Lake Santee

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Lake Santee Property Owners Association

Long Range Planning CommitteeReport 2017

13 SW Wrenn Pkwy
Greensburg, Indiana

p. 812.527.2943

lakesantee@etczone.com
http://lake-santee.com/

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Executive Summary

In 2006, the Lake Santee Property Owners Association (LSPOA) Board of Directors (Board) appointed a Long Range Planning Committee. The purpose of the original committee was as follows:

The purpose of the Committee, as defined by Leon Crowe, is to provide the Board of Directors with alternative perspectives and action steps which are felt to be important to the continued progress and growth of the Lake Santee Community.

In 2016, the LSPOA Board determined that it was again time to appoint a new Long Range Planning Committee. The objectives of this committee and the committee membership are listed below. In addition to updated Vision and Mission statements, the current committee is also making recommendations in the following areas based on the outcome of committee meetings, a LSPOA public meeting and a LSPOA membership survey:

- Lake & Beaches
- Dam
- Silt, Sedimentation & Dredging
- Roads
- Security

Additionally, this report contains information on additional funding possibilities, as well as, information for a change to the Lake Santee Subdivision Restrictions.

This report contains recommendations for the establishment of several sub-committees to further explore and make recommendations that are more detailed around the above subject areas. Our committee felt that these sub-committees would be both an opportunity to engage a wider range of LSPOA members, as well as, provide a way to dive deeper into these subject areas, ultimately providing the Board with a more detailed recommendation.

Committee Membership

The committee met monthly beginning in February 2017 through September 2017 with the following members in regular attendance:

Current LSPOA Board of Director Members:

- Polly Fox – Committee Chair
- Steve Gauck
- Carol Goodwin

LSPOA Members:

- Wade Amos
- Shannon Gibbs
- Rick Johnson
- Du McKinley
- Randy Osendorf

Committee Objectives & Process

The current LSPOA Board of Directors desired to create a long range planning committee with the following objectives:

- Review the report from the previous long range planning committee, which was presented to the Board in October 2006
- Establish a reasonable timeframe for long range planning
- Determine the needs of the Lake Santee community over the identified timeframe
- Report back to the LSPOA Board of Directors the findings of the committee

Lake Santee Statistics

The committee gathered the following statistical information (as of March 2017):

- Lake Santee has 769 members
  - 739 are full paying members
  - 42% of the membership are full-time members
  - 73% of the membership own a home
  - 27% are vacant lot owners
- There are a total of 559 homes
  - 6 homes are under construction
- There are 268 registered golf carts
  - 34% of the membership own a golf cart
- There are 1,141 registered watercraft
  - 641 are motorized
  - 541 are non-motorized (paddle board, canoe, paddle boat, etc.)
  - 87% of the membership own motorized craft(s)
  - 68% of the membership own non-motorized craft(s)
- Lake Santee has 74 rental slips
  - 90% were rented in 2016
  - There is room for 5 – 7 additional slips
  - There are 11 access areas around the lake
- There are 26.5 miles of roads
  - Approximately 7 miles are paved
  - 1.5 miles are covered with millings
  - 18 miles of road are gravel
  - The average cost to pave is $40,000 – 60,000 per mile, depending on condition of the existing base
- The following staff are employed:
  - 6 full-time employees – 4 in maintenance and 2 in the office
  - 11 to 14 part-time employees, depending on the season – 4 in security, 1 in the recycling area, 1 – 2 for boat patrol, 2 – 4 for beach and gate control, 2 seasonal maintenance and 1 custodian
- General lake info:
  - The lake is approximately 250 acres
  - There are 5 – 5.5 miles of shoreline
  - The lake is approximately 2 miles in length
  - The average depth is 15 feet
  - At capacity, the lake holds approximately 1.2 billion gallons of water
  - For 2017 dredging costs are $42.00 per cubic yard

Vision & Mission Statements

In July 2006, the LSPOA Board of Directors approved a vision and mission statement, which was proposed by the previous long range planning committee. This committee reviewed the July 2006 vision and mission statements. The committee is proposing the following revised vision and mission statements:

Vision Statement

To develop the Lake Santee property as a preferred, growth oriented, well publicized and vibrant residential community. Infrastructure, organization and policies will clearly reflect the intent of providing property owners with opportunity for a friendly, healthy, secure, prosperous and quality lifestyle.

Mission Statement

As a means of measuring performance, as well as, assuring progress and continuity of focus, the association's governing body will maintain a long range plan which shall include objectives and related action steps for the planning period. This plan will address the following goals:

1) Lake Conservation
    a. Identify, develop and maintain programs which ensure the proper maintenance of the dam, shoreline, beaches, and lake body
2) Member Safety
    a. Identify, develop and maintain programs to ensure the safety of members and their guests, both on and off the water
    b. Support the availability of public services (i.e. fire protection, emergency services, schools)
3) Roads and Maintenance
    a. Identify, develop and maintain programs which keep roadways, access lots, signage, right-of-ways and community-owned buildings in good condition
    b. Maintain and enforce building codes and maintenance standards for private property, based on the governing documents
4) Operational Effectiveness
    a. Identify, develop and implement best practices in the areas of employee relations and governing structure to ensure the optimal use of community resources
    b. Understand and adopt management strategies based on the growth and demographic trends
    c. Develop an understanding of the sources of existing revenue
    d. Identify potential sources of revenue and develop programs to explore the viability of those potential sources
5) Communication and Community Advancement
    a. Identify, develop and maintain programs to ensure effective communication to existing members
    b. Promote the community to potential new members
    c. Identify, develop and maintain recreational programs of interest to all LSPOA members
    d. Support community organizations in their efforts to enhance the lake community

SWOT Analysis & Survey Summary

The committee completed a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, which member Stephanie Amos facilitated. After completing the SWOT analysis, each committee member voted for his or her priority. The items included in the table each received three or more votes from the committee members.

Strengths	Weaknesses
• Lake/Beach: Skiing, Drinking water • Roads, Ditches & Common Areas: Maintenance of roads and ditches • Quality of Life: Recreational activities, Fire protection on property • Administration, Policy & Management: The community has established rules	• Lake/Beach: Silt/Sediment, Lack of enforcement of lake rules • Roads, Ditches & Common Areas: No plan to make roads nicer/pavement • Quality of Life: Lack of community engagement
Opportunities	**Threats**
• Roads, Ditches & Common Areas: A lot of land for potential opportunity • Administration, Policy & Management: Community engagement	• Lake/Beach: Sediment/Erosion, Board inaction • Roads, Ditches & Common Areas: Board inaction, Cost of maintenance/material

The committee held a meeting, which was open to all members, on May 7, 2017. Thirty-five people representing 26 membersips attended the meeting. The results of the committee's SWOT analysis were displayed. Shannon Gibbs explained the process the committee had followed to complete the SWOT analysis and asked the attendees for additions in each category. Carol Goodwin served as scribe, recording additional input from the members. At the conclusion of the SWOT analysis, each member present was asked to vote on his or her top priority. The items included in the table each received five or more votes from the members present.

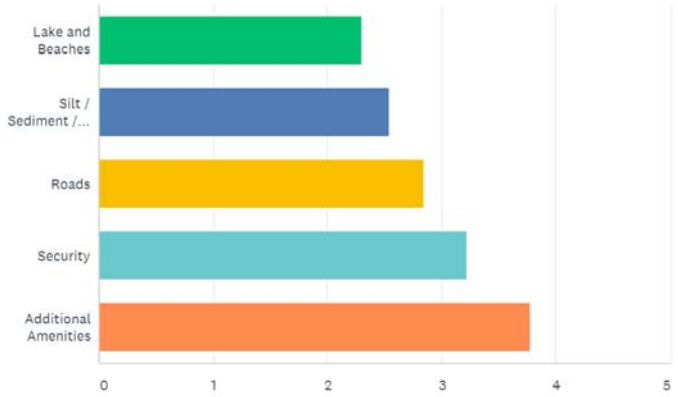
Strengths	Weaknesses
• Lake & Beaches • Recreational activities • Fire protection on property	• Silt & sediment • Lack of enforcement of rules • Lack of knowledge of rules (by members)
Opportunities	**Threats**
• Review/update rules and regulations • Use of retention ponds/how to fund	• Lake & Beaches • Sediment / erosion • Multiple inlets for sediment (allowing sediment entry)

Following these exercises, the committee sent out a survey to gather additional input from the members. The survey was advertised in two Smoke Signals and on Facebook. The survey gathered basic demographic data, as well as, asked specific questions around each member's satisfaction with roads, the lake, beaches, etc. While 122 surveys were complete, 10 surveys were disqualified because they were either duplicates submitted by the same person or were submitted by multiple members of the same household. The full results of the remaining 112 survey responses are included in Appendix A, this represents participation by approximately 15% of the membership.

The responding members ranked their priority for potential improvement as the following, with 1 being the highest priority and 5 being the lowest priority: 1.) Lake / Beaches, 2.) Silt / Sedimentation / Dredging, 3.) Roads, 4.) Security and 5.) Additional Amenities.

Please rank the potential improvement items below in order of importance for Lake Santee:

Answered: 103 Skipped: 9



	PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4	PRIORITY 5	TOTAL	WEIGHTED AVERAGE
Lake and Beaches	28.16% 29	33.01% 34	22.33% 23	13.59% 14	2.91% 3	103	2.30
Silt / Sediment / Dredging	33.01% 34	23.30% 24	15.53% 16	12.62% 13	15.53% 16	103	2.54
Roads	18.45% 19	20.39% 21	28.16% 29	23.30% 24	9.71% 10	103	2.85
Security	13.59% 14	14.56% 15	29.13% 30	21.36% 22	21.36% 22	103	3.22
Additional Amenities	16.50% 17	5.83% 6	9.71% 10	19.42% 20	48.54% 50	103	3.78

Potential Improvement Priorities from the survey

The subject areas in the Outcomes and Recommendations section below are derived from the SWOT analysis exercises and the results of this survey.

Outcomes & Recommendations

Contained below are recommendations for the establishment of several sub-committees. This committee acknowledges that establishing and running these sub-committees could cause considerably more work for the LSPOA Board of Directors. It is not our intention that LSPOA Board members chair these sub-committees. It is up to the Board's discretion if the sub-committee should contain current board members. In most cases, it will be most beneficial to solicit committee members with personal or professional experience in that particular subject matter. It is the recommendation of our committee that a board member be appointed to each sub-committee as their primary contact. It would be the expectation that the sub-committee provide minutes of each meeting to the board member and for the board member to report updates to the LSPOA executive committee, and the full Board, as appropriate, based on those meeting minutes. However, it would not be expected that the appointed board member would be an active committee participant nor that he/she would be required to attend sub-committee meetings.

Lake & Beaches

Survey results indicated that the property owners have moved the beaches and recreation areas to a higher priority. The committee also was in agreement that additions and improvements in these areas are becoming more important to our members. Keeping the beaches clean, improving the look and amenities in, on and around the beaches are on the list of higher interest. The lake is on a current plan to refurbish the remaining umbrellas on the main beach in 2018. Many suggestions came from the survey including, but not limited to, more and better playground equipment, beach improvements & additional beach amenities, pickle ball court, indoor exercise facility, dog park, walking & bike trails, community swimming pool, convenience store, slalom course, improved gate security, etc. A complete list is included in this report as Appendix B. The addition of the amphitheater has been a tremendous asset.

Having the restaurant open and available has been indicated as being important to our members. Continuing to work with a Lessee and maintaining an attractive building and restaurant is a priority. Many improvements have been made over the last 2-3 years with the building itself including, but not limited to, decking, railing, tables, new beacon light, and flooring. The committee recommends we continue to maintain as needed and improve the facility to accommodate our members and guests. The committee is also aware that this building, especially the kitchen, may not over the long-term make it easy to attract a Lessee without major improvement and increased space.

We believe all the ideas are amicable and deserve consideration. It is a reflection of the changing demographic of our community and the lifestyle they appreciate. Therefore, our committee recommends to the LSPOA Board of Directors that a sub-committee for Lake and Beaches be appointed to evaluate various and specific improvements, the cost, and possible funding avenues. Our committee recommends that this sub-committee consist of 4 – 6 members and be appointed no later than April 2018. We further recommend that the sub-committee take no longer than 6 months to make specific recommendations back to the LSPOA Board of Directors.

Dam

This section, although it is included as a part of Lake & Beaches to be in line with how the LSPOA Board is organized, this committee believes it deserves specific and individual attention. The lake health, including the dam, is vital priority of the property owners. While the dam is inspected regularly by the Indiana Department of Natural Resources, the committee feels that it is critical to seek additional input on the health and structural integrity of the dam given the age of the dam. The committee recommends that the LSPOA Board of Directors engage a certified engineer to determine the difference between their inspection and the routine DNR inspection. If this difference is significant, the committee recommends that the LSPOA Board of Directors complete the inspection by the certified engineer soon as practical. Additional action may be necessary once this inspection report is received and reviewed.

Silt, Sedimentation & Dredging

The survey results strongly indicated that silt, sediment and erosion are a main priority for Lake Santee members. In 2006, JFNew was commissioned to provide recommendations on the best way to manage sediment entering the north end of the lake. This resulted in the "Stormwater Wetland Treatment System at Lake Santee" memo included in Appendix C of this report. It is the recommendation of this committee that the LSPOA Board pursue a similar, updated analysis from JFNew or a like company as soon as practical. This analysis should be expanded beyond the north end to include all primary lake inlets. Once completed, this committee further recommends that the LSPOA Board appoint a sub-committee to review the outcome of the report and make recommendations to the LSPOA Board on short-term and long-term implementation plans. This committee further recommends that the sub-committee should develop recommendations to add to or enhance the LSPOA rules and regulations regarding erosion and sediment control, with a specific focus around construction projects.

Since the water from the lake is utilized as the community's primary source of drinking water, it is in the interest of the Lake Santee Regional Waste and Water District (LSRWWD) to help maintain the health of the lake. This committee recommends that the LSPOA Board approach the LSRWWD Board of Trustees to gauge their interest in partnering in any long term plans for silt control and/or dredging. Our committee does understand that any participation by the LSRWWD would likely result in an increase in the water/sewer bills, which would need to be weighed in conjunction with the overall funding considerations.

Our committee recommends that this sub-committee consist of 4 – 6 members and be appointed no later than January 2018. We further recommend that the sub-committee take no longer than 9 months to provide a specific, comprehensive strategy to the LSPOA Board of Directors.

Roads

After reviewing the 2017 LSPOA survey results, it was significant and interesting that road paving was a lower priority than anticipated. Although the overall weighted average from the survey indicated that roads are of concern, they were not of the highest priority. And, in line with the Planning Committee discussions, owners who purchased land off of Santee Drive were aware that they were purchasing on a gravel road with no specific plan for paving in the near future.

The committee contends that it is imperative that we continue to maintain the paving strategy for Santee Drive over the next 5 years going back to the paving of 1.25 mi biannually. We have been doing rejuvenation over the past few years and although it has saved dollars and allowed for some additional surfacing of secondary roads, it is our main thoroughfare and is one of the visual attributes of our community especially to first-time visitors and guests. It serves not only our main traffic, but its smooth surface is utilized for golf carts, bicycling, running and walking. We view it as one of our lifestyle staples here at Lake Santee.

The committee reiterates that the continued improvement of gravel roads remains imperative, whether it be through the addition of gravel as necessary, or continuing to add millings or other road surfacing techniques as the budget can allow. Improved road surfacing options should be a part of every year's evaluation and assessment of road improvement. Maintaining and improving ditches and drainage should be a part of the annual assessment to improve the longevity of any road improvements.

Along with good road surfaces comes the challenge of excessive speed. We recommend the 25 mph speed limit remain in place. Additional speed limit and road signage should be added as necessary and speed control bumps should be added and maintained in the particular problematic areas.

We are making no particular recommendation regarding funding other than the continued annual assessment of the aforementioned items and budgeting accordingly.

Security

While security was not ranked as important as other priorities, security continues to be a regular concern among members. This committee acknowledges that it is important to maintain a safe and secure environment for the members who live within the boundaries of Lake Santee and for the public who come to Lake Santee. The sense of community and safe environment would not be possible without the working force of the security officers who have patrolled Lake Santee in various forms for many years. Some of the duties of these security officers include assisting the fire department, helping the EMTs find their destination, helping stranded boaters to the marina, enforcing the rules and regulations, and many other necessary responsibilities.

Our committee recognizes that it is not easy for officers to be on a schedule that ensures 24/7 service for any form of emergency or call for assistance. Concerns have been raised from the community about the effectiveness of the current security program. Concerns range from a general lack of knowledge of the rules and regulations to the residency requirement of security officers, which may deter the officers from penalizing friends and neighbors who are not following the rules and regulations.

Our committee recommends that a sub-committee be formed with the charge of reviewing the current security structure and make a recommendation on the future structure. As part of this review, we recommend that the sub-committee seek information and pricing to outsource security services.

Our committee recommends that this sub-committee consist of 4 – 6 members and be appointed no later than January 2018. We further recommend that the sub-committee take no longer than 4 months to make future structure recommendations.

Additional Recommendations

Funding

This committee discussed possible funding options to supplement the current dues structure. Ultimately, it was the consensus of our committee that there may be avenues for financial help, depending on the project. Any funding source will require a well thought out need by clearly identifying the project to be funded, a plan to attain the needed funding, and then create a plan to accomplish the funding goal.

To continue to explore the possibility of external funding options, our committee recommends that a sub-committee be formed which would consist of 4 – 6 members and be appointed no later than January 2018. We further recommend that the sub-committee take no longer than 9 months to research funding options and make recommendations to the Board on options to pursue or to explore further.

In 2006, the LSPOA engaged with Historic Hoosier Hills to assist the Board in pursing potential funding options. Our committee recommends that the funding sub-committee contact this organization to gain a better understanding of the outcome of that engagement. This conversation should give the funding sub-committee a clearer understanding of options and directions based on the previous experience with this organization.

Additional resources, which may be of interest to the sub-committee, are:

- Southeastern Indiana Regional Planning Commission (SIRPC)
  - http://www.sirpc.org/board.php
  - This organization is a potential grant administrator/writer that serves Decatur County. Decatur County officials serve on this organization's board of directors.
- USDA Indiana
  - http://www.rd.usda.gov/in
  - North Vernon Service Center – USDA
  - Jerry Hay BP Specialist/Ofc. Contact (812) 346-3411 ext.126, Jerry.Hay@in.usda.gov
  - Can provide long term financing
- Indiana Office of Community & Rural Affairs aka CDBG
  - http://www.in.gov/ocra/2330.htm
  - Andrea Deutsch (317) 690-9736 adeutsch@ocra.in.gov
  - Administers Community Development Block Grant for public infrastructure.
  - This generally benefits communities with 51% or > moderate to low income families.
  - 10% match usually required and grants are typically $50,000.
- U.S. Army Corp of Engineers
  - http://www.usace.army.mil/Missions/Civil-Works/Dam-Safety-Program/
- Engineering Services: FPBH, Inc.
  - Offices in New Castle and North Vernon
  - Dan Wright (765) 575-4056
  - http://fpbhonline.com/index.htm

Lake Santee Subdivision Restrictions

The Long Range Planning Committee acknowledges that it may be necessary in the future to modify the Lake Santee Subdivision Restrictions, and acknowledges the cumbersome requirements necessary to change, alter, amend or revoke the Restrictions in whole or in part.

Section 10 of the Restrictions states that an amendment requires "owners of at least two thirds of the said lots so agree in writing". Recognizing that such a requirement is cumbersome and likely very time consuming considering the diverse membership (full-time, part-time, vacant lot owners, etc.), the Long Range Planning Committee recommends that the LSPOA Board of Directors consider the pros and cons of amending the language of Section 10 as proposed below. Our committee recognizes that this language would simplify the requirements necessary to amend the Restrictions in the future, if the LSPOA Board believes that a change is or will be necessary. Our committee recognizes that passing this change will require a concerted and sustained strategy on behalf of the LSPOA Board of Directors and the administrative staff to obtain the necessary member signatures.

Section 10 (Current Language)

"…All of the restrictions, conditions, covenants or agreements contained herein shall continue until January 1, 1973. The same may be thereafter, and from time to time, changed, altered, amended or revoked in whole or in part by the owners of the lots in the subdivision whenever, the owners of at least two thirds of the said lots so agree in writing."

Section 10 (Proposed Language/Amendment)

"…All of the restrictions, conditions, covenants or agreements contained herein shall continue until January 1, 1973. The same may be thereafter, and from time to time, changed, altered, amended or revoked in whole or in part by the owners of the lots in the subdivision whenever, the owners of at least two thirds of the said lots so agree in writing ***or*** *by action of the Lake Santee Property Owners Association at a meeting duly called for said purpose by a vote of at least a majority of the members thereof.*

Appendix A – Survey Results

Q1 Please provide your full name, including both your first and last name

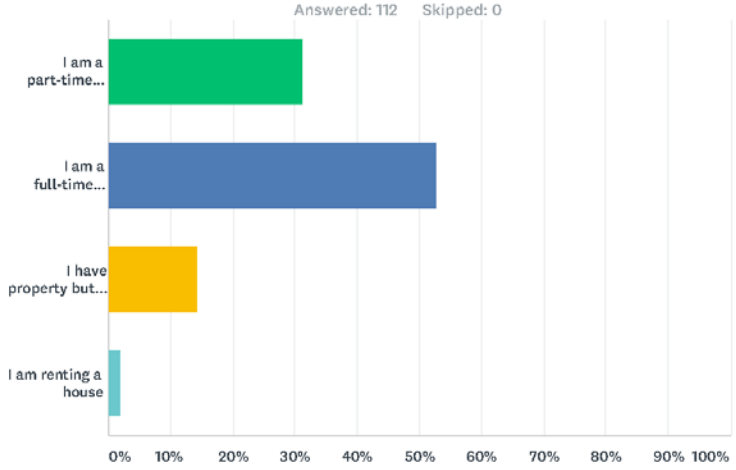
Answered: 112 Skipped: 0

Q2 Please provide your lot number. If you own more than one lot, please provide only one number.

Answered: 112 Skipped: 0

Q3 What is your resident status?

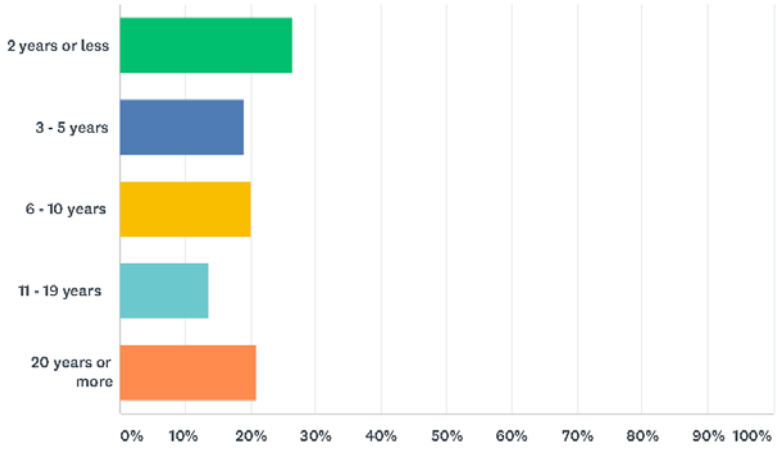
Answered: 112 Skipped: 0



Answer Choices	Responses	
I am a part-time resident (this is not my primary house)	31.25%	35
I am a full-time resident (this is my primary house)	52.68%	59
I have property but do not have a house	14.29%	16
I am renting a house	1.79%	2
TOTAL		112

Q4 How long have your owned a house or property at Lake Santee?

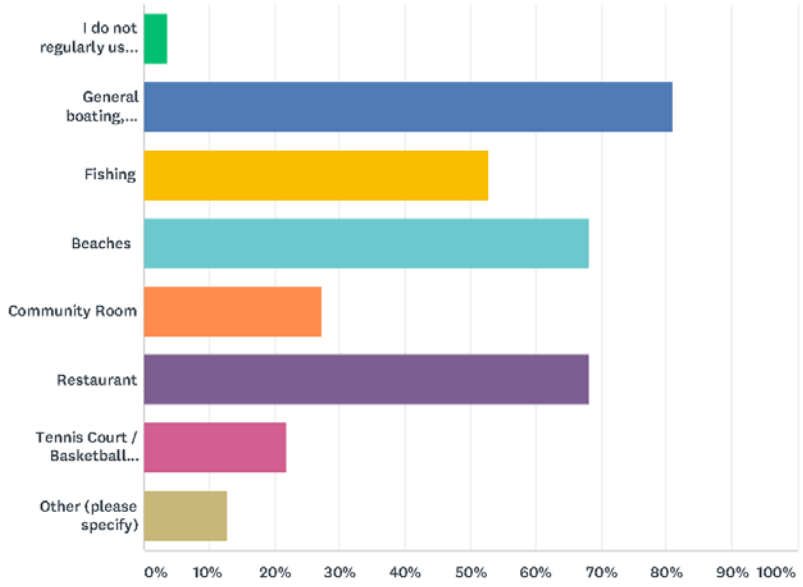
Answered: 110 Skipped: 2



Answer Choices	Responses	
2 years or less	26.36%	29
3 - 5 years	19.09%	21
6 - 10 years	20.00%	22
11 - 19 years	13.64%	15
20 years or more	20.91%	23
TOTAL		110

Q5 What amenities do you regularly use?

Answered: 110 Skipped: 2



Answer Choices	Responses	
I do not regularly use any amenities	3.64%	4
General boating, skiing, tubing, etc.	80.91%	89
Fishing	52.73%	58
Beaches	68.18%	75
Community Room	27.27%	30
Restaurant	68.18%	75
Tennis Court / Basketball Court	21.82%	24
Other (please specify)	12.73%	14
Total Respondents: 110		

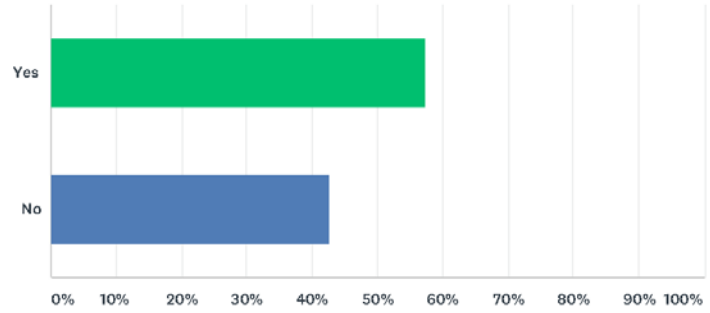
Q6 If you use the available amenities at Lake Santee, please rate your satisfaction with the quality and type of amenities available:

Answered: 110 Skipped: 2

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	1.85% 2	0.93% 1	12.04% 13	62.96% 68	22.22% 24	108	4.03

Q7 Are there additional amenities that you would recommend that the LSPOA Board of Directors consider for the future?

Answered: 110 Skipped: 2



Answer Choices	Responses	
Yes	57.27%	63
No	42.73%	47
TOTAL		110

Q8 Additional Amenity 1

Answered: 60 Skipped: 52

Q9 Additional Amenity 2

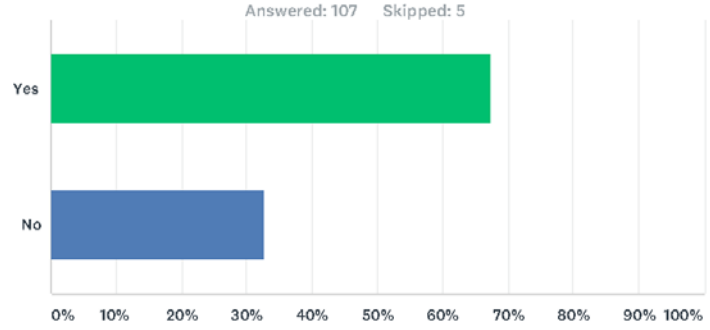
Answered: 40 Skipped: 72

Q10 Additional Amenity 3

Answered: 24 Skipped: 88

Q11 Is your property near or adjacent to a gravel road?

Answered: 107 Skipped: 5

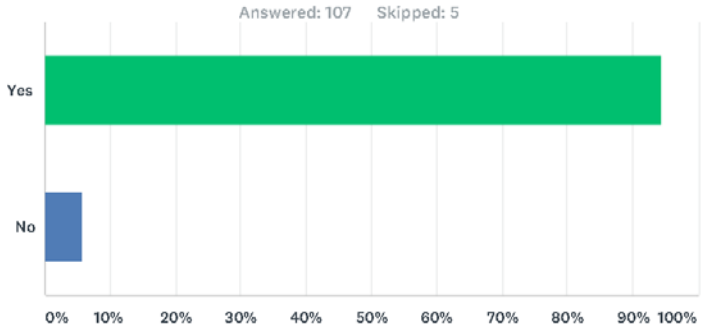


Answer Choices	Responses	
Yes	67.29%	72
No	32.71%	35
TOTAL		107

Q12 Are the type and quality of the roads within the community

important to you?

Answered: 107 Skipped: 5



Answer Choices	Responses	
Yes	94.39%	101
No	5.61%	6
TOTAL		107

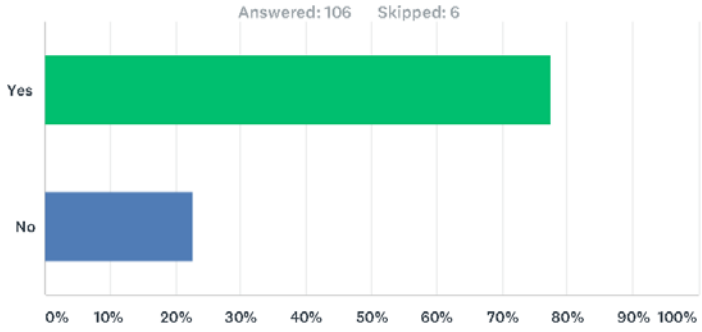
Q13 Thinking of the road quality, please rate your satisfaction with the quality of the roads within the community:

Answered: 100 Skipped: 12

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	8.00% 8	26.00% 26	23.00% 23	41.00% 41	2.00% 2	100	3.03

Q14 Do you have lake-front property or a direct view of the lake?

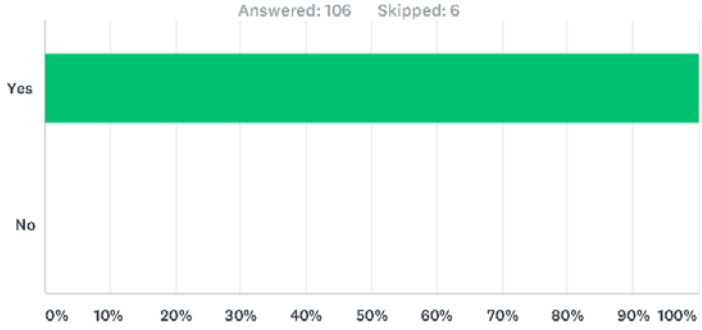
Answered: 106 Skipped: 6



Answer Choices	Responses	
Yes	77.36%	82
No	22.64%	24
TOTAL		106

Q15 Is the quality of the lake and beach areas important to you?

Answered: 106 Skipped: 6



Answer Choices	Responses	
Yes	100.00%	106
No	0.00%	0
TOTAL		106

Q16 Thinking of the lake body and the shoreline, please rate your satisfaction with the quality of the lake:

Answered: 104 Skipped: 8

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	Total	Weighted Average
(no label)	1.92% 2	8.65% 9	16.35% 17	61.54% 64	11.54% 12	104	3.55

Q17 If you use the beach areas, please rate your satisfaction with the quality of the beaches:

Answered: 104 Skipped: 8

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	N/A	Total	Weighted Average
(no label)	1.92% 2	10.58% 11	18.27% 19	47.12% 49	10.58% 11	11.54% 12	104	3.61

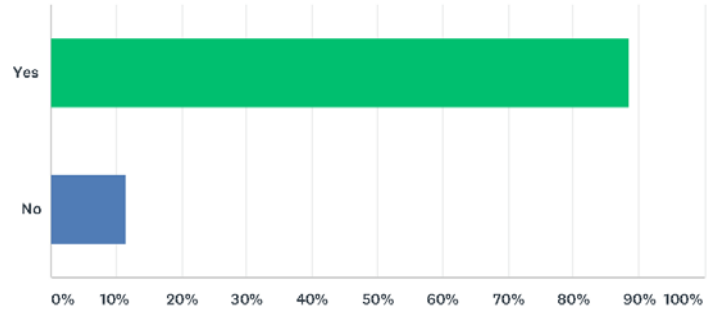
Q18 If you fish, please rate your satisfaction with the quality of fishing at Lake Santee:

Answered: 104 Skipped: 8

	Very Unsatisfied	Unsatisfied	Neutral	Satisfied	Very Satisfied	N/A	Total	Weighted Average
(no label)	0.96% 1	4.81% 5	15.38% 16	25.00% 26	20.19% 21	33.65% 35	104	3.88

Q19 Is the rate of silt and sedimentation in the lake a concern for you?

Answered: 104 Skipped: 8



Answer Choices	Responses	
Yes	88.46%	92
No	11.54%	12
TOTAL		104

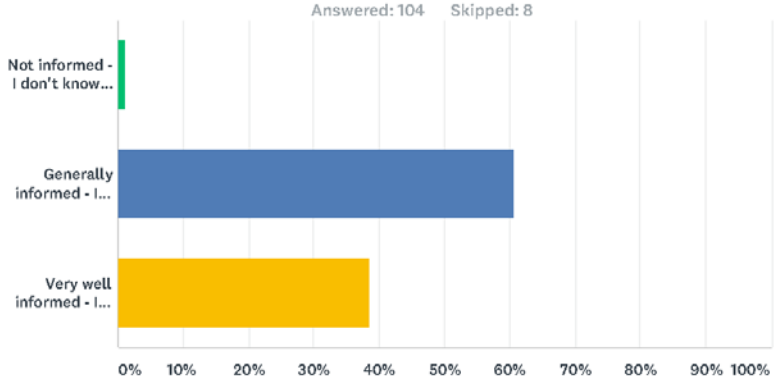
Q20 Thinking about the current rate of silt and sedimentation in the lake, how important is a long-term program to you (i.e. dredging, retention ponds)?

Answered: 104 Skipped: 8

	Not at all Important	Slightly Important	Moderately Important	Important	Very Important	Total	Weighted Average
(no label)	0.96% 1	5.77% 6	12.50% 13	35.58% 37	45.19% 47	104	4.18

Q21 As an LSPOA member, how informed are you on the covenants, bylaws, rules and regulations for Lake Santee (i.e. speed limit, tents, campers, building regulations)?

Answered: 104 Skipped: 8

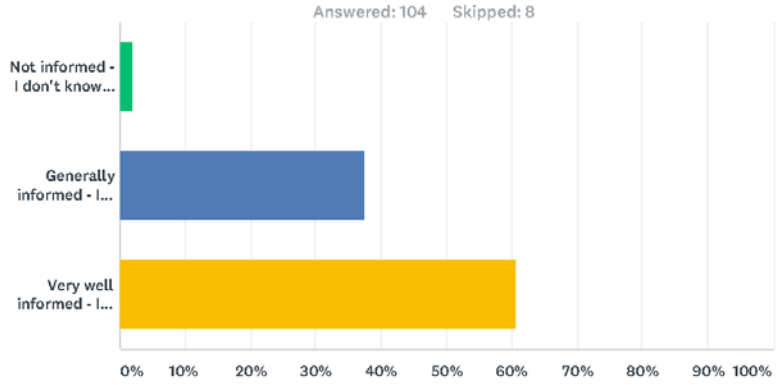


Answer Choices	Responses

Not informed - I don't know the rules	0.96%	1
Generally informed - I know some of the rules	60.58%	63
Very well informed - I know all of the rules	38.46%	40
TOTAL		104

Q22 As an LSPOA member, how informed are you on the rules that apply to boating and fishing on Lake Santee (i.e. speed limit, direction to travel)?

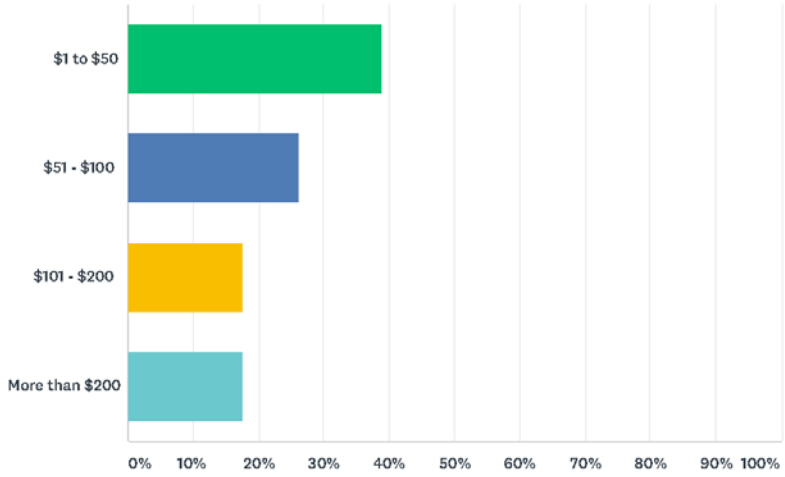
Answered: 104 Skipped: 8



Answer Choices	Responses	
Not informed - I don't know the rules	1.92%	2
Generally informed - I know some of the rules	37.50%	39
Very well informed - I know all of the rules	60.58%	63
TOTAL		104

Q23 If the LSPOA Board of Directors were to make investments to improve upon the items listed in this survey, how much would you be willing to contribute to these improvements beyond your current annual dues?

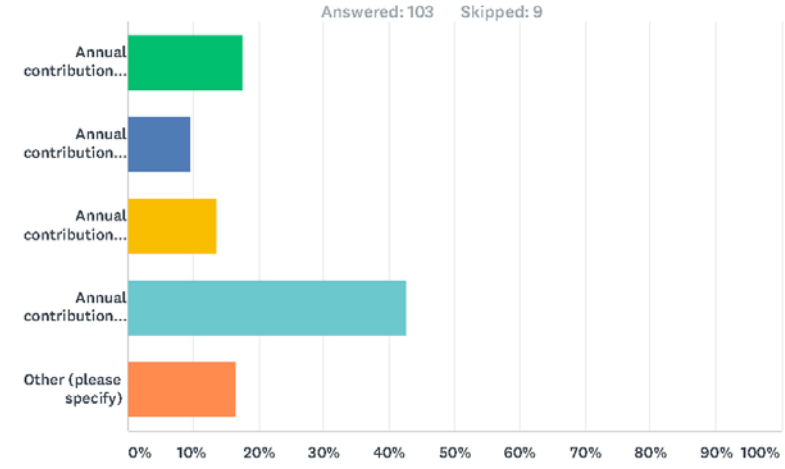
Answered: 103 Skipped: 9



Answer Choices	Responses	
$1 to $50	38.83%	40
$51 - $100	26.21%	27
$101 - $200	17.48%	18
More than $200	17.48%	18
TOTAL		103

Q24 Over what length of time would you be willing to contribute to these improvements beyond your current annual dues?

Answered: 103 Skipped: 9

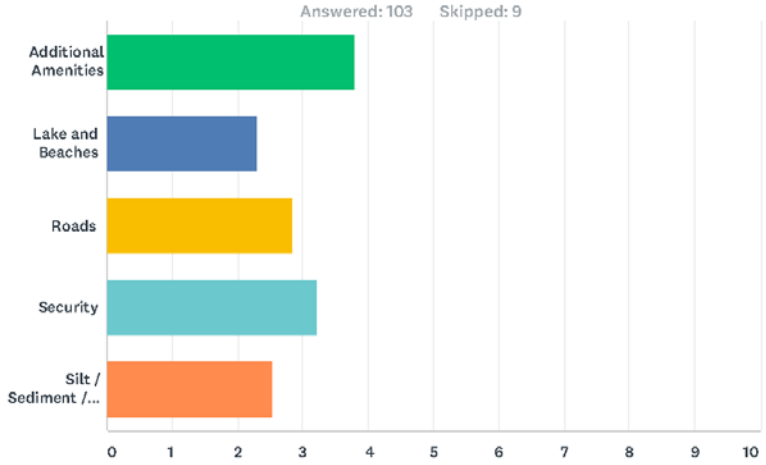


Answer Choices	Responses

Annual contribution for 1 year	17.48%	18
Annual contribution for 2 years	9.71%	10
Annual contribution for 3 years	13.59%	14
Annual contribution for 5 years	42.72%	44
Other (please specify)	16.50%	17
TOTAL		103

Q25 Please rank the potential improvement items below in order of importance for Lake Santee:

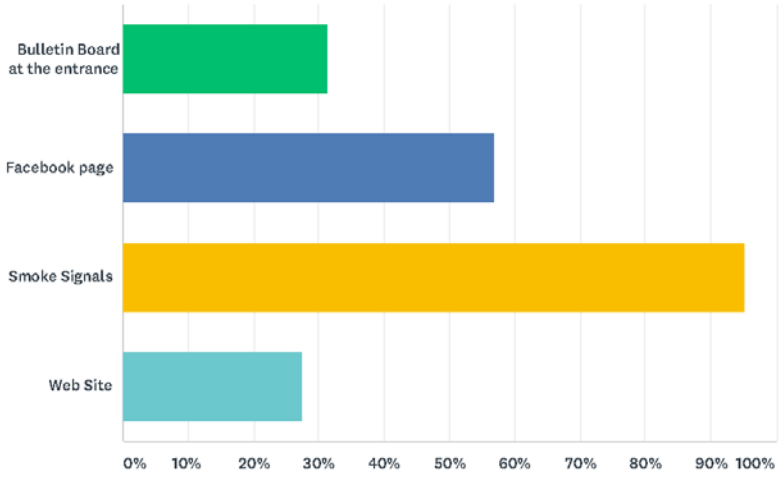
Answered: 103 Skipped: 9



	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Total	Weighted Average
Additional Amenities	16.50% 17	5.83% 6	9.71% 10	19.42% 20	48.54% 50	103	3.78
Lake and Beaches	28.16% 29	33.01% 34	22.33% 23	13.59% 14	2.91% 3	103	2.30
Roads	18.45% 19	20.39% 21	28.16% 29	23.30% 24	9.71% 10	103	2.85
Security	13.59% 14	14.56% 15	29.13% 30	21.36% 22	21.36% 22	103	3.22
Silt / Sediment / Dredging	33.01% 34	23.30% 24	15.53% 16	12.62% 13	15.53% 16	103	2.54

Q26 How do you receive information about news and events at Lake Santee?

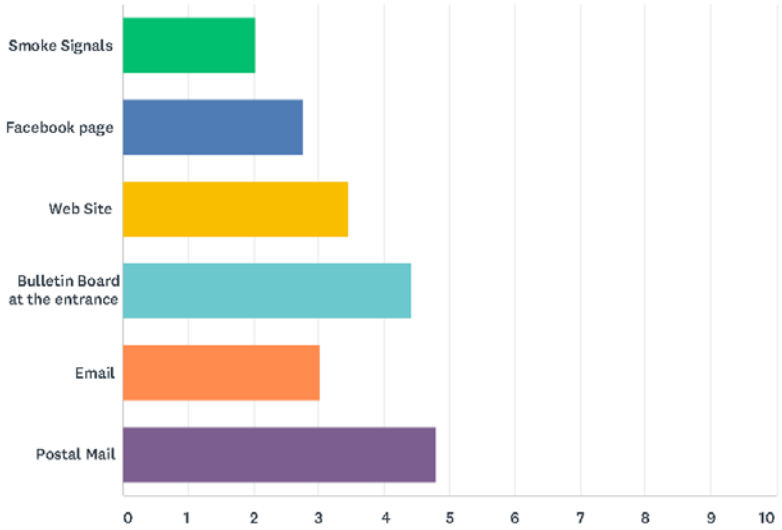
Answered: 102 Skipped: 10



Answer Choices	Responses	
Bulletin Board at the entrance	31.37%	32
Facebook page	56.86%	58
Smoke Signals	95.10%	97
Web Site	27.45%	28
Total Respondents: 102		

Q27 Please rank the following in order of how you would prefer to learn about news and events at Lake Santee:

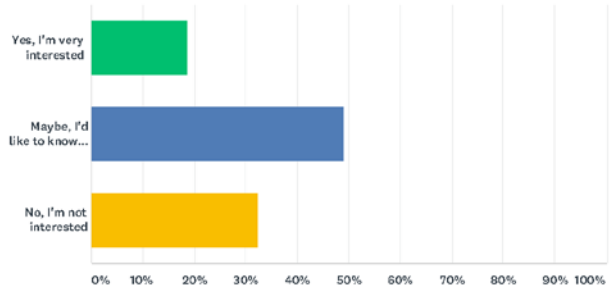
Answered: 102 Skipped: 10



	Preference 1 (Highest)	Preference 2	Preference 3	Preference 4	Preference 5	Preference 6 (Lowest)	Total	Weighted Average
Smoke Signals	47.06% 48	23.53% 24	16.67% 17	6.86% 7	3.92% 4	1.96% 2	102	2.03
Facebook page	25.49% 26	30.39% 31	15.69% 16	9.80% 10	7.84% 8	10.78% 11	102	2.76
Web Site	1.96% 2	21.57% 22	33.33% 34	24.51% 25	8.82% 9	9.80% 10	102	3.46
Bulletin Board at the entrance	1.96% 2	7.84% 8	13.73% 14	20.59% 21	34.31% 35	21.57% 22	102	4.42
Email	28.43% 29	10.78% 11	16.67% 17	26.47% 27	10.78% 11	6.86% 7	102	3.01
Postal Mail	0.98% 1	10.78% 11	11.76% 12	7.84% 8	21.57% 22	47.06% 48	102	4.79

Q28 Are you interested in volunteering within the Lake Santee community?

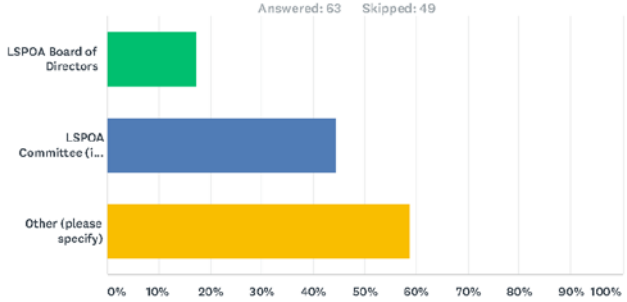
Answered: 102 Skipped: 10



Answer Choices	Responses	
Yes, I'm very interested	18.63%	19
Maybe, I'd like to know more	49.02%	50
No, I'm not interested	32.35%	33
TOTAL		102

Q29 I would be interested in volunteering in the following ways:

Answered: 63 Skipped: 49



Answer Choices	Responses	
LSPOA Board of Directors	17.46%	11
LSPOA Committee (i.e. Recreation, Nominating Committee)	44.44%	28
Other (please specify)	58.73%	37
Total Respondents: 63		

Q30 For additional information on volunteering, please provide your email address and phone number: Email Address

Answered: 50 Skipped: 62

Q31 Phone Number

Answered: 43 Skipped: 69

Appendix B – Suggested Amenities

All paved roads
Allow limited camping on site with trailer trailer equal to motor home
Back entrance repaved
Baseball / softball diamond
Bingo Night
Build boat house without first building house
Dog park or dog area.
Establish / design a boat parking spot on the far east side of the beach away from the general beach public area.
Exercise / fitness classes
Exercise/Recreation Facility
Fish Cleaning House
Fishing benches along water edge
Food vending/concessions at main beach
Fresh water splash pool for the kids.
Full time gate security
Garbage dump open on Friday, longer hours on Saturday
General Store (Grocery) / Gas station
Golf Cart wash
Golf course
Golf Driving Range, Chipping & Putting Green
Grocery Store
Horseshoe pits
Kayak small boat launches
Larger beach
Marina - Continue and/or expand services
More attractions at east beach
More shelter houses at public areas
Pickle Ball
Playground away from the beach, special needs equipment
Putt Putt Course
Regular Slalom Course Hours
Regular Tennis Court vs plastic
Restaurant - continue and/or expand services
Shooting range
Side walk
Swimming pool with a kiddie area
trash cans at rented dock areas
Trash pick up
Updated, larger Community Rm with a dance floor & stage , pool table. & Bar for Banquets
Upgrade Lake Access Areas
Walking & Bike Trails, Golf Cart Paths

Appendix C – JFNew Memo

COPY

August 3, 2006

Mr. Darrow McCreary
Lake Santee Property Owners Association, Inc.
13 SW Wrenn Parkway
Greensburg, IN 47240

6640 Parkdale Place, Suite S
Indianapolis, Indiana 46254
Phone: 317-388-1982 ext. 27
Fax: 317-388-1986

Rod W. Ginter
Environmental Scientist
rginter@jfnew.com

Re: Stormwater Wetland Treatment System at Lake Santee

Dear Mr. McCreary:

JFNew is excited about the opportunity to present the Lake Santee Property Owners Association with a concept design and estimated costs for a stormwater wetland treatment system on the Salt Creek inlet at the north end of the lake. After visiting the site on June 27, 2006, reviewing the USDA Soil Conservation Service Technical Assistance Report provided, and performing flow calculations for the Salt Creek watershed, JFNew believes that a stormwater wetland treatment system can be successful for the site.

Enclosed with this letter please find a concept-level site plan for the old water plant property and a typical drawing of the type of rock check dam that could be installed in the stream channel to divert stormwater flow. It should be noted that this initial site plan does not reflect the increased acreage available for wetland construction at the south end of the site, while the engineering calculations do reflect this additional acreage. Outlined within this letter are estimates of the required construction activities, maintenance activities and associated costs for building and maintaining a stormwater wetland at current lake surface elevations. JFNew would like to further develop the models and designs for the Lake Santee Property Owners Association upon your review and analysis.

Our initial analysis of the site and storm flow data indicates that approximately 50 percent of the total sediment load from Salt Creek could be captured on a yearly basis in an optimized 2.5-acre forebay and 5.5-acre wetland system, which would likely require annual or biannual sediment removal for land application. The site adjacent to Salt Creek has approximately 12 acres available for a stormwater treatment system, including areas for fill disposal. For purposes of cost control, JFNew has assumed that cut and fill materials must be balanced on or near the construction site. Given the need to balance fill, the largest area available for the stormwater forebay and wetland is roughly eight acres. An 11-acre stormwater wetland system with greater sediment retention rates could be constructed if fill materials could be deposited entirely in adjacent areas or hauled offsite, but excavation costs would be considerably higher. The cost of design, construction, and maintenance of this proposed system will need to be compared to the cost of the periodic dredging of the north end of Lake Santee. It should be noted that while a stormwater wetland system will certainly reduce the sediment load to the lake, an eight acre system would likely only cut the required frequency of lake dredging roughly in half, rather than removing the need for it entirely.

Diverting Storm Flow

The Right Hand Fork of Salt Creek drains a watershed area of approximately 1,650 acres, or 2.6 square miles, into the north end of Lake Santee. Roughly 70 percent of the area upstream of Lake Santee is used for agriculture, with fine silt loam and clay loam soils predominating in the watershed. According to the USDA Technical Assistance Report, an estimated 6,000 tons of sediment per year enters Lake Santee from this watershed, and this sediment load is carried almost entirely in periodic storm flows. JFNew's estimates of the base and storm flow volumes for Salt Creek are shown in the following table in cubic feet per second (cfs).

Table 1 – JFNew's Estimated Salt Creek Flow by Storm Event

Weather Event	Base (no storms)	2-month Storm	2-year Storm	5-year Storm	10-year Storm	100-year Storm
Flow (cfs)	1-3	160	320	420	500	900

In order to minimize impact to the existing channel and to facilitate permitting, the base flow of Salt Creek will need to be routed through the normal channel, while storm flows will need to be diverted into the stormwater wetland system. Base flow elevations of the lower reach of Salt Creek are estimated at 995 - 996 mean sea level (MSL), roughly the same elevation as the normal surface level of Lake Santee. Diversion of storm flow will require that a check dam or reinforced concrete dam structure be built in the stream approximately 150 feet downstream of the bridge at County Road 550 North. This structure will require a weir or pipe in the center to allow base flow to move through the existing channel while diverting a high percentage of flow during storm events. JFNew recommends early communication with the regulatory agencies in order to asses the complexity of permitting either type of structure presented.

The second part of the stormwater diversion system would consist of a 100-feet wide spillway on the east stream bank just upstream of the check dam structure. The elevation of this vegetated spillway would be excavated and graded to a height just above the base flow of the channel, or roughly 995.5 MSL, so that approximately 75-80 percent of a 2-month rainfall event could be diverted through the spillway to the stormwater wetland system. The banks and berms forming the spillway will require armoring with rip-rap or fieldstone to avoid any erosion or channeling issues. Stormwater would then flow over the armored spillway into the settling forebay and constructed wetland floodplain to the east of the spillway (see concept site plan). The design of the dam and spillway structures could vary considerably from this initial concept based on more detailed flow modeling and agency permit and flood control requirements.

Capturing Sand and Silt

The size and depth of the open-water forebay on the northern part of the site will be critical to the success of the sediment removal rates for this system. This is the area where the majority of the sediments would be captured, and must therefore be of sufficient volume to both hold the sediments and retain storm flows for sufficient periods to allow the larger part of the sediment load to settle out. Generally for this watershed land use and area, the size of the forebay and wetland system should be at least one percent of the area of the watershed which drains to it for full sediment load attenuation. The 11 to 12 acres of land area available for the Lake Santee stormwater wetland provide approximately 0.7 percent of the watershed area. In addition, with the desire to maintain a neutral cut-fill construction site (no offsite hauling of spoil), and additional 3 to 4 acres may be needed for stockpiling the anticipated considerable volume of excavated earth. The base elevation of the forebay would need to be excavated to around 989-990 MSL, to give a sufficient depth to the

forebay to hold yearly sediment loads. The elevations of the maintenance roads and berms could vary, but grading to 997 MSL was assumed for ease of access and increased floodplain size for this concept design. This would require the excavation and grading of an approximately three acre area from an existing mean elevation of 1,003 MSL, with an estimate of 58,000 cubic yards of earthmoving to form a 2.5-acre forebay.

The concept forebay is 40 feet wide to allow access by the 410 backhoe for dredging and maintenance during the wet season, if necessary. The 20-feet-wide peninsular maintenance roads are spaced to allow access to most points of the forebay. The winter drawdown of Lake Santee may allow sufficient drying of sediments for removal by bulldozer or dredge, in which case the forebay could be widened and the number of peninsular access roads reduced. The estimated retention time of the 2.5-acre forebay for a two month storm flow at 150-170 cfs peak flow is approximately 1.5 hours, which should allow 75 percent of particles larger than 60 microns to settle out of the water column. A considerable portion of the smaller particulates, the finer silts and clays, will likely remain suspended and would then move into the wetland cells to the south. A rock weir structure (see concept site plan) under the road would allow some of these finer particulates to settle in the adjacent open-water areas, but it would be less expensive and simpler to use sub-surface culverts to transport the stormwater to the wetland.

Capturing Fine Sediments

After crossing beneath the access road, the stormwater flow would enter a shallower, vegetated wetland area roughly 5.5 acres in area. The wetland would be constructed with an estimated base elevation of 994 MSL, for an average depth of 1.0 feet of emergent wetland. Normal lake surface level would keep the wetland submerged, giving the wetland additional volume to hold finer sediment loads. The elevations of the maintenance roads and berms could vary, but grading to 997 MSL for the internal berms was assumed for ease of access and increased floodplain size for this concept design. The outside berms could likely remain at existing elevations, to reduce erosion potential and increase stormwater volume retention during larger storm events. The emergent vegetation in the wetland area will serve to further slow and filter the water, as well as to aid in the removal of nutrients. The estimated retention time of the wetland for a two month storm event is one hour, which should allow for the removal of an estimated 50-75 percent of the fine clay particulates larger than ten microns in size. The system will likely capture some particulates smaller than ten microns, but settling rates for these particles exceed the estimated retention time of the system, and were therefore not included in the initial calculations. Construction of the wetland would require the excavation and grading of an approximately 6.5-acre area from an existing mean elevation of 1,000-1,001 MSL, with an estimate of 64,000 cubic yards of earthmoving to form a 5.5-acre wetland.

The section of the wetland immediately downstream of the inlet from the forebay may require higher periodic maintenance then the rest of the downstream wetlands, depending on the degree of fine sediment accumulation. Access roads would allow maintenance of the upstream portion of the wetland, while the downstream sections would only be divided by earthen berms with walking paths for recreational use of the area. After passing through the downstream areas of the wetland, the filtered water would then return to Salt Creek just above the bridge at Choctaw Trail.

Note: Herbicide application on the upstream agricultural land could be a concern for the wetland plants. If existing data is not available, JFNew recommends analytical testing of stormwater flows to determine the peak levels of Atrazine and other commonly-used herbicides prior to seeding and planting of the wetland cells. Analytical testing of stormwater could also be used to characterize

sediment particle densities and sizes, allowing more accurate modeling of sediment capture efficiencies.

Estimated Construction Costs

The required volume of earthmoving is considerable for this project, due to the need to bring the existing elevations of the site down to normal lake surface level or lower. More detailed topographic surveys of the stream channel and upper portion of the site would be necessary before final grading plans and detailed earthmoving calculations can be produced. The following estimates are for the excavation, construction, and planting of a rock check dam, a 100-foot wide rock spillway, a 2.5-acre settling forebay, and a 5.5-acre wetland. Construction of the forebay and stormwater wetland could take place in phases, with the check dam, spillway, with smaller forebay and wetland cells constructed at first, then expanded as needed. However, maximizing the size of the system for the site will be ultimately necessary to optimize sediment capture rates based on the size of the watershed area.

Table 2 – Estimated Costs for Stormwater Wetland System

Activity	Volume	Units	Unit Cost	Total
Grading/Earthmoving	**122,194**	**cubic yards**	**$3.50**	**$427,678.53**
Earthmoving - per acre average	**15,274**	**cubic yards**	**$3.50**	**$53,459.82**
Rock Check Dam	**425**	**cubic yards**	**$50.00**	**$21,250.00**
Rock Spillway Armor	**125**	**cubic yards**	**$50.00**	**$6,250.00**
Emergent Wetland Seeding	**5.5**	**acres**	**$3,000.00**	**$16,500.00**
Wetland Plant Plugs	**5.5**	**acres**	**$13,475.00**	**$74,112.50**
Fill Area Seeding	**3.9**	**acres**	**$3,000.00**	**$11,700.00**
Berm Seeding	**1.8**	**acres**	**$3,000.00**	**$5,441.96**
Access Road Seeding	**2.4**	**acres**	**$3,000.00**	**$7,272.73**
System Design and Modeling	**NA**	**NA**	**NA**	**$45,000.00**
Permits (IDEM, IDNR, Corps)	**NA**	**NA**	**NA**	**$25,000.00**
Subtotal				$640,705.72
Cost/Design Variance Contingency	25	percent		$160,176.43
Wetland Construction Total				**$800,882.15**
Yearly Maintenance (3 visits)	**8**	**acres**	**$1,250.00**	**$10,000.00**

Construction Permit Requirements

In order to install a rock check dam or other engineered structure in the main channel of Salt Creek, or to alter the banks of the Salt Creek channel by constructing an adjacent spillway or weir structure, applications for the following permits are anticipated.

1. Indiana Department of Natural Resources, contact - Debbie Lowe.
    a. Floodway Construction Permit application, State Form 42946.
    b. $200 application fee, with an additional $15 fee for online application.
    c. IDNR Public Notice, State Form 50354.
    d. Estimated processing time: four months from receipt of complete application.

2. Indiana Department of Environmental Management, contact – Jason Randolph.
    a. Section 401 Water Quality Certification permit application, State Form 51821.
    b. No application fee.
    c. Estimated processing time: four months from receipt of complete application.

3. Indiana Department of Environmental Management, contact – Jay Davis.
   a. NPDES Rule 5 Stormwater - Notice of Intent application, State Form 47487.
   b. $100 application fee.
   c. Proof of Public Notice of Construction (local newspaper).
   d. Construction Plan Approval or No-Review letter from Decatur County NRCS office.
   e. Estimated processing time: one month from receipt of complete NOI form.

4. U.S. Army Corps of Engineers Section 404 application, contact – Tim Smith.
   a. Federal Eng Form 43451.
   b. No application fee.
   c. Estimated processing time: one month following approval of IDEM Section 401 application.

Required Maintenance

Yearly maintenance of this stormwater wetland system will be essential to its success. Depending on the specific size and density range of the sediment load, the areas of the forebay nearest the spillway or some specific distance from the spillway will likely require annual sediment removal via bulldozing or dredging. As we discussed in our on-site visit, the winter drawdown of Lake Santee may provide an ideal time for sediment removal, and the sediments could be dewatered and concentrated prior to removal. Dewatering and concentration alone may prove sufficient to contain several years of sediments in the forebay. The forebay is currently designed so that most of it is accessible with a John Deere 410 backhoe, but this may be changed if another method of sediment removal is shown to be more cost effective.

The upstream section of the wetland may also require periodic dredging, backfilling and replanting, as this area will likely trap the majority of the finer silts and clays, and may become blocked more quickly than the remainder of the wetland. When possible, existing plants may be reused, with overall replanting costs in addition to yearly maintenance costs, but could be performed during regular maintenance visits to reduce travel costs.

In addition to sediment removal, maintenance of the forebay area would likely involve mowing of the vegetated maintenance roads, although the banks could be planted with native plants that require once or twice yearly mowing or burning. Wetland maintenance would be more intensive, and would likely require three (3) annual visits for invasive species control both in the wetland and along the berms and stream banks. Three annual visits would likely be sufficient to control Cattails and other undesirable species in the wetland, as most of the seed banks for these would be removed during the initial excavation. Any reseeding or replanting necessary for newly excavated or disturbed areas could also take place during the maintenance visits.

In summary, JFNew finds that a stormwater wetland system is feasible for Salt Creek upstream of Lake Santee, but only if the costs of excavation are offset by greater reductions in the overall maintenance costs of sediment removal via dredging of the lake bottom. Given the area currently available for construction and estimated erosion and storm flow rates for the Salt Creek watershed, JFNew believes that a properly-designed eight-acre stormwater treatment system could reduce annual sediment loading to the lake by an estimated 50 percent. It should be noted that at concept design level the recommended and available system would not entirely prevent sediment from entering the lake, but would reduce the frequency of required dredging.

Mr. Darrow McCreary, Lake Santee Property Owners Association, Inc.
August 3, 2006

As we discussed during our initial site visit, Brian Neilson and I would be happy to present our findings at the August 9th evening meeting of the Lake Santee Property Owners Association. Please feel free to contact me with any questions or concerns.

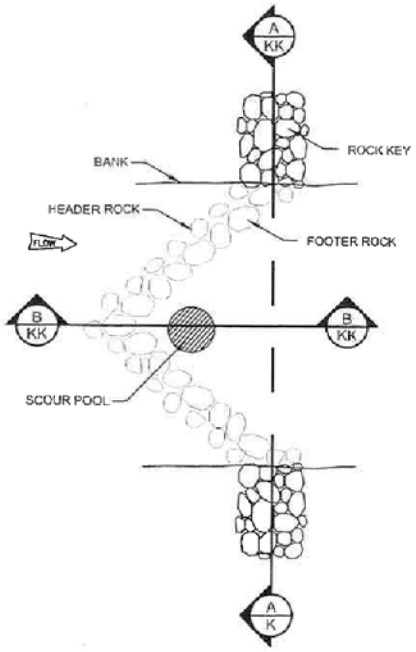
Best regards,

Rod Ginter

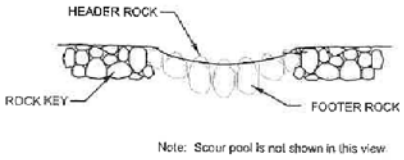
Enclosure

Cc:

File No. 06-04-29

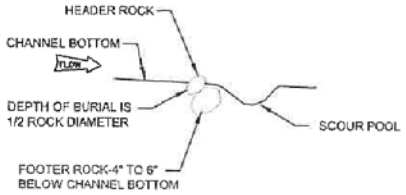


1/KK **TYPICAL ANGLED VORTEX ROCK WEIR - PLAN VIEW**
NOT TO SCALE

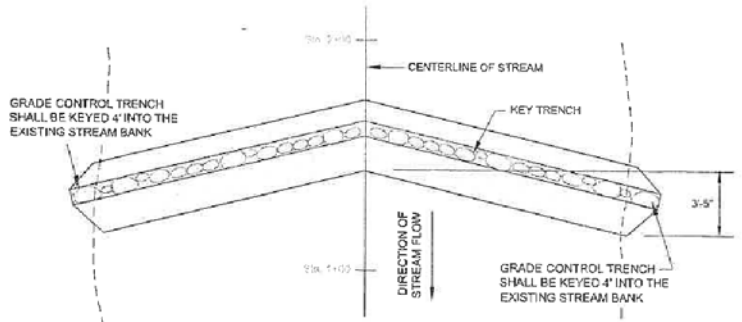


Note: Scour pool is not shown in this view

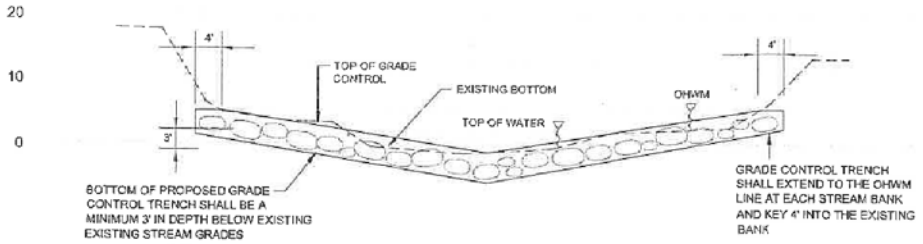
A/KK **TYPICAL ANGLED VORTEX ROCK WEIR - SECTION**
NOT TO SCALE



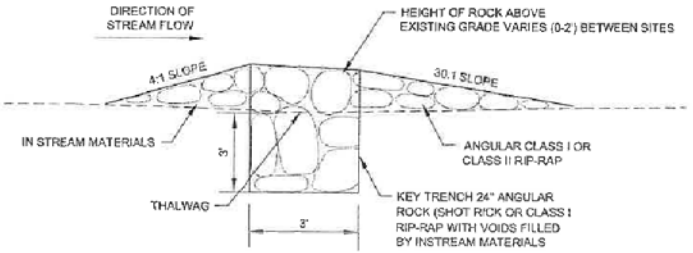
B/KK **TYPICAL ANGLED VORTEX ROCK WEIR - SECTION**
NOT TO SCALE



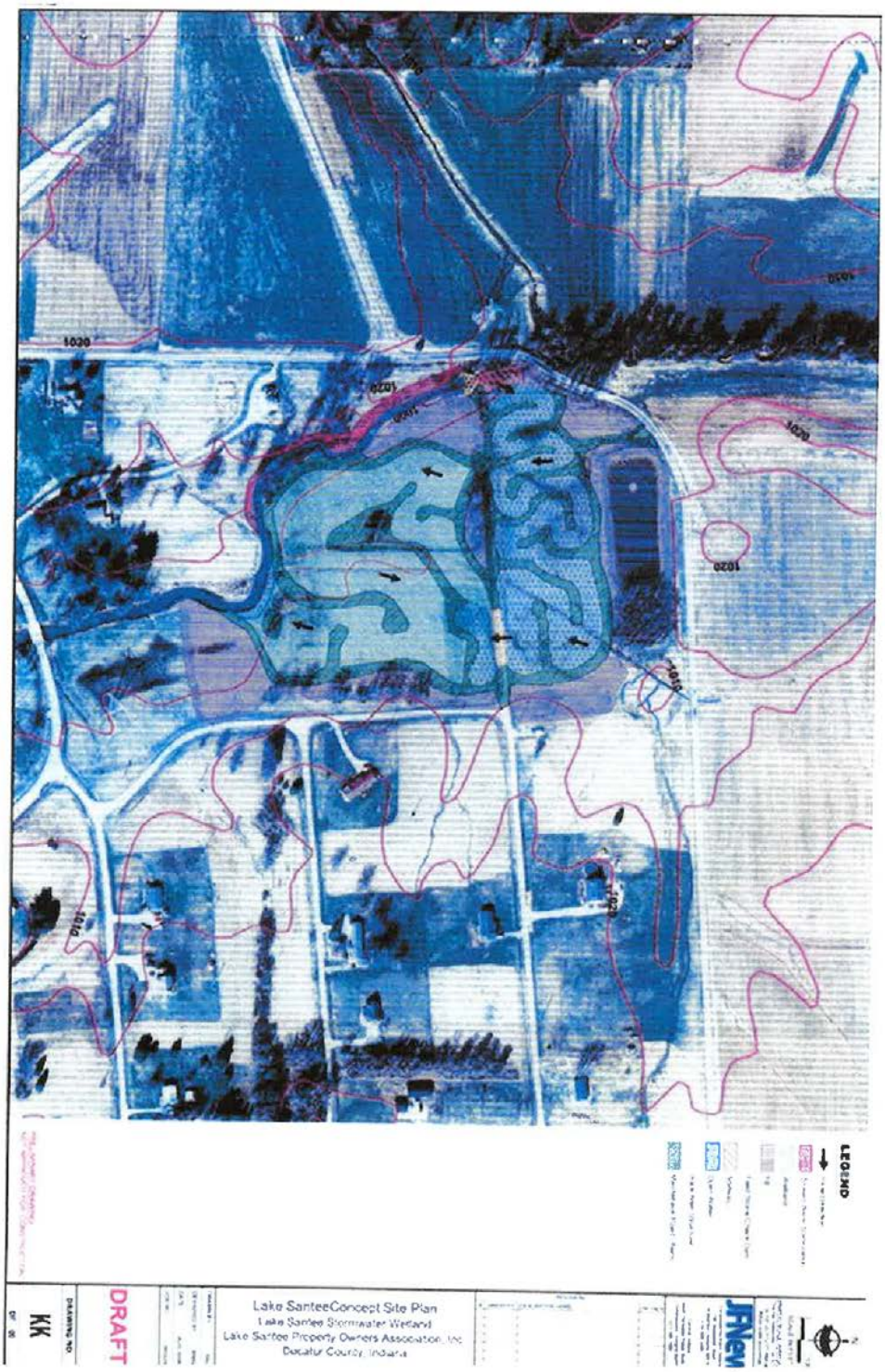
1/9 TYPICAL GRADE CONTROL PLAN VIEW
NOT TO SCALE



2/9 TYPICAL GRADE CONTROL – CROSS SECTION THROUGH KEY TRENCH
NOT TO SCALE



3/9 TYPICAL GRADE CONTROL – CROSS SECTION THROUGH STREAM CENTERLINE
NOT TO SCALE


LEGEND
DRAFT
Lake SanteeConcept Site Plan
Lake Santee Stormwater Wetland
Lake Santee Property Owners Association, Inc
Decatur County, Indiana
KK