at all beautiful	4 1.66	6 3.68	5 1.07	1 1.69	16 2
Slightly beautiful	24 9.96	17 10.43	28 6.01	5 8.47	74 8
Moderately beautiful	94 39.00	72 44.17	163 34.98	21 35.59	350 38
Very beautiful	86 35.68	47 28.83	206 44.21	25 42.37	364 39
Extremely beautiful	29 12.03	19 11.66	62 13.30	6 10.17	116 12
No opinion	4 1.66	2 1.23	2 0.43	1 1.69	9 1
Total	241	163	466	59	929
Frequency Missing = 35					

Question 4 asked the respondent to list the number of years they visited or lived on the lake named in question 2. The distribution analysis below shows that the respondents lived or visited the named lake for a median of 11 year with a wide range of 0 to 69 years. Seventy five percent of the respondents lived or visited the named lake for six or more years. These data suggest that most of the individuals answering the survey have several years of lake observation for experience.

Quantiles		Years Lived on Lake
100.0%	maximum	69
99.5%		60
97.5%		47
90.0%		33
75.0%	quartile	21
50.0%	median	11
25.0%	quartile	6
10.0%		3
2.5%		1
0.5%		0
0.0%	minimum	0

Question 5 asked the Lake User Survey respondents to rank the amount of time they spend at a list of 12 different lake user activities. All activities were conducted by at least some of the respondents. However, Figure 1 shows that sailing and jet skiing are the two activities done least often while fishing and sitting to enjoy the lake are the activities done most often.

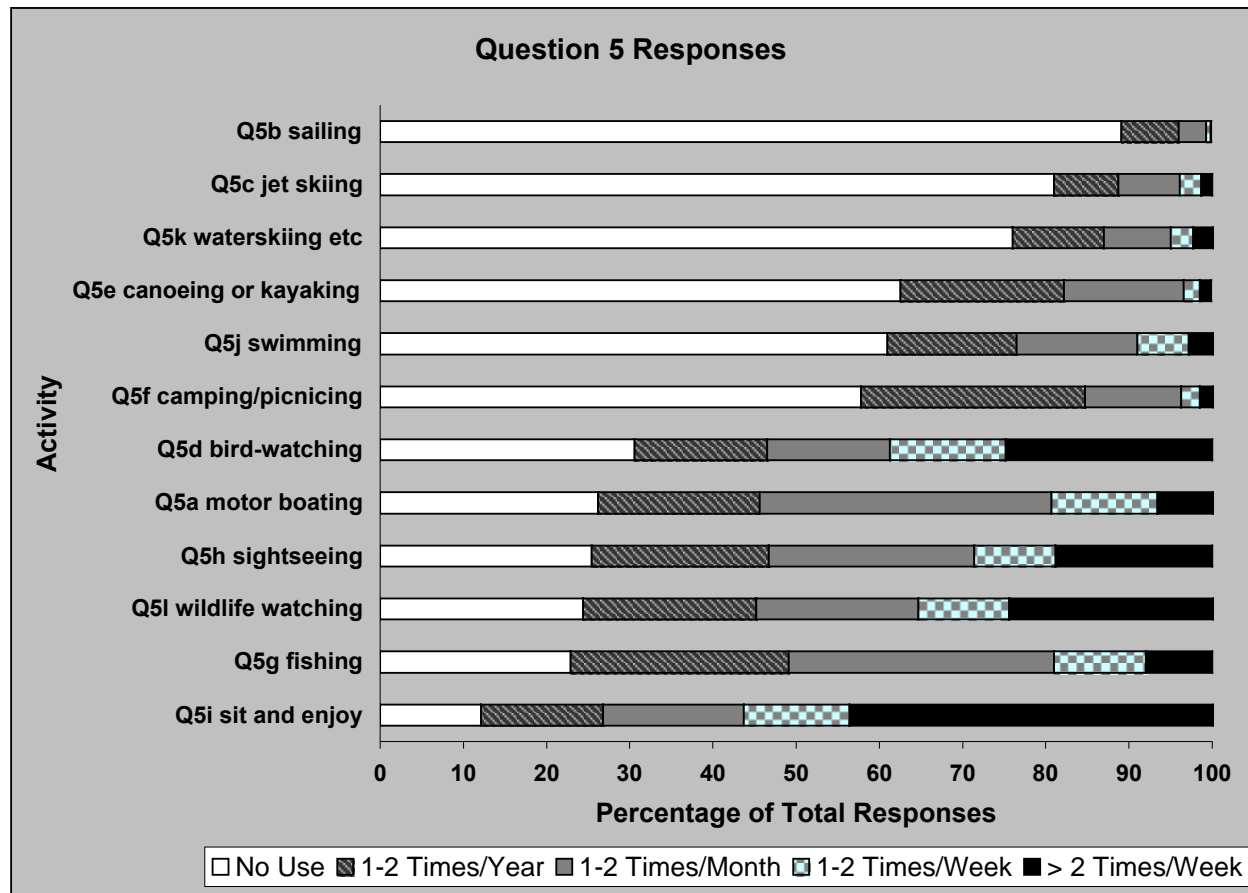


Figure 1. Summary of the percentage of time survey respondents use lakes for a list of 12 different lake use activities.

The cross tables below show the frequency of responses to each individual activity (Question 5a through 5L) by user group. For each activity the frequency of use is similar among all user groups.

Table of Q5a_motor_boating by Group					
Q5a_motor_boating (5a motor boating frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	52 20.47	38 22.75	134 28.45	11 18.64	235 25
1-2 times per year	73 28.74	49 29.34	82 17.41	23 38.98	227 24
1-2 times per month	90 35.43	51 30.54	159 33.76	15 25.42	315 33
1-2 times per week	26 10.24	22 13.17	63 13.38	3 5.08	114 12
More than 2X per week	13 5.12	7 4.19	33 7.01	7 11.86	60 6
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5b_sailing by Group					
Q5b_sailing (5b sailing frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	180 70.87	119 71.26	327 69.43	41 69.49	667 70
1-2 times per year	66 25.98	47 28.14	125 26.54	16 27.12	254 27
1-2 times per month	7 2.76	0 0.00	16 3.40	2 3.39	25 3
1-2 times per week	1 0.39	1 0.60	2 0.42	0 0.00	4 0
More than 2X per week	0 0.00	0 0.00	1 0.21	0 0.00	1 0
Total	254	167	471	59	951
Frequency Missing = 13					



Table of Q5c_jet_skiing by Group					
Q5c_jet_skiing(5c jet skiing frequency)	Group				Total
	Boat license list	Fishing license list	LAKWATCH list	NALMS & FLMS list	
None	161 63.39	102 61.08	321 68.15	38 64.41	622 65
1-2 times per year	66 25.98	55 32.93	101 21.44	20 33.90	242 25
1-2 times per month	16 6.30	7 4.19	33 7.01	1 1.69	57 6
1-2 times per week	8 3.15	2 1.20	10 2.12	0 0.00	20 2
More than 2X per week	3 1.18	1 0.60	6 1.27	0 0.00	10 1
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5d_bird_watching by Group					
Q5d_bird_watching (5d bird watching frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	102 40.16	72 43.11	54 11.46	19 32.20	247 26
1-2 times per year	85 33.46	59 35.33	108 22.93	21 35.59	273 29
1-2 times per month	21 8.27	16 9.58	78 16.56	4 6.78	119 13
1-2 times per week	19 7.48	7 4.19	77 16.35	9 15.25	112 12
More than 2X per week	27 10.63	13 7.78	154 32.70	6 10.17	200 21
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5e_canoeing_or_kayaking by Group					
Q5e_canoeing_or_kayaking (5e canoeing or kayaking frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	155 61.02	97 58.08	203 43.10	26 44.07	481 51
1-2 times per year	83 32.68	60 35.93	161 34.18	29 49.15	333 35
1-2 times per month	12 4.72	8 4.79	87 18.47	4 6.78	111 12
1-2 times per week	2 0.79	1 0.60	12 2.55	0 0.00	15 2
More than 2X per week	2 0.79	1 0.60	8 1.70	0 0.00	11 1
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5f_camping_picnicking by Group					
Q5f_camping_picnicking (5f camping/picnicking at a lake frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	121 47.64	64 38.32	236 50.11	24 40.68	445 47
1-2 times per year	110 43.31	81 48.50	167 35.46	30 50.85	388 41
1-2 times per month	19 7.48	20 11.98	47 9.98	3 5.08	89 9
1-2 times per week	2 0.79	0 0.00	15 3.18	0 0.00	17 2
More than 2X per week	2 0.79	2 1.20	6 1.27	2 3.39	11 1
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5g_fishing by Group					
Q5g_fishing (5g fishing frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	55 21.65	19 11.38	117 24.84	14 23.73	205 22
1-2 times per year	82 32.28	54 32.34	126 26.75	27 45.76	289 30
1-2 times per month	81 31.89	61 36.53	130 27.60	14 23.73	286 30
1-2 times per week	21 8.27	21 12.57	56 11.89	1 1.69	99 10
More than 2X per week	15 5.91	12 7.19	42 8.92	3 5.08	72 8
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5h_sightseeing by Group					
Q5h_sightseeing (5h sightseeing frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	76 29.92	42 25.15	78 16.56	11 18.64	207 22
1-2 times per year	91 35.83	72 43.11	127 26.96	20 33.90	310 33
1-2 times per month	49 19.29	26 15.57	113 23.99	13 22.03	201 21
1-2 times per week	20 7.87	11 6.59	45 9.55	4 6.78	80 8
More than 2X per week	18 7.09	16 9.58	108 22.93	11 18.64	153 16
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5i_sit_and_enjoy by Group					
Q5i_sit_and_enjoy (5i sit and enjoy the view frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	49 19.29	27 16.17	17 3.61	10 16.95	103 11
1-2 times per year	78 30.71	66 39.52	61 12.95	18 30.51	223 23
1-2 times per month	48 18.90	31 18.56	51 10.83	14 23.73	144 15
1-2 times per week	28 11.02	11 6.59	64 13.59	5 8.47	108 11
More than 2X per week	51 20.08	32 19.16	278 59.02	12 20.34	373 39
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5j_swimming by Group					
Q5j_swimming (5j swimming frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	137 53.94	89 53.29	233 49.47	26 44.07	485 51
1-2 times per year	76 29.92	57 34.13	118 25.05	28 47.46	279 29
1-2 times per month	26 10.24	14 8.38	72 15.29	3 5.08	115 12
1-2 times per week	11 4.33	5 2.99	33 7.01	0 0.00	49 5
More than 2X per week	4 1.57	2 1.20	15 3.18	2 3.39	23 2
Total	254	167	471	59	951
Frequency Missing = 13					



Table of Q5k_waterskiing_etc by Group					
Q5k_waterskiing_etc (5k waterskiing, wakeboarding or knee boarding frequency)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	147 57.87	108 64.67	314 66.67	32 54.24	601 63
1-2 times per year	71 27.95	47 28.14	103 21.87	26 44.07	247 26
1-2 times per month	24 9.45	6 3.59	32 6.79	1 1.69	63 7
1-2 times per week	6 2.36	3 1.80	12 2.55	0 0.00	21 2
More than 2X per week	6 2.36	3 1.80	10 2.12	0 0.00	19 2
Total	254	167	471	59	951
Frequency Missing = 13					

Table of Q5l_wildlife_watching by Group					
Q5l_wildlife_watching (5l wildlife watching or photography)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
None	89 35.04	56 33.53	46 9.77	13 22.03	204 21
1-2 times per year	93 36.61	74 44.31	101 21.44	20 33.90	288 30
1-2 times per month	31 12.20	15 8.98	105 22.29	12 20.34	163 17
1-2 times per week	19 7.48	5 2.99	62 13.16	5 8.47	91 10
More than 2X per week	22 8.66	17 10.18	157 33.33	9 15.25	205 22
Total	254	167	471	59	951
Frequency Missing = 13					

Question 6 asked the survey respondents if there were any days in the last year when they could not use a lake because of high water. Only six percent (55 individuals) of the respondents answered yes to question 6. This suggests that generally high water is not an issue for recreational use of lakes. Some of the respondents could not use a lake in each one of the preceding months (Table 2) but the highest problems were in August 2005 and October 2004 with 20 individuals not able to use a lake. For those that could not use a lake, 78% said they just did something else with their time (Question 7 Cross Table below).

Table of Q6_no_use_high_water by Group					
Q6_no_use_high_water (6 Were there any days during the last year when you wanted to use the lake but could not because of a high water level?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
No	239 95.60	152 92.68	440 93.82	58 95.08	889 94
Yes	11 4.40	12 7.32	29 6.18	3 4.92	55 6
Total	250	164	469	61	944
Frequency Missing = 20					

Table 2. Monthly frequency of respondents that could not use a lake because of high water.

Month	Frequency
Q6a September 2005 days	16
Q6b August 2005 days	20
Q6c July 2005 days	18
Q6d June 2005 days	17
Q6e May 2005 days	15
Q6f April 2005 days	13
Q6g March 2005 days	13
Q6h February 2005 days	11
Q6i January 2005 days	12
Q6j December 2004 days	15
Q6k November 2004 days	16
Q6l October 2004 days	20

Table of Q7_did_instead by Group					
Q7_did_instead (7 What did you do when high water prevented you from using the lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Used another lake or waterway	2 11.76	5 26.32	1 2.44	0 0.00	8 10
Choose another recreational activity	3 17.65	1 5.26	4 9.76	1 33.33	9 11
Did something else with my time	12 70.59	13 68.42	36 87.80	2 66.67	63 79
Total	17	19	41	3	80
Frequency Missing = 884					

Question 8 asked the respondents if there were any days in the last year when they could not use a lake because of low water. Only 4 percent (37 individuals) of the respondents answered yes to question 8. Similar to question 6 about high water, this suggests that generally low water is not an issue for recreational use of lakes. Some of the respondents could not use a lake in each one of the preceding months (Table 3) but the highest problems were in June 2005 and July 2004 with 11 individuals not able to use a lake. For those that could not use a lake, 61% said they just did something else with their time (Question 9, Cross Table below).

Table of Q8__no_use_low_water by Group					
Q8__no_use_low_water (8 Were there any days during the last year when you wanted to use the lake but could not because of a low water level?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	13 5.22	11 6.67	12 2.56	1 1.64	37 4
No	236 94.78	154 93.33	457 97.44	60 98.36	907 96
Total	249	165	469	61	944
Frequency Missing = 20					

Table 3. Monthly frequency of respondents that could not use a lake because of low water.

Month	Frequency
Q8a September, 2005	7
Q8b August, 2005	8
Q8c July, 2005	10
Q8d June, 2005	11
Q8e May, 2005	7
Q8f April, 2005	8
Q8g March, 2005	7
Q8h February, 2005	5
Q8i January, 2005	4
Q8j December, 2004	7
Q8k November, 2004	8
Q8l October, 2004	10

Table of Q9_did_instead by Group					
Q9_did_instead (9 What did you do when low water prevented you from using the lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Used another lake or waterway	4 20.00	7 33.33	3 13.04	1 50.00	15 23
Choose another recreational activity	5 25.00	1 4.76	5 21.74	0 0.00	11 17
Did something else with my time	11 55.00	13 61.90	15 65.22	1 50.00	40 61
Total	20	21	23	2	66
Frequency Missing = 898					

Question 10 asked specifically about the severe drought in 2000 and whether the survey respondents had trouble using a lake because of low water. Approximately half of the respondents (463 individuals) said yes that during the extreme drought of 2000 they had a difficult time using a lake. The majority of those individuals (55%) said they did something different with their time (Question 11 Cross Table below).

Table of Q10_no_use_in_2000 by Group					
Q10_no_use_in_2000(10 Thinking back several years to 2000 when Florida had a severe drought, were there any days when you wanted to use the lake but could not because of a low water level?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
No, because I did not live at or use a lake in 2000	81 32.40	43 26.54	149 32.39	11 18.33	284 30
No, I was not impacted by low water	61 24.40	42 25.93	59 12.83	23 38.33	185 20
Yes	108 43.20	77 47.53	252 54.78	26 43.33	463 50
Total	250	162	460	60	932
Frequency Missing = 32					

Table of Q11_did_instead by Group					
Q11_did_instead (11 What did you do in 2000 when low water prevented you from using the lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Used another lake or waterway	32 32.99	21 35.59	32 20.25	4 30.77	89 27
Choose another recreational activity	20 20.62	10 16.95	26 16.46	3 23.08	59 18
Did something else with my time	45 46.39	28 47.46	100 63.29	6 46.15	179 55
Total	97	59	158	13	327
Frequency Missing = 637					



Question 12 asked the respondents how important lake water level is in determining the beauty of a lake. A strong majority of the respondents thought that water level was extremely important (283 individuals, 30%) or very important (332 individuals, 35%) in determining the beauty of a lake. Only a small portion of the respondents thought that lake level was only slightly important (72 individuals) or not at all important (40 individuals).

Table of Q12_level_importance by Group					
Q12_level_importance (12 How important is the water level in determining the beauty or attractiveness of a lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Extremely important	86 33.99	46 28.22	135 28.66	16 26.23	283 30
Very important	97 38.34	61 37.42	159 33.76	15 24.59	332 35
Moderately important	50 19.76	38 23.31	109 23.14	16 26.23	213 22
Slightly important	14 5.53	10 6.13	39 8.28	9 14.75	72 8
Not at all important	4 1.58	5 3.07	27 5.73	4 6.56	40 4
No opinion	2 0.79	3 1.84	2 0.42	1 1.64	8 1
Total	253	163	471	61	948
Frequency Missing = 16					

Question 13 asked which of five options is the most important in determining the beauty of a lake. Even though Question 12 suggested that many individuals thought that water level was extremely important in determining the beauty of a lake only 15% of the respondent (143 individuals) in Question 13 thought that water level was the most important factor in determining the beauty of a lake. Both water clarity and extent of natural shoreline were thought to be more important in determining the beauty of a lake with 35% and 35% of the respondents, respectively.

Table of Q13_most_important by Group					
Q13_most_important (13 Which one is most important in determining the beauty of a lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Water level	48 18.97	18 11.04	71 15.14	6 10.00	143 15
Water clarity	93 36.76	65 39.88	158 33.69	18 30.00	334 35
Amount of open water	37 14.62	21 12.88	50 10.66	9 15.00	117 12
Extent of natural shoreline	66 26.09	53 32.52	182 38.81	27 45.00	328 35
Visibility of houses along shore	9 3.56	6 3.68	8 1.71	0 0.00	23 2
Total	253	163	469	60	945
Frequency Missing = 19					

Question 14 asked the respondents how they most often judge the water level on lakes. The strong majority of the respondents use either water level in relation to the top of a dock (356 individuals, 38%) or water level in relation to shoreline vegetation (310 individuals, 33%) to judge the water level on lakes. Very few individuals use water control structures (18 individuals, 2%) or in lake staff gauges (100 individuals, 11%) to judge the water level of lakes. There are slight differences in the responses from different groups. The individuals from the LAKEWATCH group generally used boat docks to judge water level most often (45%) while individuals from the Boat License group most often (34%) used boat ramps to judge water level.

Table of Q14_judge_level by Group					
Q14_judge_level (14 Which of the following do you most often use to judge the water levels on lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Water level in relation to top of docks	85 33.73	48 29.09	212 45.20	11 18.33	356 38
Water level in relation to boat ramps	79 31.35	40 24.24	30 6.40	13 21.67	162 17
Water level in relation to water control structures	3 1.19	2 1.21	12 2.56	1 1.67	18 2
Water level in relation to shoreline vegetation	74 29.37	71 43.03	139 29.64	26 43.33	310 33
In-lake water-level gauges (also called Staff Gages)	11 4.37	4 2.42	76 16.20	9 15.00	100 11
Total	252	165	469	60	946
Frequency Missing = 18					

Question 15 asked the respondents what water level in relation to the top of a dock or boat ramp decreased the scenic value of a lake. A strong majority of the respondents (620 individuals, 72%) felt that water level at the bottom of a dock or boat ramp decrease the scenic value of a lake.

Table of Q15_scenic_value_level by Group					
Q15_scenic_value_level (15 What water level do you feel decreases the scenic value of your lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Top of the dock, boat ramp, etc.	37 15.23	25 16.67	75 18.47	15 26.79	152 18
Middle of the dock, boat ramp, etc.	28 11.52	18 12.00	36 8.87	1 1.79	83 10
Bottom of the dock, boat ramp, etc.	178 73.25	107 71.33	295 72.66	40 71.43	620 72
Total	243	150	406	56	855
Frequency Missing = 109					

Question 16 asked the respondents to describe the shape of the lake they live on or visit. The vast majority of the respondents (725 individuals, 77%) stated that the lake they live on or visit is a shallow where the bottom drops gently from the shoreline. This is not unexpected because the majority of the lakes in Florida are shallow (Hoyer et al. 2005).

Table of Q16_lake_shape by Group					
Q16_lake_shape (16 What is the shape of the lake that is most like the one that you live at or have visited most?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Shallow where the bottom drops gently from the shoreline	190 75.40	110 66.67	381 81.58	44 72.13	725 77
Deep where the bottom drops steeply from the shoreline	26 10.32	24 14.55	69 14.78	12 19.67	131 14
Do not know	36 14.29	31 18.79	17 3.64	5 8.20	89 9
Total	252	165	467	61	945
Frequency Missing = 19					

Question 17 asked respondents to pick a water level based on the percentage of time a water level occurs at a lake that they prefer most. Questions 18 and 19 asked respondents to pick a water level based on the percentage of time a water level occurs at a lake where they feel the beauty and recreational use are harmed, respectively. Figure 2 and the cross table summaries below show that the vast majority of respondents to Question 17 prefer a water level above the median water level (854 individuals, 91%) with 27%, 16%, and 22% of the respondents preferring a water level where levels are at a stage equal to or less than 50%, 60% and 70% of the time, respectively. Questions 18 and 19 show that the majority of respondents (Question 18: 418 individuals, 52% and Question 19: 421 individuals, 53%) felt that the beauty and recreational use of a lake are not harmed until the water levels are at a stage equal to or less than 20% to 30% of the time (Figure 2 and Cross Tables below).

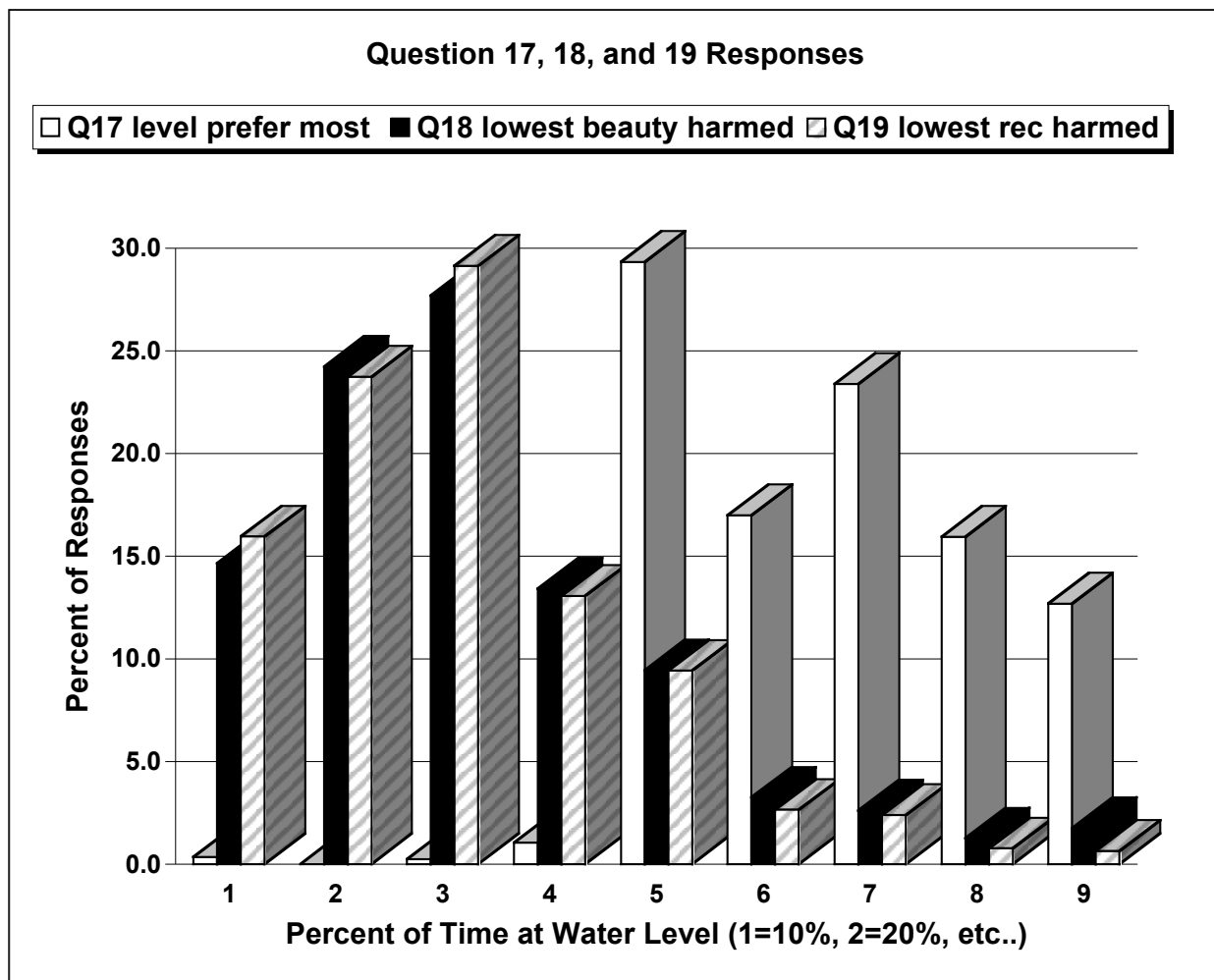


Figure 2. Percentage of responses for Survey Questions 17, 18, and 19.

Table of Q17_level_prefer_most by Group					
Q17_level_prefer_most (17 What is the long-term water level that you prefer most?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
90%	29 11.60	18 11.11	57 12.45	5 8.33	109 12
80%	29 11.60	29 17.90	73 15.94	6 10.00	137 15
70%	67 26.80	32 19.75	91 19.87	11 18.33	201 22
60%	39 15.60	20 12.35	81 17.69	6 10.00	146 16
50%	59 23.60	37 22.84	128 27.95	28 46.67	252 27
40%	2 0.80	3 1.85	3 0.66	1 1.67	9 1
30%	1 0.40	0 0.00	1 0.22	0 0.00	2 0.2
10%	0 0.00	2 1.23	0 0.00	1 1.67	3 0.2
Don't Know	24 9.60	21 12.96	24 5.24	2 3.33	71 7
Total	250	162	458	60	930
Frequency Missing = 34					

Table of Q18_lowest_beauty_harmed by Group					
Q18_lowest_beauty_harmed (18 What is the lowest long-term water level at which the lakes scenic beauty is harmed?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
0	2 0.95	1 0.70	6 1.50	0 0.00	9 1
10	20 9.52	13 9.15	71 17.75	14 26.42	118 15
20	55 26.19	29 20.42	98 24.50	13 24.53	195 24
30	54 25.71	41 28.87	119 29.75	9 16.98	223 28
40	32 15.24	20 14.08	48 12.00	8 15.09	108 13
50	21 10.00	16 11.27	35 8.75	4 7.55	76 9
60	12 5.71	10 7.04	4 1.00	0 0.00	26 3
70	4 1.90	6 4.23	9 2.25	2 3.77	21 3
80	2 0.95	2 1.41	5 1.25	1 1.89	10 1
90	6 2.86	3 2.11	4 1.00	1 1.89	14 2
Total	210	142	400	53	805
Frequency Missing = 159					



Table of Q19_lowest_rec_harmed by Group					
Q19_lowest_rec_harmed (19 What is the lowest long-term water level at which the lakes recreational use is harmed?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
0	2 0.94	2 1.47	10 2.53	0 0.00	14 2
10	20 9.39	16 11.76	80 20.20	11 21.57	127 16
20	54 25.35	29 21.32	97 24.49	9 17.65	189 24
30	67 31.46	30 22.06	119 30.05	16 31.37	232 29
40	30 14.08	29 21.32	40 10.10	5 9.80	104 13
50	22 10.33	18 13.24	28 7.07	7 13.73	75 9
60	8 3.76	4 2.94	9 2.27	0 0.00	21 3
70	4 1.88	6 4.41	6 1.52	3 5.88	19 2
80	2 0.94	2 1.47	2 0.51	0 0.00	6 1
90	3 1.41	0 0.00	2 0.51	0 0.00	5 1
100	1 0.47	0 0.00	0 0.00	0 0.00	1 0
Total	213	136	396	51	796
Frequency Missing = 168					

Questions 20a, 20b, and 20c asked the respondents to pick the lowest water level based on the percentage of time a water level occurs at a lake that they would accept during a 2-year, 1-year and 3-month drought event. The majority of respondents (Question 20a: 362 individuals, 42%, Question 20b: 359 individuals, 41% and Question 20c: 273 individuals, 32%) selected a water level that occurs equal to or less than 30% to 40% of the time as the lowest water level they would accept for a 2-year, 1-year and 3-month drought (Figure 3 and Cross Tables below).

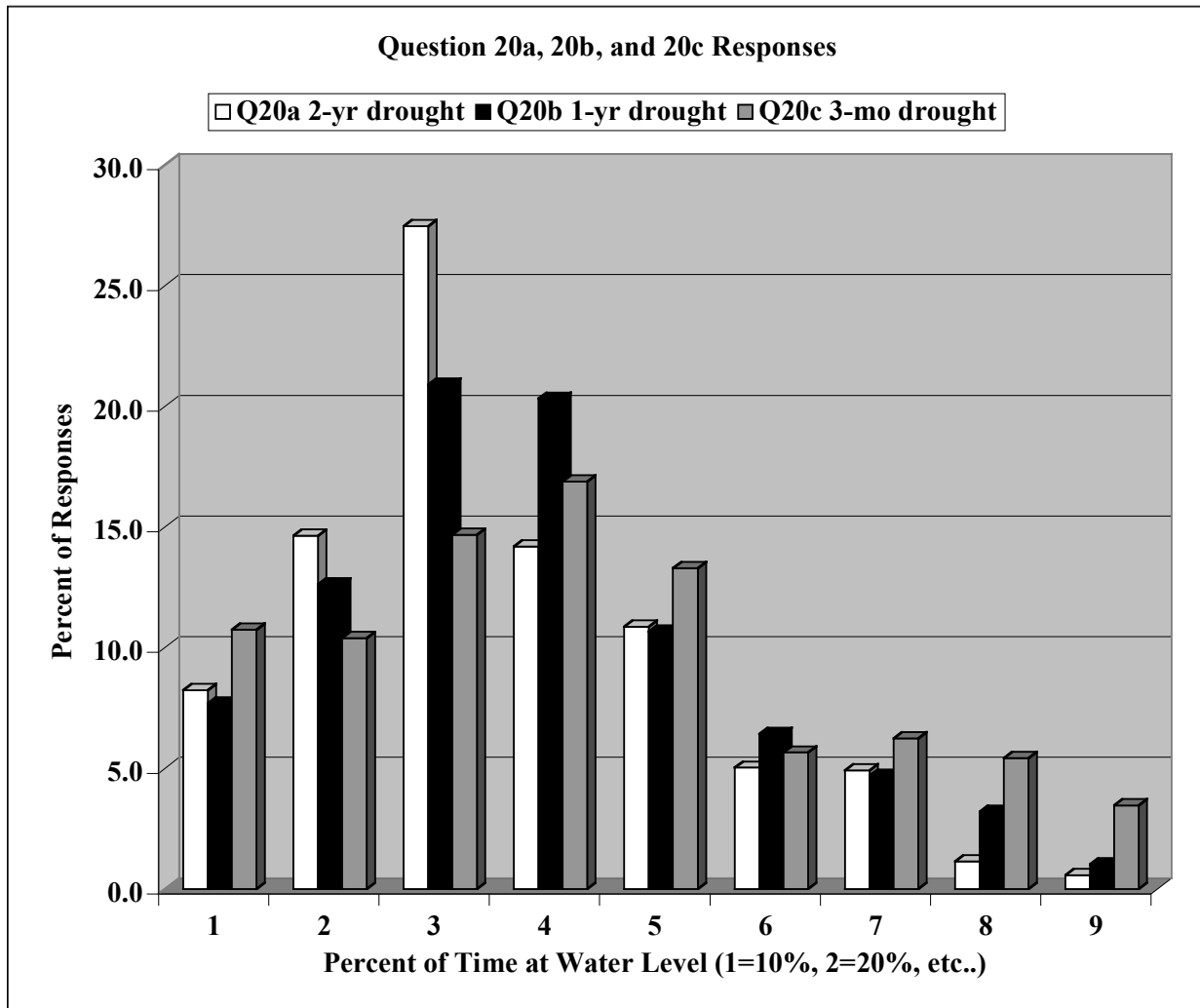


Figure 3. Percentage of responses for Survey Questions 20a, 20b, and 20c.

Table of Q20a_2_yr_drought by Group					
Q20a_2_yr_drought (20a What is the lowest level that you would accept during a 2-year drought?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	8 3.42	8 5.16	45 10.49	11 19.64	72 8
20%	28 11.97	18 11.61	71 16.55	11 19.64	128 15
30%	57 24.36	43 27.74	125 29.14	15 26.79	240 27
40%	42 17.95	15 9.68	58 13.52	9 16.07	124 14
50%	27 11.54	20 12.90	44 10.26	4 7.14	95 11
60%	13 5.56	7 4.52	22 5.13	2 3.57	44 5
70%	11 4.70	14 9.03	17 3.96	1 1.79	43 5
80%	5 2.14	1 0.65	4 0.93	0 0.00	10 1
90%	0 0.00	1 0.65	3 0.70	1 1.79	5 1
Don't Know	43 18.38	28 18.06	40 9.32	2 3.57	113 13
Total	234	155	429	56	874
Frequency Missing = 90					

Table of Q20b_1_yr_drought by Group					
Q20b_1_yr_drought (20b What is the lowest level that you would accept during a 1-year drought?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	9 3.86	11 7.19	40 9.32	7 12.50	67 8
20%	19 8.15	12 7.84	69 16.08	10 17.86	110 13
30%	48 20.60	24 15.69	95 22.14	15 26.79	182 21
40%	46 19.74	31 20.26	88 20.51	12 21.43	177 20
50%	25 10.73	16 10.46	50 11.66	2 3.57	93 11
60%	18 7.73	14 9.15	20 4.66	4 7.14	56 6
70%	16 6.87	11 7.19	13 3.03	1 1.79	41 5
80%	11 4.72	5 3.27	10 2.33	2 3.57	28 3
90%	2 0.86	2 1.31	4 0.93	1 1.79	9 1
Don't Know	39 16.74	27 17.65	40 9.32	2 3.57	108 12
Total	233	153	429	56	871
Frequency Missing = 93					

Table of Q20c_3_mo_drought by Group					
Q20c_3_mo_drought (20c What is the lowest level that you would accept during a 3-month drought?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	17 7.30	13 8.44	51 12.03	12 22.22	93 11
20%	20 8.58	8 5.19	58 13.68	4 7.41	90 10
30%	30 12.88	20 12.99	69 16.27	8 14.81	127 15
40%	27 11.59	22 14.29	81 19.10	16 29.63	146 17
50%	34 14.59	23 14.94	54 12.74	4 7.41	115 13
60%	14 6.01	11 7.14	22 5.19	2 3.70	49 6
70%	21 9.01	11 7.14	20 4.72	2 3.70	54 6
80%	15 6.44	12 7.79	18 4.25	2 3.70	47 5
90%	12 5.15	7 4.55	8 1.89	3 5.56	30 3
Don't Know	43 18.45	27 17.53	43 10.14	1 1.85	114 13
Total	233	154	424	54	865
Frequency Missing = 99					

Questions 20d, 20e, and 20f asked the respondents to pick the highest water level based on the percentage of time a water level occurs at a lake that they would accept during a 2-year, 1-year and 3-month flood event. The majority of respondents (Question 20d: 495 individuals, 58%, Question 20e: 478 individuals, 55% and Question 20f: 441 individuals, 51%) selected a water level that occurs equal to or less than 80% to 90% of the time as the highest water level they would accept for a 2-year, 1-year and 3-month flood (Figure 4 and Cross Tables below).

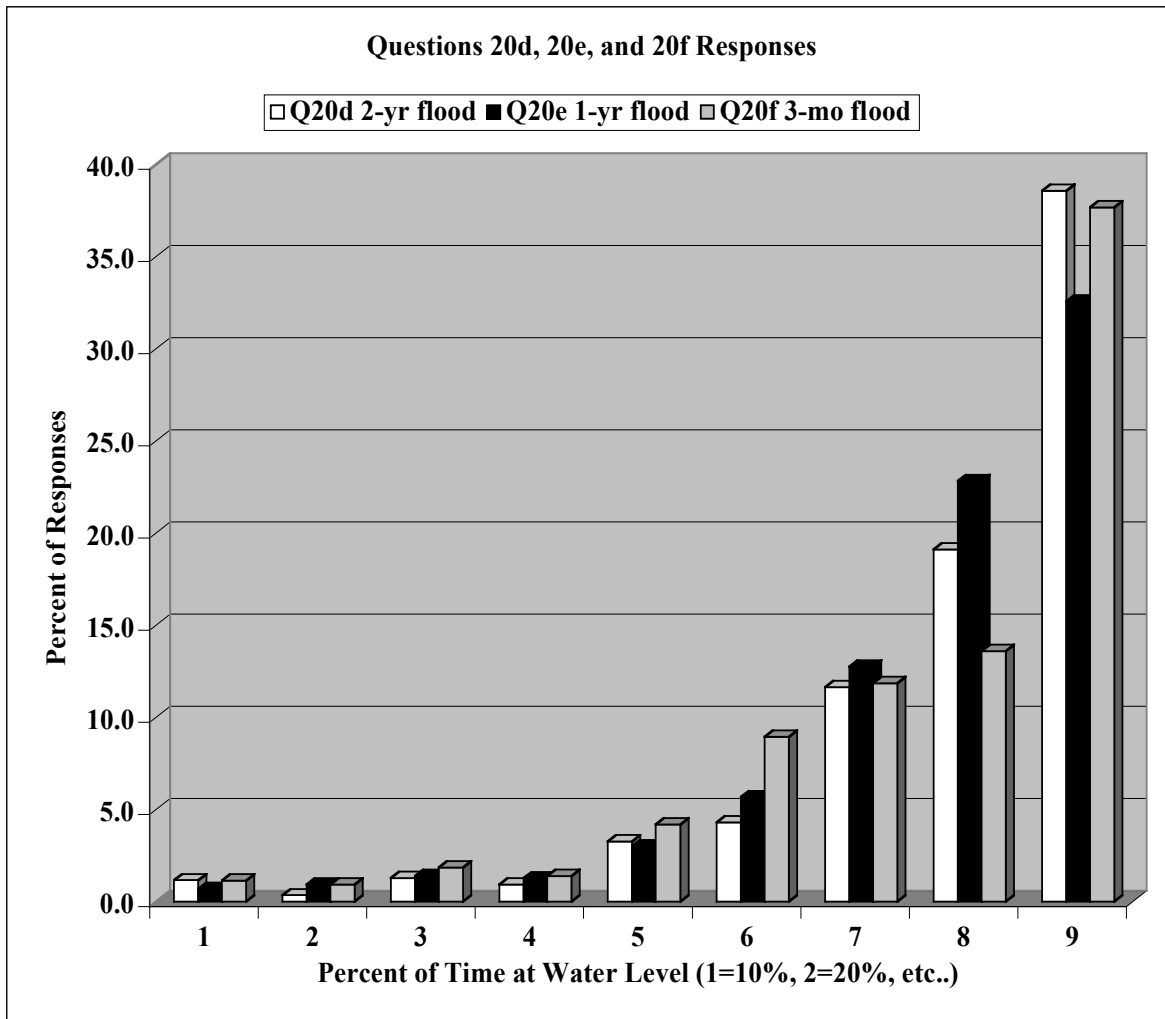


Figure 4. Percentage of responses for Survey Questions 20e, 20f, and 20g.

Table of Q20d_2_yr_flood by Group					
Q20d_2_yr_flood (20d What is the highest level that you would accept during a 2-year flood?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	3 1.29	2 1.31	4 0.96	1 1.82	10 1
20%	1 0.43	1 0.65	1 0.24	0 0.00	3 0
30%	2 0.86	3 1.96	6 1.44	0 0.00	11 1
40%	3 1.29	2 1.31	3 0.72	0 0.00	8 1
50%	11 4.74	5 3.27	10 2.39	2 3.64	28 3
60%	8 3.45	4 2.61	21 5.02	4 7.27	37 4
70%	27 11.64	17 11.11	49 11.72	7 12.73	100 12
80%	33 14.22	30 19.61	88 21.05	13 23.64	164 16
90%	81 34.91	45 29.41	182 43.54	23 41.82	331 39
Don't Know	63 27.16	44 28.76	54 12.92	5 9.09	166 19
Total	232	153	418	55	858
Frequency Missing = 106					

Table of Q20e_1_yr_flood by Group					
Q20e_1_yr_flood (20e What is the highest level that you would accept during a 1-year flood?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	3 1.29	0 0.00	3 0.71	0 0.00	6 1
20%	0 0.00	4 2.61	3 0.71	1 1.82	8 1
30%	5 2.16	1 0.65	6 1.42	0 0.00	12 1
40%	5 2.16	3 1.96	3 0.71	0 0.00	11 1
50%	8 3.45	7 4.58	7 1.65	4 7.27	26 3
60%	12 5.17	7 4.58	27 6.38	3 5.45	49 6
70%	26 11.21	17 11.11	60 14.18	7 12.73	110 13
80%	49 21.12	34 22.22	100 23.64	14 25.45	197 23
90%	64 27.59	37 24.18	159 37.59	21 38.18	281 33
Don't Know	60 25.86	43 28.10	55 13.00	5 9.09	163 19
Total	232	153	423	55	863
Frequency Missing = 101					



Table of Q20f_3_mo_flood by Group					
Q20f_3_mo_flood (20f What is the highest level that you would accept during a 3-month flood?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	3 1.29	3 1.96	4 0.95	0 0.00	10 1
20%	4 1.72	1 0.65	2 0.48	1 1.85	8 1
30%	6 2.58	4 2.61	5 1.19	1 1.85	16 2
40%	4 1.72	2 1.31	4 0.95	2 3.70	12 1
50%	14 6.01	6 3.92	14 3.33	2 3.70	36 4
60%	17 7.30	12 7.84	41 9.76	7 12.96	77 9
70%	25 10.73	17 11.11	52 12.38	8 14.81	102 12
80%	30 12.88	19 12.42	57 13.57	11 20.37	117 14
90%	71 30.47	47 30.72	186 44.29	20 37.04	324 38
Don't Know	59 25.32	42 27.45	55 13.10	2 3.70	158 18
Total	233	153	420	54	860
Frequency Missing = 104					

Question 21 asked the survey respondents to select from 3 different water level fluctuation patterns. The majority of the respondents (571 individuals, 60%) preferred a moderate increase or decrease in water level annually. A relatively large percent of the respondents (298 individuals, 32%) preferred almost no increase or decrease in water level annually.

Table of Q21_pattern by Group					
Q21_pattern (21 Which water level pattern do you prefer on a lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Large increases or decreases during the year	7 2.77	1 0.62	32 6.82	5 8.20	45 5
Moderate increases or decreases during the year	147 58.10	90 55.56	291 62.05	43 70.49	571 60
Almost no increase or decrease during the year	91 35.97	62 38.27	133 28.36	12 19.67	298 32
Do not know	8 3.16	9 5.56	13 2.77	1 1.64	31 3
Total	253	162	469	61	945
Frequency Missing = 19					

Question 22 asked the respondents to select one of three options that most represents their opinion on what causes water level fluctuation in the lake they live on or visit. The largest percentage of respondents (403 individuals, 43%) felt that natural causes were the most important factor determining water level fluctuations. However, a large percentage of respondents (372 individuals, 39%) also felt that both natural and man-made causes impacted water levels.

Table of Q22_level_cause by Group					
Q22_level_cause (22 What, in your opinion, is the cause of fluctuating water levels on the lake that you live at or have visited most?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Mostly natural causes	103 40.71	74 45.68	205 43.71	21 34.43	403 43
Mostly man-made causes	42 16.60	18 11.11	67 14.29	5 8.20	132 14
Both natural and man- made causes	95 37.55	57 35.19	186 39.66	34 55.74	372 39
Do not know	13 5.14	13 8.02	11 2.35	1 1.64	38 4
Total	253	162	469	61	945
Frequency Missing = 19					

Question 23 asked the survey respondents if governmental agencies should be involved in managing water levels. A majority of the respondents (505 individuals, 54%) felt that government agencies should manage water level just enough to minimize flooding and low water periods, while 28% of the respondents (260 individuals) thought that government agencies should not manage water level in order to allow lakes to follow a natural cycle.

Table of Q23_gov_manage by Group					
Q23_gov_manage (23 Do you think governmental agencies should or should not manage the water level on lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Government agencies should manage the water level to maintain a specific depth	44 17.46	22 13.66	50 10.64	10 16.67	126 13
Government agencies should manage the water level just enough to minimize flooding and low water periods	145 57.54	83 51.55	243 51.70	34 56.67	505 54
Government agencies should not manage the water level in order to allow lakes to follow a natural cycle	49 19.44	44 27.33	153 32.55	14 23.33	260 28
No opinion	14 5.56	12 7.45	24 5.11	2 3.33	52 6
Total	252	161	470	60	943
Frequency Missing = 21					

Question 24a, 24b and 24c asked the survey respondents to pick the lowest water level based on the percentage of time a water level occurs at a lake that they would accept to supply water to their community, another community in their county and a community in a different county. There was a wide range of responses to Questions 24a, 24b, and 24c with no real dominant trend or opinion (Figure 5 and cross tables below). However, there was a trend at lower water levels for the respondents to accept lower water lake levels if it was for water use in their own community.

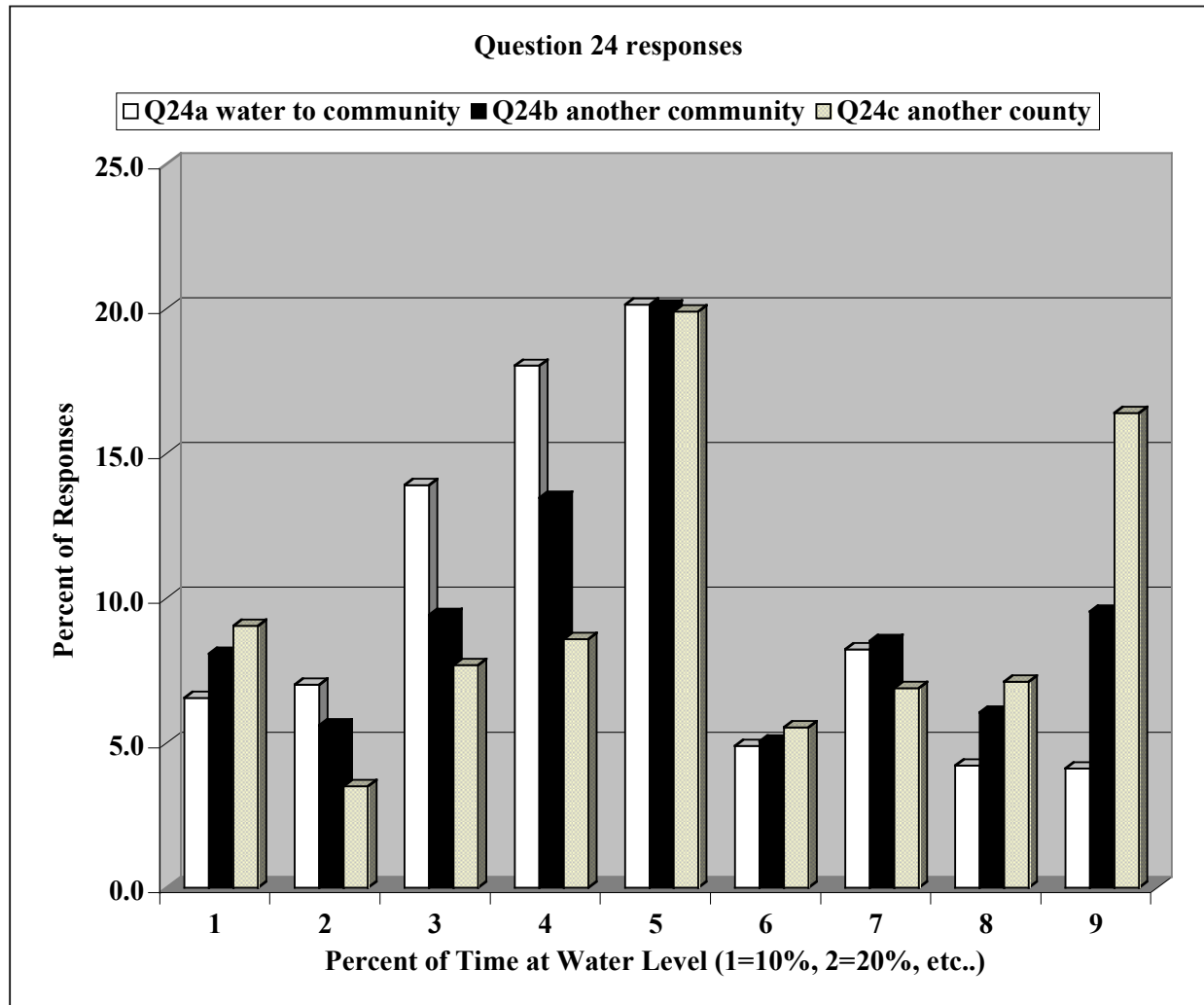


Figure 5. Percentage of Survey responses to Questions 24a, 24b, and 24c.

Table of Q24a_water_to_community by Group					
Q24a_water_to_community (24a What is the lowest level that you would accept over the long-term in order to provide water for your community?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	11 4.60	12 7.69	32 7.17	4 7.02	59 7
20%	22 9.21	8 5.13	28 6.28	5 8.77	63 7
30%	29 12.13	31 19.87	53 11.88	12 21.05	125 14
40%	35 14.64	21 13.46	93 20.85	13 22.81	162 18
50%	43 17.99	22 14.10	105 23.54	11 19.30	181 20
60%	17 7.11	3 1.92	21 4.71	3 5.26	44 5
70%	18 7.53	26 16.67	30 6.73	0 0.00	74 8
80%	11 4.60	4 2.56	19 4.26	4 7.02	38 4
90%	10 4.18	3 1.92	20 4.48	4 7.02	37 4
Don't Know	43 17.99	26 16.67	45 10.09	1 1.75	115 13
Total	239	156	446	57	898
Frequency Missing = 66					

Table of Q24b_another_community by Group					
Q24b_another_community (24b What is the lowest level that you would accept over the long-term in order to provide water for another community in your county?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	15 6.28	19 12.18	31 7.06	7 12.28	72 8
20%	19 7.95	8 5.13	16 3.64	7 12.28	50 6
30%	22 9.21	17 10.90	40 9.11	5 8.77	84 9
40%	28 11.72	20 12.82	61 13.90	11 19.30	120 13
50%	41 17.15	21 13.46	106 24.15	11 19.30	179 20
60%	16 6.69	7 4.49	21 4.78	1 1.75	45 5
70%	18 7.53	18 11.54	37 8.43	3 5.26	76 9
80%	15 6.28	9 5.77	26 5.92	4 7.02	54 6
90%	19 7.95	12 7.69	48 10.93	6 10.53	85 10
Don't Know	46 19.25	25 16.03	53 12.07	2 3.51	126 14
Total	239	156	439	57	891
Frequency Missing = 73					

Table of Q24c_another_county by Group					
Q24c_another_county (24c What is the lowest level that you would accept over the long- term in order to provide water for people in another county?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
10%	18 7.63	20 12.82	35 8.05	7 12.28	80 9
20%	6 2.54	4 2.56	15 3.45	6 10.53	31 4
30%	26 11.02	13 8.33	26 5.98	3 5.26	68 8
40%	19 8.05	17 10.90	36 8.28	4 7.02	76 9
50%	37 15.68	23 14.74	97 22.30	19 33.33	176 20
60%	9 3.81	8 5.13	32 7.36	0 0.00	49 6
70%	14 5.93	13 8.33	32 7.36	2 3.51	61 7
80%	18 7.63	6 3.85	36 8.28	3 5.26	63 7
90%	37 15.68	26 16.67	74 17.01	8 14.04	145 16
Don't Know	52 22.03	26 16.67	52 11.95	5 8.77	135 15
Total	236	156	435	57	884
Frequency Missing = 80					



Question 25a asked respondents if they would support having additional lake bottom exposed during a drought period by people pumping nearby well water for household use. The cross table below shows that the respondents were equally split with 37% (350 individuals) supporting addition exposure of bottom sediments and 39% opposed (354 individuals).

Table of Q25a_household_use by Group					
Q25a_household_use (25a Would you support or oppose an additional amount being exposed by people pumping nearby well-water for household use?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	107 42.63	63 39.62	159 34.19	21 35.00	350 37
Neither	48 19.12	41 25.79	81 17.42	13 21.67	183 20
Oppose	81 32.27	45 28.30	203 43.66	25 41.67	354 39
Don't Know	15 5.98	10 6.29	22 4.73	1 1.67	48 5
Total	251	159	465	60	935
Frequency Missing = 29					

Question 25b asked respondents if they would support having additional lake bottom exposed during a drought period by people pumping water for use on gardens and lawns. The cross table below shows that the respondents were strongly opposed (744 individuals, 81%) to water use for gardens and lawns during a drought.

Table of Q25b_lawns by Group					
Q25b_lawns (25b Would you support or oppose an additional amount being exposed by people pumping nearby well-water for use on the lawn or gardens?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	11 4.55	7 4.40	23 5.03	3 5.08	44 5
Neither	23 9.50	27 16.98	39 8.53	3 5.08	92 10
Oppose	198 81.82	115 72.33	380 83.15	51 86.44	744 81
Don't Know	10 4.13	10 6.29	15 3.28	2 3.39	37 4
Total	242	159	457	59	917
Frequency Missing = 47					

Question 26 asked the respondents if they would support or oppose the raising or lowering of water level at the lake where they live or visit, if the lake proposed water level was determined by a professional. The largest percentage of respondents (442 individuals, 47%) supported this idea, while a smaller percentage (119 individuals, 13%) opposed it.

Table of Q26_professionals by Group					
Q26_professionals (26 If raising and lowering lake water to a level determined by professionals was possible at the lake where you live or visit, would you support or oppose their recommendation?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	120 47.62	63 39.13	224 48.28	35 58.33	442 47
Neither	59 23.41	37 22.98	70 15.09	9 15.00	175 19
Oppose	23 9.13	21 13.04	70 15.09	5 8.33	119 13
Don't Know	50 19.84	40 24.84	100 21.55	11 18.33	201 21
Total	252	161	464	60	937
Frequency Missing = 27					

Question 27 asked the respondents if they support or oppose the Fish and Wildlife Conservation Commission's muck removal program for lakes. A strong majority of the respondents (695 individuals, 74%) support the muck removal program while a small percentage (32 individuals, 3%) opposed it.

Table of Q27_muck_removal by Group					
Q27_muck_removal (27 Do you support or oppose the Fish and Wildlife Conservation Commissions muck removal program for lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	191 75.49	117 71.78	338 71.61	49 81.67	695 74
Neither	18 7.11	19 11.66	54 11.44	6 10.00	97 10
Oppose	12 4.74	5 3.07	14 2.97	1 1.67	32 3
Don't Know	32 12.65	22 13.50	66 13.98	4 6.67	124 13
Total	253	163	472	60	948
Frequency Missing = 16					

Question 28 asked respondents if they would or would not contact a list of seven different organizations if they had a concern about the water level in their favorite lake. Figure 6 indicates that greater than 50% of the respondents would contact their County Commission, the SWFWMD, FDEP, FFWCC, and the local Water Authority. Less than 50% of the respondents would contact their Legislators, Property Owners Association, or other organizations not listed.

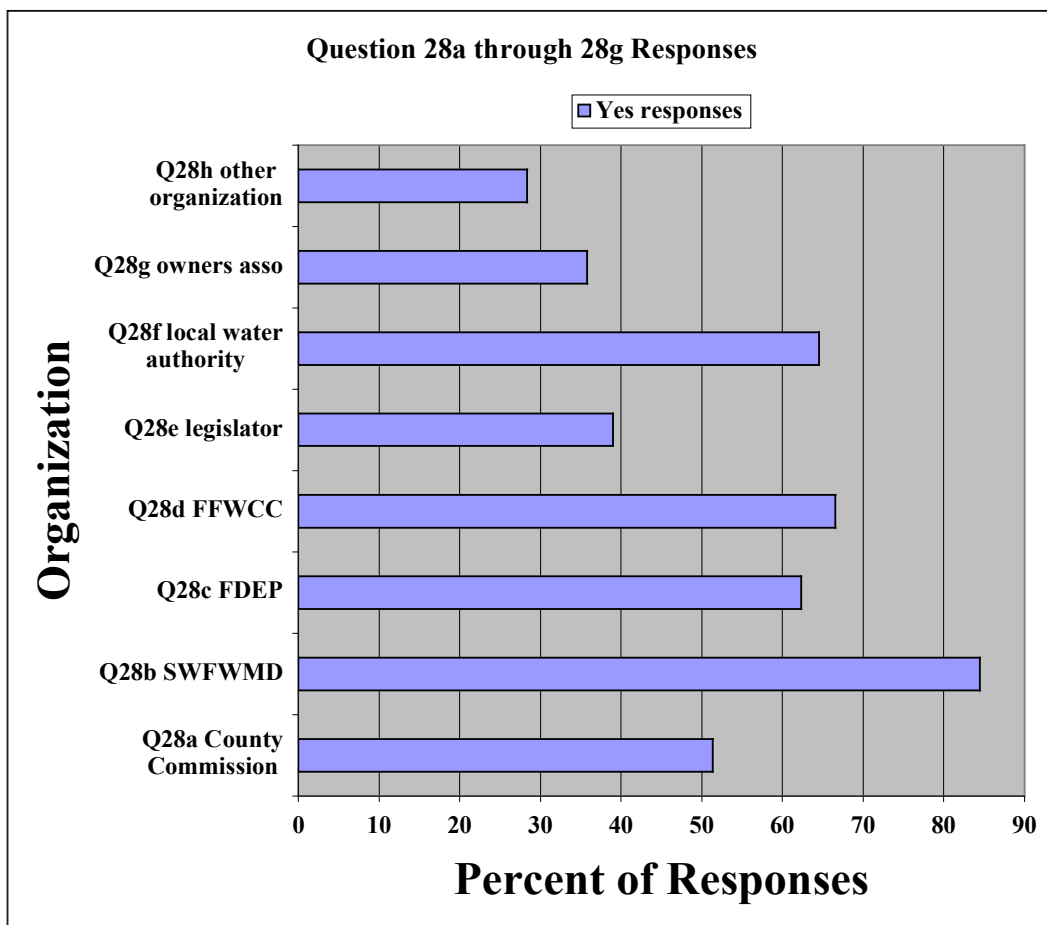


Figure 6. Percentage of responses to Survey Questions 28a through 28g.

Question 29 asked the respondents how much they liked seven different lake conditions related to exposed muck shoreline plants and emergent vegetation (See Appendix I, Question 29). Figure 7 and the following Cross Tables show the percentages of respondents that liked and dislike the several lake conditions.

For Question 29a the majority of respondents somewhat (252 individuals, 27%) or really (400 individuals, 43%) disliked cattails growing 100 feet out from shore all the way around the lake.

For Question 29b respondents about equally like or disliked emergent plants growing in the water up to 25 feet from the shoreline.

However, for Question 29c the majority of respondents somewhat or really disliked emergent plants growing 25 to 50 feet from the shoreline.

Additionally, for Question 29d the vast majority of the respondents somewhat disliked (252 individuals, 27%) or really disliked (363 individuals, 40%) emergent plants growing in the water 50 to 100 feet from the shoreline.

For Question 29e the vast majority of the respondents somewhat disliked (238 individuals, 26%) or really disliked (405 individuals, 45%) exposed muck during drought conditions.

For Question 29f a majority of the respondents somewhat disliked (280 individuals, 31%) or really disliked (316 individuals, 35%) plants like cattails and willows growing out into the lake when water is low.

For Question 29g approximately 50% of the respondents somewhat dislike (226 individuals, 24%) or really disliked (222 individuals, 24%) new trees growing along the shoreline following a drought.

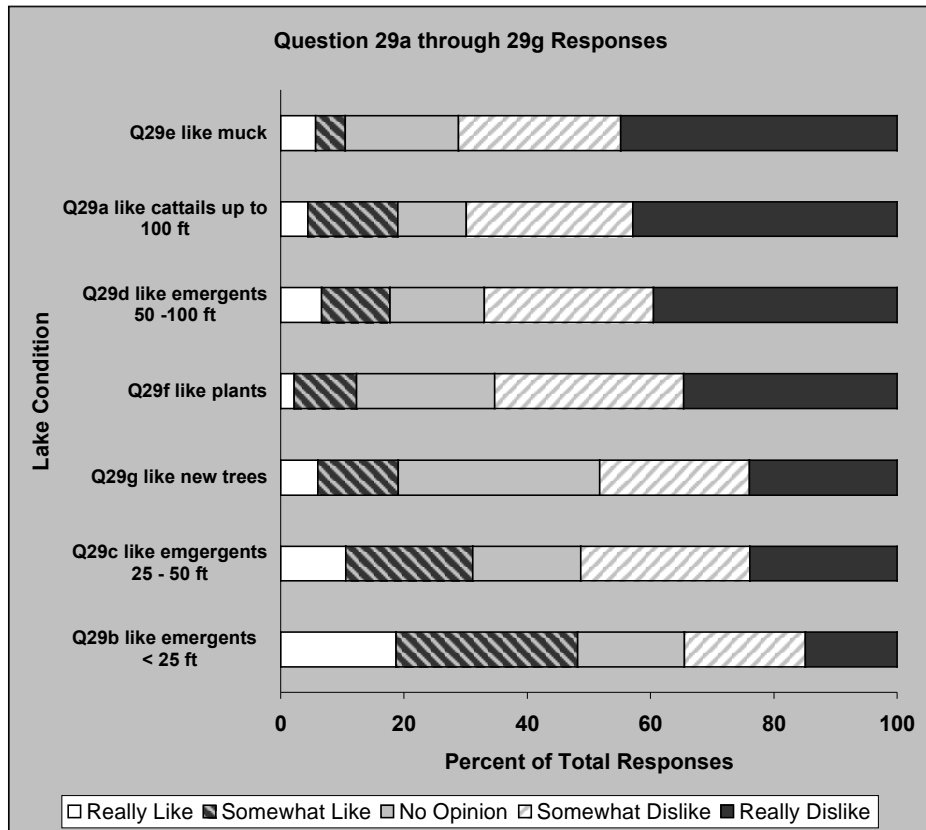


Figure 7. Summary of the percentage of Survey respondents that liked or dislike certain lake conditions related to muck, shoreline vegetation and emergent vegetation (See Appendix I Question 29)

Table of Q29a_like_cattails by Group					
Q29a_like_cattails (29a Cattails growing 100 feet out from shore all of the way around the lake)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	15 6.05	16 9.88	9 1.94	1 1.67	41 4
Somewhat like	48 19.35	39 24.07	41 8.86	8 13.33	136 15
Neither	45 18.15	19 11.73	38 8.21	2 3.33	104 11
Somewhat dislike	66 26.61	47 29.01	115 24.84	24 40.00	252 27
Strongly dislike	74 29.84	41 25.31	260 56.16	25 41.67	400 43
Total	248	162	463	60	933
Frequency Missing = 31					



Table of Q29b_like_emergents by Group					
Q29b_like_emergents (29b Emergent plants growing in the water up to 25 feet from the shoreline)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	33 13.52	21 13.21	93 20.39	25 41.67	172 19
Somewhat like	71 29.10	62 38.99	121 26.54	17 28.33	271 29
Neither	43 17.62	26 16.35	81 17.76	9 15.00	159 17
Somewhat dislike	54 22.13	36 22.64	84 18.42	6 10.00	180 20
Strongly dislike	43 17.62	14 8.81	77 16.89	3 5.00	137 15
Total	244	159	456	60	919
Frequency Missing = 45					

Table of Q29c_like_emergents_50 by Group					
Q29c_like_emergents_50 (29c Emergent plants growing in the water 25 to 50 feet from the shoreline)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	19 7.72	13 8.18	52 11.40	13 21.31	97 11
Somewhat like	45 18.29	34 21.38	91 19.96	20 32.79	190 21
Neither	46 18.70	33 20.75	72 15.79	11 18.03	162 18
Somewhat dislike	74 30.08	50 31.45	117 25.66	12 19.67	253 27
Strongly dislike	62 25.20	29 18.24	124 27.19	5 8.20	220 24
Total	246	159	456	61	922
Frequency Missing = 42					

Table of Q29d_like_emergents_100 by Group					
Q29d_like_emergents_100 (29d Emergent plants growing in the water 50 to 100 feet from the shoreline)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	10 4.12	9 5.59	32 7.05	10 16.67	61 7
Somewhat like	27 11.11	19 11.80	46 10.13	10 16.67	102 11
Neither	38 15.64	33 20.50	58 12.78	11 18.33	140 15
Somewhat dislike	64 26.34	45 27.95	127 27.97	16 26.67	252 27
Strongly dislike	104 42.80	55 34.16	191 42.07	13 21.67	363 40
Total	243	161	454	60	918
Frequency Missing = 46					

Table of Q29e_like_muck by Group					
Q29e_like_muck (29e Exposed muck during periods of drought)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	5 2.09	4 2.56	34 7.56	8 13.56	51 6
Somewhat like	8 3.35	7 4.49	23 5.11	6 10.17	44 5
Neither	36 15.06	28 17.95	89 19.78	13 22.03	166 18
Somewhat dislike	57 23.85	41 26.28	123 27.33	17 28.81	238 26
Strongly dislike	133 55.65	76 48.72	181 40.22	15 25.42	405 45
Total	239	156	450	59	904
Frequency Missing = 60					

Table of Q29f_lile_plants by Group					
Q29f_lile_plants (29f Plants such as cattails and willows grow out into the lake when the water is low)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	5 2.06	4 2.53	10 2.20	1 1.72	20 2
Somewhat like	23 9.47	27 17.09	38 8.37	4 6.90	92 10
Neither	65 26.75	38 24.05	91 20.04	11 18.97	205 22
Somewhat dislike	84 34.57	48 30.38	127 27.97	21 36.21	280 31
Strongly dislike	66 27.16	41 25.95	188 41.41	21 36.21	316 35
Total	243	158	454	58	913
Frequency Missing = 51					

Table of Q29g_like_new_trees by Group					
Q29g_like_new_trees (29g New trees growing along the shoreline following a drought that block the view of the lake)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly like	10 4.05	17 10.56	25 5.43	4 6.67	56 6
Somewhat like	27 10.93	26 16.15	58 12.61	10 16.67	121 13
Neither	83 33.60	49 30.43	147 31.96	24 40.00	303 33
Somewhat dislike	73 29.55	39 24.22	101 21.96	13 21.67	226 24
Strongly dislike	54 21.86	30 18.63	129 28.04	9 15.00	222 24
Total	247	161	460	60	928
Frequency Missing = 36					

Question 30 asked the respondents if they agreed or disagreed with 12 different statements about lake conditions (See Appendix I, Question 30). Figure 8 and the following Cross Tables show the percentages of respondents that agreed or disagreed with 12 different statements about lake conditions.

For Question 30a a majority of respondents strongly agreed (286 individuals, 31%) or somewhat agreed (344 individuals, 37%) with the statement that water level is too low when docks stick out of the water.

For Question 30b a strong majority of respondents strongly agree (510 individuals, 55%) or somewhat agreed (238 individuals, 26%) with the statement that over half of a lake should have open water.

For Question 30c over 50% of the respondents somewhat disagreed (269 individuals, 29%) or strongly disagreed (202 individuals, 22%) with the statement that even during droughts, exposed sandy bottoms are ugly.

For Question 30d a majority of respondents strongly agreed (278 individuals, 30%) or somewhat agreed (308 individuals, 33%) with the statement that stagnant water happens when the water is too low.

For Question 30e over 50% of the respondents strongly agreed (175 individuals, 19%) or somewhat agreed (375 individuals, 40%) with the statement that cattails and other emergent plants around a lake are attractive.

For Question 30f over 60% of the respondents strongly agreed (300 individuals, 34%) or somewhat agreed (294 individuals, 32%) with the statement that water levels are too low when muck is exposed for a couple of weeks.

For Question 30g over 60% of the respondents strongly agreed (346 individuals, 37%) or somewhat agreed (266 individuals, 29%) to the statement that water levels are too high when it floods lawns along the lakeshore.

For Question 30h well over 80% of the respondents strongly agreed (489 individuals, 53%) or somewhat agreed (295 individuals, 32%) with the statement that water level fluctuations are necessary for wetlands, wildlife and fisheries.

For Question 30i a majority but only 44% of the respondents strongly agreed (167 individuals, 18%) or somewhat agreed (243 individuals, 26%) with the statement that water control structures and dams reduce the natural beauty of lakes.

For Question 30j over 50% of the respondents strongly agreed (244 individuals, 27%) or somewhat agreed (261 individuals, 28%) that water levels should be maintained to avoid odors from exposed muck.

For Question 30k 50% of the respondents strongly agreed (184 individuals, 20%) or somewhat agreed (281 individuals, 30%) that when trees are flooded around the lake, water level is too high.

For Question 30L 81% of the respondents strongly agreed (507 individuals, 55%) or somewhat agreed (242 individuals, 26%) that water level is too low when muck is exposed for six months or more.

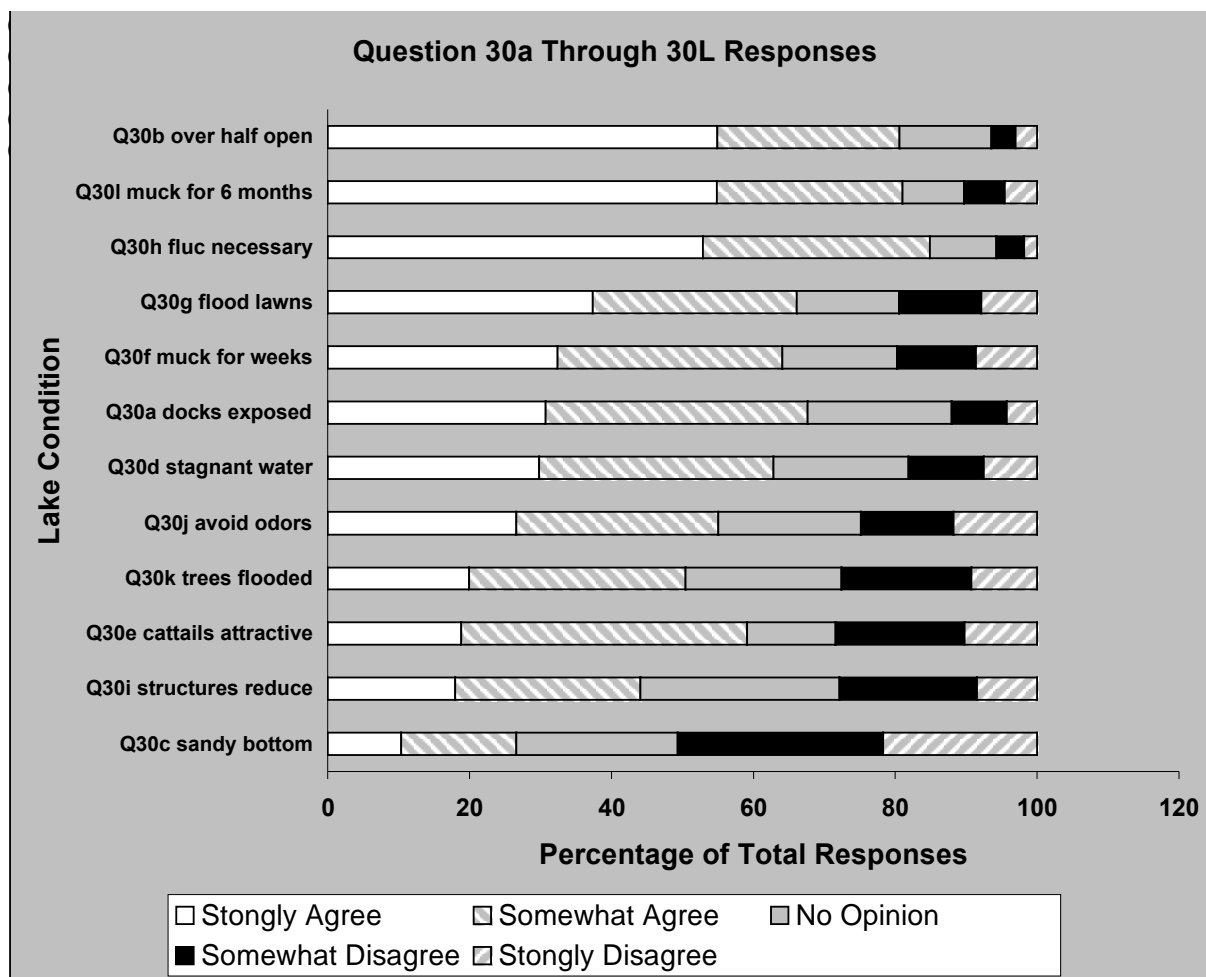


Figure 8. Percentage of responses for Survey Questions 30a through 30L.



Table of Q30a_docks_exposed by Group					
Q30a_docks_exposed (30a The water level is too low when docks stick out of the water a lot)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	93 37.65	50 31.06	132 28.57	11 18.03	286 31
Somewhat agree	92 37.25	62 38.51	165 35.71	25 40.98	344 37
Neither	41 16.60	35 21.74	101 21.86	12 19.67	189 20
Somewhat disagree	15 6.07	10 6.21	37 8.01	10 16.39	72 8
Strongly disagree	6 2.43	4 2.48	27 5.84	3 4.92	40 4
Total	247	161	462	61	931
Frequency Missing = 33					

Table of Q30b_over_half_open by Group					
Q30b_over_half_open (30b Over half of the lake should have open water)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	137 56.38	75 46.58	275 59.40	23 37.70	510 55
Somewhat agree	66 27.16	51 31.68	103 22.25	18 29.51	238 26
Neither	27 11.11	24 14.91	55 11.88	14 22.95	120 13
Somewhat disagree	7 2.88	3 1.86	17 3.67	5 8.20	32 3
Strongly disagree	6 2.47	8 4.97	13 2.81	1 1.64	28 3
Total	243	161	463	61	928
Frequency Missing = 36					

Table of Q30c_sandy_bottom by Group					
Q30c_sandy_bottom (30c Even during droughts, exposed sandy bottoms are ugly)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	33 13.41	23 14.38	36 7.78	4 6.56	96 10
Somewhat agree	53 21.54	27 16.88	65 14.04	6 9.84	151 16
Neither	61 24.80	45 28.13	91 19.65	15 24.59	212 23
Somewhat disagree	68 27.64	40 25.00	142 30.67	19 31.15	269 29
Strongly disagree	31 12.60	25 15.63	129 27.86	17 27.87	202 22
Total	246	160	463	61	930
Frequency Missing = 34					

Table of Q30d_stagnant_water by Group					
Q30d_stagnant_water (30d Stagnant water happens when the water is too low)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	88 35.63	50 31.06	128 27.59	12 19.67	278 30
Somewhat agree	99 40.08	54 33.54	134 28.88	21 34.43	308 33
Neither	32 12.96	29 18.01	105 22.63	12 19.67	178 19
Somewhat disagree	17 6.88	17 10.56	60 12.93	5 8.20	99 11
Strongly disagree	11 4.45	11 6.83	37 7.97	11 18.03	70 7
Total	247	161	464	61	933
Frequency Missing = 31					

Table of Q30e_cattails_attractive by Group					
Q30e_cattails_attractive (30e Cattails and other emergent plants around lake shores are attractive)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	46 18.85	41 25.31	74 15.98	14 22.95	175 19
Somewhat agree	104 42.62	77 47.53	164 35.42	30 49.18	375 40
Neither	26 10.66	22 13.58	65 14.04	3 4.92	116 12
Somewhat disagree	47 19.26	12 7.41	100 21.60	10 16.39	169 18
Strongly disagree	21 8.61	10 6.17	60 12.96	4 6.56	95 10
Total	244	162	463	61	930
Frequency Missing = 34					

Table of Q30f_muck_for_weeks by Group					
Q30f_muck_for_weeks (30f Water levels are too low when muck is exposed for a couple of weeks)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	95 38.93	62 38.75	130 28.14	13 21.31	300 32
Somewhat agree	90 36.89	51 31.88	139 30.09	14 22.95	294 32
Neither	35 14.34	29 18.13	77 16.67	9 14.75	150 16
Somewhat disagree	13 5.33	12 7.50	63 13.64	15 24.59	103 11
Strongly disagree	11 4.51	6 3.75	53 11.47	10 16.39	80 9
Total	244	160	462	61	927
Frequency Missing = 37					

Table of Q30g_flood_lawns by Group					
Q30g_flood_lawns (30g Water levels are too high when it floods lawns along the lakeshore)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	104 42.45	61 37.89	165 35.95	16 26.23	346 37
Somewhat agree	83 33.88	52 32.30	119 25.93	12 19.67	266 29
Neither	30 12.24	25 15.53	64 13.94	15 24.59	134 14
Somewhat disagree	15 6.12	14 8.70	68 14.81	10 16.39	107 12
Strongly disagree	13 5.31	9 5.59	43 9.37	8 13.11	73 8
Total	245	161	459	61	926
Frequency Missing = 38					

Table of Q30h_fluc_necessary by Group					
Q30h_fluc_necessary (30h Water level fluctuations are necessary for wetlands, wildlife and fisheries)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	110 45.64	74 45.96	267 57.92	38 62.30	489 53
Somewhat agree	81 33.61	62 38.51	137 29.72	15 24.59	295 32
Neither	34 14.11	19 11.80	30 6.51	4 6.56	87 9
Somewhat disagree	11 4.56	4 2.48	18 3.90	3 4.92	36 4
Strongly disagree	5 2.07	2 1.24	9 1.95	1 1.64	17 2
Total	241	161	461	61	924
Frequency Missing = 40					



Table of Q30i_structures_reduce by Group					
Q30i_structures_reduce (30i Water control structures and dams reduce the natural beauty of lakes)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	35 14.29	31 19.25	89 19.22	12 19.67	167 18
Somewhat agree	74 30.20	45 27.95	108 23.33	16 26.23	243 26
Neither	66 26.94	46 28.57	135 29.16	14 22.95	261 28
Somewhat disagree	48 19.59	29 18.01	86 18.57	17 27.87	180 19
Strongly disagree	22 8.98	10 6.21	45 9.72	2 3.28	79 8
Total	245	161	463	61	930
Frequency Missing = 34					

Table of Q30j_avoid_odors by Group					
Q30j_avoid_odors (30j Water levels should be maintained to avoid odors from exposed muck)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	78 32.23	55 34.16	101 22.20	10 16.95	244 27
Somewhat agree	90 37.19	41 25.47	120 26.37	10 16.95	261 28
Neither	47 19.42	40 24.84	83 18.24	14 23.73	184 20
Somewhat disagree	16 6.61	16 9.94	77 16.92	11 18.64	120 13
Strongly disagree	11 4.55	9 5.59	74 16.26	14 23.73	108 12
Total	242	161	455	59	917
Frequency Missing = 47					

Table of Q30k_trees_flooded by Group					
Q30k_trees_flooded (30k When trees around a lake are flooded, the water is too high)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	52 21.58	39 24.38	85 18.44	8 13.33	184 20
Somewhat agree	85 35.27	46 28.75	138 29.93	12 20.00	281 30
Neither	56 23.24	37 23.13	99 21.48	11 18.33	203 22
Somewhat disagree	34 14.11	29 18.13	85 18.44	21 35.00	169 18
Strongly disagree	14 5.81	9 5.63	54 11.71	8 13.33	85 9
Total	241	160	461	60	922
Frequency Missing = 42					

Table of Q30l_muck_for_6_months by Group					
Q30l_muck_for_6_months (30l Water levels are too low when muck is exposed for 6 months or more)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	144 59.02	97 60.25	241 52.62	25 40.98	507 55
Somewhat agree	76 31.15	41 25.47	110 24.02	15 24.59	242 26
Neither	13 5.33	15 9.32	45 9.83	7 11.48	80 9
Somewhat disagree	3 1.23	4 2.48	37 8.08	9 14.75	53 6
Strongly disagree	8 3.28	4 2.48	25 5.46	5 8.20	42 5
Total	244	161	458	61	924
Frequency Missing = 40					

For Question 31 the vast majority (696 individuals, 81%) did not know that there is an aesthetic standard for water levels in Florida lakes.

Table of Q31_aesthetic_standards by Group					
Q31_aesthetic_standards (31 Are you aware that there is an aesthetic standard for the water level in Florida's lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	28 12.44	26 17.45	90 21.13	19 32.20	163 19
No	197 87.56	123 82.55	336 78.87	40 67.80	696 81
Total	225	149	426	59	859
Frequency Missing = 105					

Question 32 asked the respondents if they agreed or disagreed with 8 different statements about recreational use of lakes (See Appendix I, Question 32). Figure 9 and the following Cross Tables show the percentages of respondents that agreed or disagreed with 8 different statements about recreational use of lakes.

For Question 32a, 75% of the respondents strongly agreed (418 individuals, 45%) or somewhat agreed (277 individuals, 30%) with the statement that tree stumps are a hazard when the water is low.

For Question 32b, 84% of the respondents strongly agree (437 individuals, 47%) or somewhat agreed (344 individuals, 37%) with the statement that a lake with emergent and underwater plants has good fishing.

For Question 32c, a majority (59%) of the respondents strongly agreed (283 individuals, 31%) or somewhat agreed (258 individuals, 28%) with the statement that water level should be managed to allow access to boat docks.

For Question 32d, a small majority (48%) of the respondents strongly agreed (157 individuals, 17%) or somewhat agreed (265 individuals, 29%) with the statement that it is okay if a lake can only be used by canoe or kayak due to low water. However, 38% of the respondents somewhat disagreed or strongly disagreed with the statement.

For Question 32e, a majority of the respondents (66%) strongly agreed (282 individuals, 30%) or somewhat agreed (305 individuals, 33%) with the statement that lake bottoms are damaged by the prop wash from boats during drought conditions.

For Question 32f, the respondents were somewhat split on their responses. A small majority (42%) strongly agreed or somewhat agreed with the statement that low water is less objectionable if dredging is used to maintain access to open water areas. However 30% of the respondents somewhat disagreed or strongly disagreed with the statement and 28% had no opinion about the statement.

For Question 32g, 55% of the respondents somewhat disagreed (286 individuals, 31%) or strongly disagreed (221 individuals, 24%) with the statement that a lake with emergent and underwater plants is good for swimming.

For Question 32h, the largest percentage of respondents (290 individuals, 31%) neither agreed or disagreed with the statement that a lake with emergent and underwater plants is good for boating. However, a small majority (46%) somewhat disagreed (271 individuals, 29%) or strongly disagreed (155 individuals, 17%) with the statement.

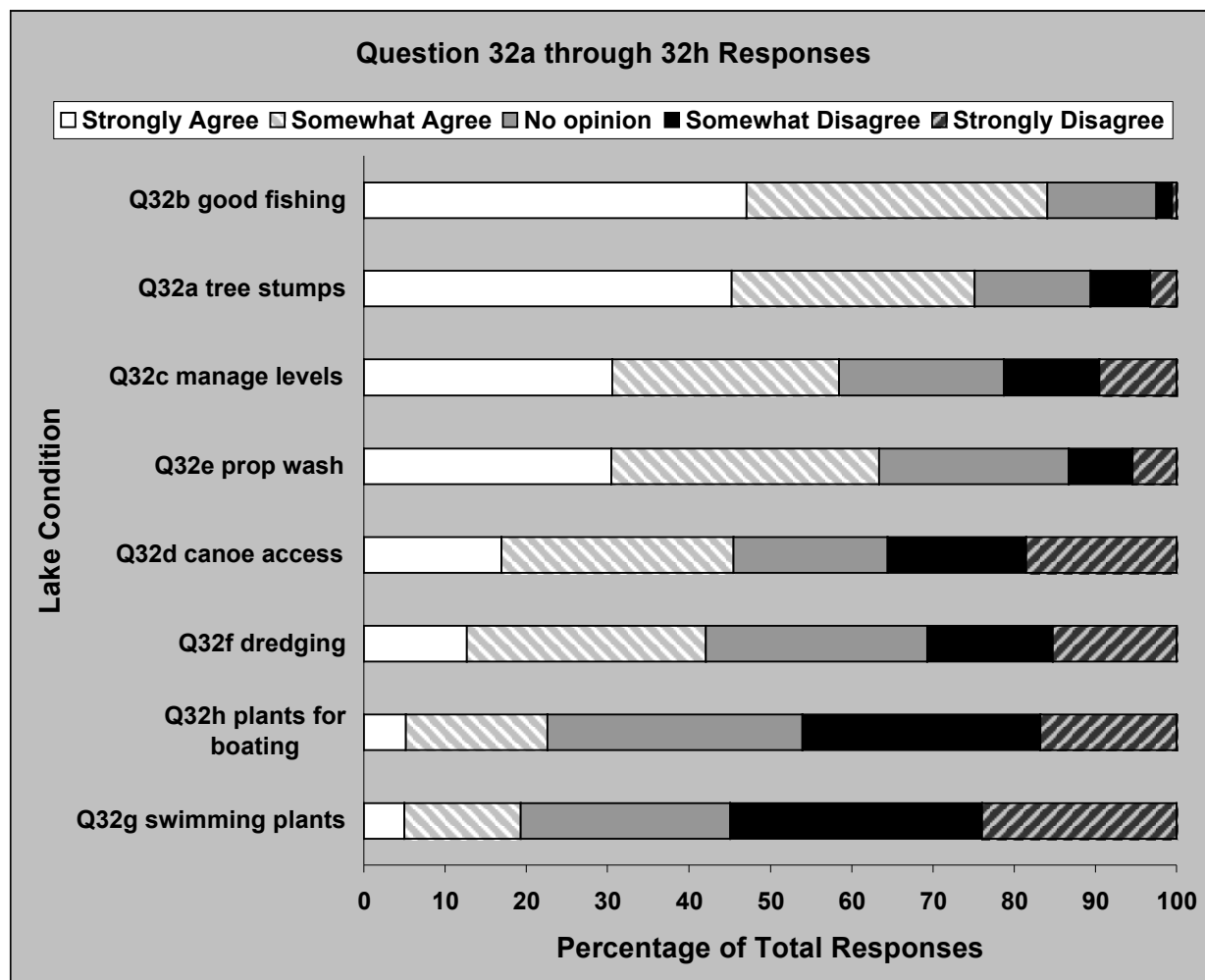


Figure 9. Percentage of responses for Survey Questions 32a through 32l.

Table of Q32a_tree_stumps by Group					
Q32a_tree_stumps(32a Tree stumps are a hazard when the water is low)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	128 51.82	86 53.75	181 39.61	23 37.70	418 45
Somewhat agree	74 29.96	44 27.50	137 29.98	22 36.07	277 30
Neither	20 8.10	15 9.38	89 19.47	8 13.11	132 14
Somewhat disagree	15 6.07	10 6.25	37 8.10	6 9.84	68 7
Strongly disagree	10 4.05	5 3.13	13 2.84	2 3.28	30 3
Total	247	160	457	61	925
Frequency Missing = 39					



Table of Q32b_good_fishing by Group					
Q32b_good_fishing (32b A lake with emergent and underwater plants has good fishing)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	112 45.71	90 55.56	211 45.77	24 39.34	437 47
Somewhat agree	98 40.00	48 29.63	171 37.09	27 44.26	344 37
Neither	28 11.43	22 13.58	69 14.97	6 9.84	125 13
Somewhat disagree	6 2.45	2 1.23	7 1.52	3 4.92	18 2
Strongly disagree	1 0.41	0 0.00	3 0.65	1 1.64	5 1
Total	245	162	461	61	929
Frequency Missing = 35					

Table of Q32c_manage_levels by Group					
Q32c_manage_levels (32c Water levels should be managed to allow me to get my boat to a dock)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	92 37.55	63 39.62	116 25.16	12 19.67	283 31
Somewhat agree	82 33.47	46 28.93	116 25.16	14 22.95	258 28
Neither	47 19.18	29 18.24	101 21.91	11 18.03	188 20
Somewhat disagree	15 6.12	9 5.66	72 15.62	13 21.31	109 12
Strongly disagree	9 3.67	12 7.55	56 12.15	11 18.03	88 10
Total	245	159	461	61	926
Frequency Missing = 38					

Table of Q32d_canoe_access by Group					
Q32d_canoe_access (32d It is okay if a lake can only be accessed by canoe or kayak due to low water)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	25 10.20	19 11.88	100 21.65	13 21.31	157 17
Somewhat agree	61 24.90	45 28.13	137 29.65	22 36.07	265 29
Neither	41 16.73	40 25.00	82 17.75	13 21.31	176 19
Somewhat disagree	59 24.08	23 14.38	67 14.50	9 14.75	158 17
Strongly disagree	59 24.08	33 20.63	76 16.45	4 6.56	172 19
Total	245	160	462	61	928
Frequency Missing = 36					

Table of Q32e_prop_wash by Group					
Q32e_prop_wash (32e Lake bottoms are damaged by the prop wash from boats during droughts)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	73 29.80	42 26.42	143 31.02	24 39.34	282 30
Somewhat agree	85 34.69	43 27.04	157 34.06	20 32.79	305 33
Neither	61 24.90	46 28.93	102 22.13	7 11.48	216 23
Somewhat disagree	18 7.35	15 9.43	32 6.94	8 13.11	73 8
Strongly disagree	8 3.27	13 8.18	27 5.86	2 3.28	50 5
Total	245	159	461	61	926
Frequency Missing = 38					

Table of Q32f_dredging by Group					
Q32f_dredging (32f Low water is less objectionable if dredging is used to maintain access to open water for boaters)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	37 15.04	25 15.63	48 10.48	7 11.48	117 13
Somewhat agree	77 31.30	47 29.38	126 27.51	22 36.07	272 29
Neither	76 30.89	40 25.00	120 26.20	16 26.23	252 27
Somewhat disagree	34 13.82	29 18.13	75 16.38	5 8.20	143 15
Strongly disagree	22 8.94	19 11.88	89 19.43	11 18.03	141 15
Total	246	160	458	61	925
Frequency Missing = 39					

Table of Q32g_swimming_plants by Group					
Q32g_swimming_plants (32g A lake with emergent and underwater plants is good for swimming)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	12 4.90	5 3.14	26 5.69	3 4.92	46 5
Somewhat agree	23 9.39	17 10.69	77 16.85	15 24.59	132 14
Neither	52 21.22	38 23.90	131 28.67	16 26.23	237 26
Somewhat disagree	84 34.29	51 32.08	133 29.10	18 29.51	286 31
Strongly disagree	74 30.20	48 30.19	90 19.69	9 14.75	221 24
Total	245	159	457	61	922
Frequency Missing = 42					

Table of Q32h_plants_for_boating by Group					
Q32h_plants_for_boating (32h A lake with emergent and underwater plants is good for boating)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Strongly agree	5 2.05	6 3.77	31 6.72	6 9.84	48 5
Somewhat agree	35 14.34	26 16.35	88 19.09	12 19.67	161 17
Neither	72 29.51	54 33.96	144 31.24	20 32.79	290 31
Somewhat disagree	80 32.79	42 26.42	134 29.07	15 24.59	271 29
Strongly disagree	52 21.31	31 19.50	64 13.88	8 13.11	155 17
Total	244	159	461	61	925
Frequency Missing = 39					

Question 33 asked the respondents to select one of five different lengths of time that would be acceptable to have a dock and/or boat ramp closed because of low water and/or growth of emergent vegetation. Figure 10 and the following Cross Tables show the percentages of respondents that selected the five different time periods.

For Question 33a, a majority of the respondents (61%) felt that it is never acceptable (207 individuals, 24%) or acceptable for only 2 to 4 weeks (321 individuals, 37%) to have a boat ramp closed due to low water.

For Question 33b, a small majority of the respondents (57%) felt that it is never acceptable (205 individuals, 24%) or acceptable for only 2 to 4 weeks (291 individuals, 33%) to have a dock closed due to low water.

For Question 33c, a vast majority of the respondents (77%) felt that it is never acceptable (373 individuals, 43%) or acceptable for only 2 to 4 weeks (287 individuals, 33%) to have a public boat ramp closed due to growth of emergent vegetation.

For Question 33d, a vast majority of the respondents (75%) felt that it is never acceptable (355 individuals, 41%) or acceptable for only 2 to 4 weeks (285 individuals, 33%) to have a dock closed due to growth of emergent vegetation.



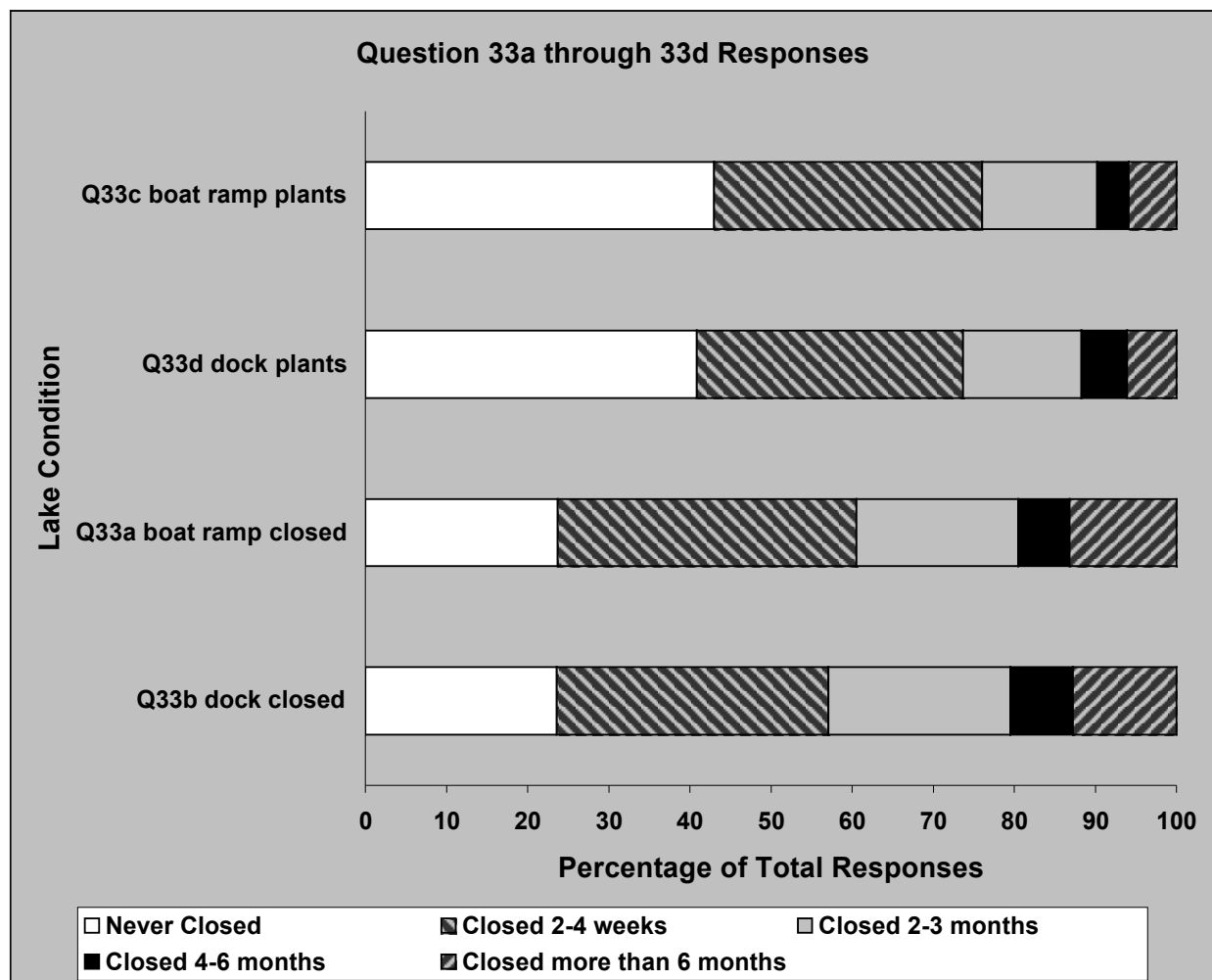


Figure 10. Percentage of responses for Survey Questions 33a through 33d.

Table of Q33a_boat_ramp_closed by Group					
Q33a_boat_ramp_closed (33a What amount of time that a public boat ramp is closed due to low water would you consider acceptable?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Never closed	78 33.05	42 28.19	75 17.56	12 20.00	207 24
Closed 2-4 weeks	96 40.68	62 41.61	143 33.49	20 33.33	321 37
Closed 2-4 months	35 14.83	28 18.79	92 21.55	19 31.67	174 20
Closed 4-6 months	4 1.69	6 4.03	41 9.60	4 6.67	55 6
Closed 6+ months	23 9.75	11 7.38	76 17.80	5 8.33	115 13
Total	236	149	427	60	872
Frequency Missing = 92					

Table of Q33b_dock_closed by Group					
Q33b_dock_closed (33b What amount of time that a dock is closed due to low water would you consider acceptable?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Never closed	79 33.62	38 25.85	75 17.56	13 21.67	205 24
Closed 2-4 weeks	85 36.17	52 35.37	137 32.08	17 28.33	291 33
Closed 2-4 months	44 18.72	36 24.49	99 23.19	16 26.67	195 22
Closed 4-6 months	9 3.83	9 6.12	43 10.07	6 10.00	67 8
Closed 6+ months	18 7.66	12 8.16	73 17.10	8 13.33	111 13
Total	235	147	427	60	869
Frequency Missing = 95					

Table of Q33c_boat_ramp_plants by Group					
Q33c_boat_ramp_plants (33c What amount of time that a public boat ramp is closed due to growth of emergent vegetation would you consider acceptable?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Never closed	119 50.64	71 47.33	153 36.17	30 50.00	373 43
Closed 2-4 weeks	85 36.17	48 32.00	138 32.62	16 26.67	287 33
Closed 2-4 months	16 6.81	26 17.33	73 17.26	8 13.33	123 14
Closed 4-6 months	6 2.55	1 0.67	22 5.20	5 8.33	34 4
Closed 6+ months	9 3.83	4 2.67	37 8.75	1 1.67	51 6
Total	235	150	423	60	868
Frequency Missing = 96					

Table of Q33d_dock_plants by Group					
Q33d_dock_plants (33d What amount of time that a dock is closed due to growth of underwater plants would you consider acceptable?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Never closed	118 50.00	69 46.00	139 32.86	29 48.33	355 41
Closed 2-4 weeks	81 34.32	45 30.00	142 33.57	17 28.33	285 33
Closed 2-4 months	20 8.47	25 16.67	74 17.49	8 13.33	127 15
Closed 4-6 months	9 3.81	6 4.00	31 7.33	3 5.00	49 6
Closed 6+ months	8 3.39	5 3.33	37 8.75	3 5.00	53 6
Total	236	150	423	60	869
Frequency Missing = 95					

For Question 34 the vast majority (745 individuals, 80%) did not know that there is a recreational standard for water levels in Florida lakes.

Table of Q34_rec_standards by Group					
Q34_rec_standards (34 Are you aware that there is a recreational standard for the water level in Florida's lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	40 16.33	26 16.56	92 19.96	20 33.33	178 20
No	205 83.67	131 83.44	369 80.04	40 66.67	745 80
Total	245	157	461	60	923
Frequency Missing = 41					

Question 35 asked respondents if they thought emergent plants (e.g., Cattails) and floating plants (e.g., Lilly pads) are wetland vegetation and a majority (709 individuals, 78%) thought they were.

Table of Q35_wetland_vegetation by Group					
Q35_wetland_vegetation (35 Do you think emergent plants (e.g., Cattails) and floating plants (e.g., Lilly pads) are wetland vegetation?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	198 81.15	127 82.47	336 73.85	48 82.76	709 78
No	46 18.85	27 17.53	119 26.15	10 17.24	202 22
Total	244	154	455	58	911
Frequency Missing = 53					

Question 36 asked respondents if they supported or opposed preserving wetlands. The vast majority of the respondents (826 individuals, 89%) support the concept of preserving wetlands.

Table of Q36_preserve_wetlands by Group					
Q36_preserve_wetlands (36 Do you support or oppose preserving wetlands?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	203 83.20	135 84.91	433 92.92	55 91.67	826 89
Neither	29 11.89	17 10.69	26 5.58	2 3.33	74 8
Oppose	4 1.64	2 1.26	1 0.21	2 3.33	9 1
Don't Know	8 3.28	5 3.14	6 1.29	1 1.67	20 2
Total	244	159	466	60	929
Frequency Missing = 35					



Question 37 asked respondents if they support or oppose managing aquatic plants along the shoreline of lakes. The vast majority of the respondents (735 individuals, 79%) do support aquatic plant management along the shoreline of lakes.

Table of Q37_manage_aquatics by Group					
Q37_manage_aquatics (37 Do you support or oppose managing aquatic plants along the shoreline of lakes?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	193 78.78	111 69.81	375 80.65	56 93.33	735 79
Neither	27 11.02	24 15.09	50 10.75	1 1.67	102 11
Oppose	15 6.12	14 8.81	25 5.38	3 5.00	57 6
Don't Know	10 4.08	10 6.29	15 3.23	0 0.00	35 4
Total	245	159	465	60	929
Frequency Missing = 35					

Question 38 asked the respondents if they considered increasing, maintaining or decreasing underwater plants was good for a lake. A strong majority (613 individuals, 66%) thought that maintaining underwater plant was good for a lake.

Table of Q38_good_for_lake by Group					
Q38_good_for_lake (38 Of the following which do you consider to be good for a lake? (regarding underwater plants))	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Increase	10 4.12	8 5.03	58 12.61	13 21.67	89 10
Maintain	166 68.31	112 70.44	297 64.57	38 63.33	613 66
Decrease	31 12.76	15 9.43	42 9.13	6 10.00	94 10
Don't Know	36 14.81	24 15.09	63 13.70	3 5.00	126 14
Total	243	159	460	60	922
Frequency Missing = 42					

Question 39 asked the respondents if low water resulted in an increase in underwater plants that limited access to open water, would they consider that impaired recreation or aesthetics. Over 50% of the respondents (492 individuals, 54%) considered this to be impaired recreation and aesthetic while 25% (231 individuals) considered it only to impair recreation.

Table of Q39_increased_plants by Group					
Q39_increased_plants (39 If low water resulted in an increase in underwater plants that limit your access to open water boating, would you consider this impaired aesthetics or recreation?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Both impaired aesthetics and recreation	150 62.24	75 47.47	241 52.62	26 43.33	492 54
Impaired aesthetics only	4 1.66	8 5.06	11 2.40	1 1.67	24 3
Impaired recreation only	49 20.33	35 22.15	124 27.07	23 38.33	231 25
Neither aesthetics nor recreation is impaired	10 4.15	10 6.33	50 10.92	6 10.00	76 8
Do not know	28 11.62	30 18.99	32 6.99	4 6.67	94 10
Total	241	158	458	60	917
Frequency Missing = 47					

Question 40 asked the respondents if it mattered to them that an underwater plant was native to Florida or exotic. The vast majority of the respondents (770 individuals, 83%) answered yes to this question.

Table of Q40_natives by Group					
Q40_natives (40 Does it matter to you whether an underwater plant is a native to Florida or introduced from outside the state?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	189 76.83	123 77.36	405 86.91	53 88.33	770 83
No	36 14.63	19 11.95	43 9.23	5 8.33	103 11
Don't Know	21 8.54	17 10.69	18 3.86	2 3.33	58 6
Total	246	159	466	60	931
Frequency Missing = 33					

Question 41 asked the respondents if Hydrilla (an invasive plant introduced to Florida) was ranked by biologists as the best underwater plant for fish and wildlife, would they accept this plant in their lake. A strong majority of the respondents (574 individuals, 62%) said they would not accept Hydrilla in their lake.

Table of Q41_Hydrilla by Group					
Q41_Hydrilla (41 If Hydrilla (an invasive plant introduced into Florida) was ranked by biologists as the best underwater plant for fish and wildlife would you accept this plant in your lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	87 35.37	66 41.51	79 17.03	8 13.56	240 26
No	131 53.25	70 44.03	330 71.12	43 72.88	574 62
Don't Know	28 11.38	23 14.47	55 11.85	8 13.56	114 12
Total	246	159	464	59	928
Frequency Missing = 36					

Question 42 asked the survey respondents if water was high enough to allow fish to survive and attract large numbers of wading bird, but not to support fishing on the lake would this be acceptable. Fifty percent of the respondents (462 individuals) thought that this would not be an acceptable condition.

Table of Q42_wading_birds by Group					
Q42_wading_birds (42 If water was high enough to allow fish to survive and attract large numbers of wading birds, but not to support fishing on the lake would this be acceptable?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	73 29.67	50 31.45	211 45.47	29 48.33	363 39
No	139 56.50	87 54.72	213 45.91	23 38.33	462 50
Don't Know	34 13.82	22 13.84	40 8.62	8 13.33	104 11
Total	246	159	464	60	929
Frequency Missing = 35					

Question 43 asked the survey respondents if they would accept low water that would benefit a single endangered species at the expense of other plants and animals. The majority of the respondents (481 individuals, 52%) said they would oppose that lake condition.

Table of Q43_benefit_endangered by Group					
Q43_benefit_endangered (43 If low water would benefit a single endangered species at the expense of other plant and animals, would you support or oppose lower water levels?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Support	29 11.84	17 10.76	56 12.12	8 14.04	110 12
Neither	60 24.49	38 24.05	85 18.40	10 17.54	193 21
Oppose	131 53.47	79 50.00	245 53.03	26 45.61	481 52
Don't Know	25 10.20	24 15.19	76 16.45	13 22.81	138 15
Total	245	158	462	57	922
Frequency Missing = 42					

Questions 45 through 61 were asked to give a feel for the demographics of the survey respondents.

Question 45 asked if the respondent owned or rented property on a lake. Of the 938 respondents to this question 516 (55%) owned property and 30 rented property on a lake. Of the 546 respondents that rented or owned property on a lake, the median lakeshore frontage was 100ft (Question 46) with a median of 40 ft mowed (Question 47).

Table of Q45_own_or_rent by Group					
Q45_own_or_rent (45 Do you own or rent property on a lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Own	90 36.59	45 27.78	365 77.83	16 26.23	516 55
Rent	8 3.25	8 4.94	10 2.13	4 6.56	30 3
Neither	148 60.16	109 67.28	94 20.04	41 67.21	392 42
Total	246	162	469	61	938
Frequency Missing = 26					

Quantiles		Lake Frontage Owned	Lake Frontage Mowed
100.00%	maximum	12000	12000
99.50%		5280	1869
97.50%		1045	300
90.00%		300	129
75.00%	quartile	175	90
50.00%	median	100	40
25.00%	quartile	80	9
10.00%		50	0
2.50%		0	0
0.50%		0	0
0.00%	minimum	0	0



Question 48 asked the respondents if they had a dock and Question 49 asked what the current water depth was at the end of the dock. A total of 385 individuals said they had a dock and 176 did not. Sixty percent of the respondents said they currently had over four feet of water at the end of their dock

Table of Q49_water_at_dock by Group					
Q49_water_at_dock (49 If Yes, how deep is the water at the end of dock currently?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
There is no water	1 1.41	0 0.00	0 0.00	0 0.00	1 0
Less than 1 foot	1 1.41	0 0.00	1 0.36	0 0.00	2 0
1-2 feet	5 7.04	3 9.09	17 6.05	1 10.00	26 7
3-4 feet	23 32.39	14 42.42	82 29.18	4 40.00	123 31
Over 4 feet	38 53.52	14 42.42	179 63.70	5 50.00	236 60
Don't Know	3 4.23	2 6.06	2 0.71	0 0.00	7 2
Total	71	33	281	10	395
Frequency Missing = 569					

Question 50 asked the respondents if they had boat ramp access to there lake and 62% (571 individuals) said they had a concrete ramp while 13% (120 individuals) had sand/dirt ramp access.

Table of Q50_have_ramp by Group					
Q50_have_ramp (50 Do you have a boat ramp or access to one on your lake?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Concrete ramp	168 70.00	109 68.55	260 55.91	34 57.63	571 62
Sand/dirt ramp	30 12.50	17 10.69	68 14.62	5 8.47	120 13
No ramp	42 17.50	33 20.75	137 29.46	20 33.90	232 25
Total	240	159	465	59	923
Frequency Missing = 41					

Question 51 asked the respondents if the ramp had ever been unusable because of low water and 53% (367 individuals) said yes.

Table of Q51_ramp_unusable by Group					
Q51_ramp_unusable (51 If Yes, has it ever been unusable because of low water?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	101 51.79	64 48.48	184 56.44	18 45.00	367 53
No	94 48.21	68 51.52	142 43.56	22 55.00	326 47
Total	195	132	326	40	693
Frequency Missing = 271					

Question 52 asked the respondents if they owned a boat and 83% (786 individuals) said they did own a boat. Question 53 asked how many feet of water are required to operate the boat and the median response was two feet. Question 54 asked how many days in the last month did they use their boat and the median response was 3 days.

Table of Q52_have_boat by Group					
Q52_have_boat (52 Do you have a boat?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	234 92.49	121 73.78	392 83.58	39 66.10	786 83
No	19 7.51	43 26.22	77 16.42	20 33.90	159 17
Total	253	164	469	59	945
Frequency Missing = 19					

Quantiles		Depth to Operate Boat	Days in Last Month Used Boat
100.00%	maximum	50	300
99.50%		25.5	91.95
97.50%		10	30
90.00%		4	14
75.00%	quartile	3	6
50.00%	median	2	3
25.00%	quartile	2	1
10.00%		1	0
2.50%		0	0
0.50%		0	0
0.00%	minimum	0	0

Question 55 asked the respondents how many people including themselves usually ride in their boat. The distribution analysis below shows that the median number was two and 90% of the respondents stated that they general have four or less people in their boat.

Quantiles		Number of People
100.00%	maximum	10
99.50%		8
97.50%		6
90.00%		4
75.00%	quartile	3
50.00%	median	2
25.00%	quartile	2
10.00%		1
2.50%		1
0.50%		0
0.00%	minimum	0

Question 56 asked the age of the respondents. The distribution analysis below shows that the date of birth of respondents ranged from 1915 to 1991, with a median date of birth of 1949.

Quantiles		Date of Birth
100.00%	maximum	1991
99.50%		1985.3
97.50%		1979
90.00%		1967
75.00%	quartile	1959
50.00%	median	1949
25.00%	quartile	1939
10.00%		1930
2.50%		1922.5
0.50%		1917.7
0.00%	minimum	1915

Question 57, 58 and 59 asked the respondents their gender and race. There were 81% male and 19% female respondents to Question 57. Out of 905 respondents to Question 58, 25 said they were Hispanic or Latino. For Question 59 describing race, 896 were White, nine were Black, two were Asian, 14 were American Indian and eight were Multi-racial.

Question 60 asked the survey respondents if they worked for pay. The Cross Table below shows that 64% (593 individuals) do work for pay. Of the ones that worked for pay they listed 365 different job titles. Of the ones not working 291 were retired and there was one self proclaimed Eccentric Nutcase.

Table of Q60_work_for_pay by Group					
Q60_work_for_pay (60 Do you work for pay?)	Group				Total
	Boat license list	Fishing license list	LAKEWATCH list	NALMS & FLMS list	
Yes	176 70.68	125 77.16	232 50.22	60 100.00	593 64
No	73 29.32	37 22.84	230 49.78	0 0.00	340 36
Total	249	162	462	60	933
Frequency Missing = 31					

Question 61 asked the respondents how many children 12 year and younger or 12 years and older lived at their home or visit their home. Only 10% of the respondents had children younger or older than living at home and only 25% had children younger or older than 12 living at home.

## Discussion

A total of 2,563 Lake User Surveys were sent out and there were 964 returned with responses. Over 98% of the individuals responding either lived on a lake or visited a lake in the last year. The respondents ranged in age from 15 to 91 with a median age of 57. A large percentage of these respondents owned or rented lakefront property for a median of 11 years, with a median of 100 feet of frontage that had a median of 40 feet mowed. Most of these individuals owned boats (83%) and they had used their boat a median of 3 times in the previous month. The respondents were asked to name the lake they lived on or visited and this yielded a list of 340 lakes. All of these data suggest that the survey was answered by a wide variety of individuals who are all familiar with a variety of lake types and uses.

The aesthetic and/or recreational activity conducted most by the respondents was just sitting and enjoying the lake, followed closely by fishing, wildlife watching, sight seeing, motor boating and bird watching. Each one of these aesthetic and/or recreational activities was done more than twice a month by 50% of the respondents. The three recreational activities carried out least by the respondents were sailing, jet skiing, and water skiing, with over 70% of the respondents never doing these activities.

Most individuals (89%) thought that their lake was moderately to extremely beautiful suggesting that people are generally pleased with their lake's current condition. When asked if water level was important in determining the beauty of a lake the vast majority (87%) felt it was moderately to extremely important. However, when asked to compare with other lake aspects most people thought that water clarity and extent of natural shoreline were more important than water level in determining a lake's beauty.

Most of the respondents stated that they judged the water level of the lake they use by its relation to docks (38%) or shoreline vegetation (33%). The vast majority of respondents (94%) said they were not impacted by high water level during the last year with only 6% not able to use their lake because of high water. The only difficulties respondents had with high water was if it flooded lawns or trees during high water conditions, which relates to property damage. The vast majority of respondents (96%) were also not impacted by low water in the last year. However, during the drought of 2000, 50% of the respondents were impacted by low water. The following is a primary list, not inclusive of all conditions related to low water, that the respondents strongly felt decreased the aesthetic and recreational use of lakes:

- Cattails growing 100 feet from shore
- Emergent plants growing 50 to 100 feet from shore
- Increases in emergent and/or submersed plants that inhibit access to open water
- Plants like cattails, willows and trees growing out from shore during low water
- When the water is at the bottom of a dock
- When water is too low to access docks or boat ramps for recreational use
- Exposed tree stumps during low water
- Exposed muck during low water
- Stagnant water when water is too low

Respondents who thought low water levels impaired aesthetic and recreational use of lakes can be separated into three general groups: 1) where respondents disliked exposed muck because of aesthetics, odor and access to a lake; 2) where respondents disliked vegetation (aquatic and terrestrial) that can expand during low water and limit lake visibility and/or access of a lake for recreation; and 3) where respondents disliked the physical limitation that low water puts on lake access and recreational activities.

There were several questions in the survey regarding muck and what the respondents thought about low water exposing muck. For each question, when water was low enough to expose muck the respondents thought that lake condition was impairing the aesthetic and recreational use of the lake. When water levels were low enough to expose lake bottom (i.e., muck) the majority of respondents (60% to 71%, depending on the individual question) thought that low water impaired the aesthetic and/or recreational use of the lake. Question 27 (support or oppose the Fish and Wildlife Conservation Commission's muck removal program for lakes) confirmed this finding with 74% of the respondents (695 individuals) supporting muck removal projects. These results are similar to the opinions of lake users that helped develop three different lake management plans, one each for Tsala Apopka Chain of Lakes (Hoyer et al. 1999), Citrus County, East Lake (Canfield et al. 2002), Hillsborough County, and Lake Wailes (Canfield et al. 2002), Polk County. Thus, general lake users do not appreciate lake water levels that expose muck and this condition is considered an impairment of aesthetics and/or recreational use of a lake.

There were many questions in the survey related to aquatic plants, including emergent, floating-leaved, and submersed plants. Respondents generally thought plants are essential to the "health" of a lake and that aquatic plants are needed for fish and wildlife. Most respondents (709 individuals, 78%) considered emergent and floating leaved plants to be wetland plants and 89% (826 individuals) supported preserving wetlands. Respondents generally found no problem with emergent plants growing out to 50 feet from shore and they wished to maintain the current status of aquatic vegetation in their lake. However, when terrestrial, or aquatic plants (all types) extended past 50 feet from shore or if they interfered with recreation respondents considered this an impairment of aesthetics and/or recreational use of the lake. Supporting this finding, 79% of the survey respondents (735 individuals) supported some type of management of all types of shoreline vegetation (terrestrial and aquatic). Thus, any water level that supports the expansion of vegetation would be considered an impairment of the aesthetics and/or recreational use of a lake, despite respondent's desire to preserve wetlands.

There were also many questions in the survey that asked the respondents about water level in relation to the physical access to the lake for aesthetic and/or recreational activities on a lake. Survey returns indicated respondents were not that concerned about high water conditions unless the water flooded lawns and/or trees for an extended period. The majority of respondents (> 60%) were willing to accept a "high" water level where levels are at a stage equal to or less than levels that occur 80% to 90% of the time during a 2-year, 1-year or 3-month flood event because these levels generally do not flood property. Respondents (55% to 78%, depending on the question) felt that any low water situation that limits access to a lake impairs aesthetic and/or recreational use. However, for natural drought situations the majority of the respondents were willing to accept a low water level where level are at a stage equal to or less than 20% to 30% of



the time during a 2-year, 1-year and a three-month drought event. When asked specifically what water level impaired aesthetic and/or recreational use the majority of respondents selected a low water level where level are at a stage equal to or less than 30% to 40% of the time. When asked what long-term water level they most preferred 91% of the respondent (854 individuals) preferred some water level above the long-term median.

## **Conclusions**

While people accepted the concept that some water level fluctuation is good for fish and wildlife in a lake, 60% of respondents (571 individuals) preferred a fluctuation pattern that incorporated a moderate increase or decrease during the year. Survey respondents understand that natural (403 individuals, 43%), or both natural and human caused factors (372 individuals, 39%) are the primary cause of water level fluctuation in their lake. Over half of the respondents (505 individuals, 54%) however, felt that governmental agencies should manage water levels but just enough to minimize flooding and to prevent low water periods.

Thus, results from the Lake User Survey suggest that lake users are willing to accept water level fluctuations where water levels are at a stage that occur equal to or less than 20% of the time up to a stage that occurs equal to or less than 90% of the time. Outside of this range lake users feel that lake aesthetic and/or recreational use are impaired. However, most survey respondents preferred a moderate fluctuation pattern where water levels are at a stage that occur equal to or less than 50% of the time up to a stage that occurs equal to or less than 80% of the time

The Discussion and Conclusions of this report are primarily based on percentages of responses from the whole survey population. Most of the percentages from responses for individual question were similar (less than 10 percentage points different) among the four main user groups that were surveyed (Boat license list, Fishing license list, LAKEWATCH list and NALMS combined with FLMS list). However, there were some percentages of responses to several individual questions that differed among user groups. For example, in Question 14 a higher percentage of responses from the Boat license and Fishing license lists used boat ramps most often to judge lake water level while a higher percentage of responses from the LAKEWATCH list used docks to judge lake water level. This example may be reflective of Question 45 that shows a much larger percentage of individuals from the LAKEWATCH list own a home on a lake and they probably see their dock more than they see a boat ramp.

All of the results to individual questions are presented in Cross Tables so the reader can see any differences in responses that may be apparent among user groups, if a finer scale of analysis is needed. The raw data in an Access File are also provided on a Compact Disk attached to the back of this report if any additional finer scaled analyses are needed at a future time. However, the Discussion and Conclusions presented here should be considered the views from the whole population of Lake Users across all lake types. Depending on the individual lake, and primary lake user group there could be differences from the general patterns presented in the Conclusions. In this situation management agencies need to acknowledge there are unique situations at individual lakes and sometime strong minority views.

SWFWMD has a different nomenclature than was used in this report to describe water levels based on long-term stage records. For this report we tried to describe water levels based on the percentage of time a lake level was equal to or less than a certain percentage over time, yielding low percent numbers for low water levels. This was done to help the survey respondents better understand the survey questions. SWFWMD uses a system to describe water level in a reverse way. For example, in this report a water level that occurs equal to or less than 20% of the time is a low water level but it would be considered a P80 in District terminology. A water level that occurs equal to or less than 80% of the time is a high water level but it would be considered a P20 in District terminology. Thus for clarification of the survey conclusions, results from the Lake User Survey suggest that lake users are willing to accept water level fluctuations where water levels are at a P80 to a P10 stage. Outside of this range lake users feel that lake aesthetic and/or recreational use are impaired. However, most survey respondents preferred a moderate fluctuation pattern where water levels are at a P50 to P20 stage.

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**Appendix I**  
**Copy of Florida Lake User Survey**

# Florida Lake Users' Survey



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## Lake Users' Survey

**1. Have you lived at a lake or visited a lake during the past year?**

☐ Yes

☐ No

**2. What is the name of the lake that you live at or have visited most? (If you do not live on a lake or have visited one recently, then write the name of the lake closest to your home.)**

\_\_\_\_\_ Lake

**3. Considering the lake that you named in question 2, how beautiful would you rate it?**

☐ Extremely beautiful

☐ Very beautiful

☐ Moderately beautiful

☐ Slightly beautiful

☐ Not at all beautiful

☐ No opinion

**4. How many years have you lived at or visited this lake? \_\_\_\_\_** Number of years

**5. How often have you done the following lake-related activities during the past year? (Mark ☒ an answer for each item)**

	None	1-2 times per year	1-2 times per month	1-2 times per week	More than 2 times per week
	▼	▼	▼	▼	▼
a. Boating (motor) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Boating (sailing) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Jet skiing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Birdwatching .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Canoeing or Kayaking .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Camping/Picnicing at a lake .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Fishing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Sightseeing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Sit & enjoy the view .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Swimming .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Waterskiing, Wakeboarding or Knee boarding .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Wildlife watching or Photography ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Were there any days during the last year when you wanted to use the lake but couldn't because of a *high* water level?

☐ No Go to Question 8

☐ Yes How many days did that happen to you during the following months:

	Number of days		Number of days
September, 2005	_____	March, 2005	_____
August, 2005	_____	February, 2005	_____
July, 2005	_____	January, 2005	_____
June, 2005	_____	December, 2004	_____
May, 2005	_____	November, 2004	_____
April, 2005	_____	October, 2004	_____

7. What did you do when *high* water prevented you from using the lake? (Mark ☒ only one)

☐ Used another lake or waterway

☐ Choose another recreational activity

☐ Did something else with my time

8. Were there any days during the last year when you wanted to use the lake but couldn't because of a *low* water level?

☐ No Go to Question 10

☐ Yes How many days did that happen to you during the following months:

	Number of days		Number of days
September, 2005	_____	March, 2005	_____
August, 2005	_____	February, 2005	_____
July, 2005	_____	January, 2005	_____
June, 2005	_____	December, 2004	_____
May, 2005	_____	November, 2004	_____
April, 2005	_____	October, 2004	_____

9. What did you do when *low* water prevented you from using the lake? (Mark ☒ only one)

☐ Used another lake or waterway

☐ Choose another recreational activity

☐ Did something else with my time





**10. Thinking back several years to 2000 when Florida had a severe drought, were there any days when you wanted to use the lake but couldn't because of a *low* water level?**

- ☐ No, because I didn't live at or use a lake in 2000  
☐ No, I was not impacted by low water  
☐ Yes ➔ Which months did that happen to you during 2000?



Go to Question 12

	Yes	No	Don't Know		Yes	No	Don't Know
January	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	July	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
February	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	August	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
March	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	September	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
April	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	October	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
May	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	November	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
June	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	December	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**11. What did you do in 2000 when *low* water prevented you from using the lake? (Mark ☒ only one)**

- ☐ Used another lake or waterway  
☐ Choose another recreational activity  
☐ Did something else with my time

**12. How important is the water level in determining the beauty or attractiveness of a lake?**

- ☐ Extremely important  
☐ Very important  
☐ Moderately important  
☐ Slightly important  
☐ Not at all important  
☐ No opinion

**13. Which one is most important in determining the beauty of a lake? (Mark ☒ only the most important one)**

- ☐ Water level  
☐ Water clarity  
☐ Amount of open water  
☐ Extent of natural shoreline  
☐ Visibility of houses along shore

**14. Which of the following do you most often use to judge the water levels on lakes? (Mark ☒ only one)**

- ☐ Water level in relation to top of docks
- ☐ Water level in relation to boat ramps
- ☐ Water level in relation to water control structures
- ☐ Water level in relation to shoreline vegetation
- ☐ In-lake water-level gauges (also called Staff Gages)

**15. What water level do you feel decreases the scenic value of your lake?**

- ☐ Top of the dock, boat ramp, etc.
- ☐ Middle of the dock, boat ramp, etc.
- ☐ Bottom of the dock, boat ramp, etc.

**16. Florida lakes vary in shape. Some are shallow where the bottom drops gently from the shoreline (like a soup bowl) and others are deep where the bottom drops steeply from the shoreline (like a mixing bowl). What is the shape of the lake that is most like the one that you live at or have visited most?**

- ☐ Shallow where the bottom drops gently from the shoreline
- ☐ Deep where the bottom drops steeply from the shoreline
- ☐ Don't know

**17. Water levels vary, with high levels during floods and low levels during droughts. Water levels also vary seasonally during the year. Over the long-term, the average water level is indicated by the 50% water level. The 10% water level is lower because 10 percent of the time, the water is at that level or lower. On the other hand, the 90% water level is higher because 90 percent of the time, the water is at that level or lower. Keeping in mind the shape of your lake, what is the *long-term* water level that you prefer most?**

- ☐ 90% } High water
- ☐ 80% }
- ☐ 70%
- ☐ 60%
- ☐ 50% ➔ Long-term average
- ☐ 40%
- ☐ 30%
- ☐ 20% } Low water
- ☐ 10% }
- ☐ Don't know

**18. Using the scale in question 17, what is the lowest *long-term* water level at which the lake's scenic beauty is harmed? \_\_\_\_\_ %**

19. What is the lowest *long-term* water level at which the lake's recreational use is harmed? \_\_\_\_\_ %
20. The next few questions ask about your opinion on water levels during droughts and floods. Please keep in mind that many lakes have man-made structures (for example, dams, levees, or outflow pipes to manage the water level.

	Lowest water -----Highest water									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	Don't know
	▼	▼	▼	▼	▼	▼	▼	▼	▼	▼
a. What is the lowest level that you would accept during a 2-year drought? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. What is the lowest level that you would accept during a 1-year drought? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. What is the lowest level that you would accept during a 3-month drought? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. What is the highest level that you would accept during a 2-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. What is the highest level that you would accept during a 1-year flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. What is the highest level that you would accept during a 3-month flood?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Which water level pattern do you prefer on a lake?

- ☐ Large increases or decreases during the year
- ☐ Moderate increases or decreases during the year
- ☐ Almost no increase or decrease during the year
- ☐ Don't know

22. What, in your opinion, is the cause of fluctuating water levels on the lake that you live at or have visited most?

- ☐ Mostly natural causes
- ☐ Mostly man-made causes
- ☐ Both natural and man-made causes
- ☐ Don't know

23. Do you think governmental agencies should or should not manage the water level on lakes?

- ☐ Government agencies should manage the water level to maintain a specific depth
- ☐ Government agencies should manage the water level just enough to minimize flooding and low water periods
- ☐ Government agencies should not manage the water level in order to allow lakes to follow a natural

cycle

☐ No opinion

24. The Southwest Florida Water Management District issues permits for cities and individuals to pump water from wells to supply households and businesses. Pumping groundwater can lower water levels in lakes. Given this background, please answer the following questions.

	Lowest water	10%	20%	30%	40%	50%	60%	70%	80%	90%	Highest water	Don't know
		▼	▼	▼	▼	▼	▼	▼	▼	▼		▼
a. What is the lowest level that you would accept over the <i>long-term</i> in order to provide water for your community? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
b. What is the lowest level that you would accept over the <i>long-term</i> in order to provide water for another community in your county? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
c. What is the lowest level that you would accept over the <i>long-term</i> in order to provide water for people in another county? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

25. Suppose the lake bottom were exposed by drought. Would you support or oppose an additional amount being exposed by people pumping nearby well-water?

	Support	Neither support nor oppose	Oppose	Don't know
	▼	▼	▼	▼
a. For household use. ....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. For use on the lawn or gardens. ....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26. If raising and lowering lake water to a level determined by professionals was possible at the lake where you live or visit, would you support or oppose their recommendation?

- ☐ Support professionals' recommendations on water level
- ☐ Neither support nor oppose professionals' recommendations on water level
- ☐ Oppose professionals' recommendations on water level
- ☐ Don't know

27. Do you support or oppose the Fish and Wildlife Conservation Commission's muck removal program for lakes?

- ☐ Support muck removal programs
- ☐ Neither support nor oppose muck removal programs

☐ Oppose muck removal programs

☐ Don't know

**28. If you have a concern about the water level in your favorite lake, who would you contact? (Mark ☒ an answer for each item)**

County Commission . . . . . ☐ Yes ☐ No

Southwest Florida Water Management District . . . . . ☐ Yes ☐ No

Florida Department of Environmental Protection . . . . . ☐ Yes ☐ No

Florida Fish and Wildlife Conservation Commission . . . . . ☐ Yes ☐ No

State Legislator . . . . . ☐ Yes ☐ No

Local water authority . . . . . ☐ Yes ☐ No

Property owners association . . . . . ☐ Yes ☐ No

Other organization \_\_\_\_\_ . . . ☐ Yes ☐ No

**The next few questions ask your opinion about the aesthetics or scenic value of lakes.**

**29. Please rate how much you like or dislike the following conditions for lakes.**

	Really like ▼	Somewhat like ▼	Neither like nor dislike ▼	Somewhat dislike ▼	Really dislike ▼
a. Cattails growing 100 feet out from shore all of the way around the lake . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Emergent plants growing in the water up to 25 feet from the shoreline . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Emergent plants growing in the water 25 to 50 feet from the shoreline . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Emergent plants growing in the water 50 to 100 feet from the shoreline . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Exposed muck during periods of drought	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Plants such as cattails and willows grow out into the lake when the water is low . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. New trees growing along the shoreline following a drought that block the view of the lake . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**30. Please indicate your agreement or disagreement with the following statements.**

	Strongly agree ▼	Somewhat agree ▼	Neither agree not disagree ▼	Somewhat disagree ▼	Strongly disagree ▼
a. The water level is too low when docks stick out of the water a lot . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Over half of the lake should have open water . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c. Even during droughts, exposed sandy bottoms are ugly .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Stagnant water happens when the water is too low .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Strongly agree ▼	Somewhat agree ▼	Neither agree not disagree ▼	Somewhat disagree ▼	Strongly disagree ▼
e. Cattails and other emergent plants around lake shores are attractive .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Water levels are too low when muck is exposed for a couple of weeks .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Water levels are too high when it floods lawns along the lakeshore .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Water level fluctuations are necessary for wetlands, wildlife and fisheries ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Water control structures and dams reduce the natural beauty of lakes .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Water levels should be maintained to avoid odors from exposed muck .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. When trees around a lake are flooded, the water is too high .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Water levels are too low when muck is exposed for 6 months or more .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. Are you aware that there is an aesthetic standard for the water level in Florida's lakes? ☐ Yes  
☐ No

The next few questions ask your opinion about the recreation.

32. Please indicate your agreement or disagreement with the following statements about recreation.

	Strongly agree ▼	Somewhat agree ▼	Neither agree not disagree ▼	Somewhat disagree ▼	Strongly disagree ▼
a. Tree stumps are a hazard when the water is low .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. A lake with emergent and underwater plants has good fishing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Water levels should be managed to allow me to get my boat to a dock ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. It is okay if a lake can only be accessed by canoe or kayak due to low water .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Lake bottoms are damaged by the prop wash from boats during droughts .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- f. Low water is less objectionable if dredging is used to maintain access to open water for boaters ..... ☐ ☐ ☐ ☐ ☐
- g. A lake with emergent and underwater plants is good for swimming ..... ☐ ☐ ☐ ☐ ☐
- h. A lake with emergent and underwater plants is good for boating ..... ☐ ☐ ☐ ☐ ☐

33. Please answer the following questions about access to docks and boat ramps.

- |  | Never<br>closed<br>▼     | Closed for<br>2-4 weeks<br>▼ | Closed for<br>2-3 months<br>▼ | Closed for<br>4-6 months<br>▼ | Closed for<br>more than<br>6 months<br>▼ |
|--|--------------------------|------------------------------|-------------------------------|-------------------------------|--|
| a. What amount of time that a public boat ramp is closed due to low water would you consider acceptable? .....                     | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/>      | <input type="checkbox"/>      | <input type="checkbox"/>                 |
| b. What amount of time that a dock is closed due to low water would you consider acceptable? .....                                 | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/>      | <input type="checkbox"/>      | <input type="checkbox"/>                 |
| c. What amount of time that a public boat ramp is closed due to growth of emergent vegetation would you consider acceptable? ..... | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/>      | <input type="checkbox"/>      | <input type="checkbox"/>                 |
| d. What amount of time that a dock is closed due to growth of underwater plants would you consider acceptable? .....               | <input type="checkbox"/> | <input type="checkbox"/>     | <input type="checkbox"/>      | <input type="checkbox"/>      | <input type="checkbox"/>                 |

34. Are you aware that there is a recreational standard for the water level in Florida's lakes?

- ☐ Yes  
☐ No

The next few questions ask your opinion about emergent and underwater plants at lakes.

35. Do you think emergent plants (e.g., Cattails) and floating plants (e.g., Lilly pads) are *wetland vegetation*?

- ☐ Yes  
☐ No

36. Do you support or oppose preserving wetlands?

- ☐ Support preserving wetlands  
☐ Neither support nor oppose preserving wetlands  
☐ Oppose preserving wetlands  
☐ Don't know

**37. Do you support or oppose managing aquatic plants along the shoreline of lakes?**

- ☐ Support managing aquatic plants
- ☐ Neither support nor oppose managing aquatic plants
- ☐ Oppose managing aquatic plants
- ☐ Don't know

**38. Of the following which do you consider to be good for a lake? (Mark ☒ only one)**

- ☐ Increasing underwater plants
- ☐ Maintaining underwater plants
- ☐ Decreasing underwater plants
- ☐ Don't know

**39. If low water resulted in an increase in underwater plants that limit your access to open water boating, would you consider this impaired aesthetics or recreation?**

- ☐ Both impaired aesthetics and recreation
- ☐ Impaired aesthetics only
- ☐ Impaired recreation only
- ☐ Neither aesthetics nor recreation is impaired
- ☐ Don't know

**40. Does it matter to you whether an underwater plant is a native to Florida or introduced from outside the state?**

- ☐ Yes
- ☐ No
- ☐ Don't know

**41. If Hydrilla (an invasive plant introduced into Florida) was ranked by biologists as the best underwater plant for fish and wildlife would you accept this plant in your lake?**

- ☐ Yes
- ☐ No
- ☐ Don't know

**42. If water was high enough to allow fish to survive and attract large numbers of wading birds, but not to support fishing on the lake would this be acceptable?**

- ☐ Yes
- ☐ No
- ☐ Don't know



**43. If low water would benefit a single endangered species at the expense of other plant and animals, would you support or oppose lower water levels?**

☐ Support

☐ Neither support nor oppose

☐ Oppose

☐ Don't know

Finally, we would like to ask a few questions for statistical purposes.

45. Do you own or rent property on a lake?

☐ Own

☐ Rent

☐ Neither own nor rent ➔ Skip to question 50.

46. How many feet of lakeshore frontage do you have?

\_\_\_\_\_ Feet of frontage

47. Of the lakeshore frontage, how many feet of vegetation have been cleared or mowed?

\_\_\_\_\_ Feet cleared or mowed

48. Do you have a dock? ☐ Yes ☐ No

49. If Yes, how deep is the water at the end of dock currently?

☐ There is no water

☐ Less than 1 foot

☐ 1-2 feet

☐ 3-4 feet

☐ Over 4 feet

☐ Don't know

50. Do you have a boat ramp or access to one on your lake?

☐ Yes, concrete ramp

☐ Yes, sand/dirt ramp

☐ No

51. If Yes, has it ever been unusable because of low water? ☐ Yes ☐ No

52. Do you have a boat?

☐ Yes

☐ No ➔ Skip to question 56.

53. If Yes, how many feet of water do you need to operate your boat?

\_\_\_\_\_ Feet

54. How many days did you use your boat on a lake during the last month?

\_\_\_\_\_ Number of days

55. How many people, including yourself, usually ride in the boat?

\_\_\_\_\_ Number of people

1	9		
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56. What year were you born?

57. What is your gender? ☐ Male ☐ Female

58. Are you Hispanic or Latino? ☐ Yes ☐ No

59. What is your race? (Mark all that apply)

☐ White

☐ Black

☐ Asian

☐ American Indian

☐ Multi-racial or other (please specify)

\_\_\_\_\_

60. Do you work for pay?

☐ Yes ➔ If Yes, what kind of work do you do?

\_\_\_\_\_

☐ No

If No, are you looking for a job or are you retired, a student, or a homemaker?

☐ Looking for work

☐ Retired

☐ Student

☐ Homemaker

☐ Other \_\_\_\_\_

61. How many children or grandchildren ...

---- Number of children ----

Under 12  
years

12-18 years  
old



a. Live in your home?

\_\_\_\_\_

\_\_\_\_\_

b. Visit your home?

\_\_\_\_\_

\_\_\_\_\_

**Thank you for helping.**