

Lake/Dam Committee Meeting Minutes
Saturday, August 7, 2021

Meeting Called to Order 9:30 am

Committee Members:

Lou Jackson - present
Jack Betterly - present
Dennis Muretta – present
Kelly Evans – present
Debbie Moore – present
John McRoberts – present
Maureen Glenn – present
Steve Glenn – present
Joel Gray – excused

Dorothy Powter – present
Tim Reber – present
Jared Foss – excused
Deanne Landsverk - excused
Duane Landsverk – excused
Teddy Lovgren – present
Dave Kohler - excused
Karen Kohler - excused
Lou Jackson - present

Guests:

Roger Milliman – CAM
Ed & Mary Hill - Div. 3 Lot 121
Steve Saylor – Div. 2 Lot 126

John Ignemi – Div. 3, Lot 246
Tamra Ingwaldson – Div. 5 Lot 128
Cole Henske – Div. 1 Lot 61

Chairperson's Opening Comments: Kelly Evans – lots of good things happening. Then a bit of bad news / good news. The barge motor failed, unrepairable. A new motor is being installed.

Approval of July 10, 2021 minutes – Dennis moved to approve the minutes, seconded by Lou. Motion passed.

Dock Permits: Teddy ~ working to get some remedial dock permits approved and actionable. No new ones pending at this time.

Boat Registrations: Jared ~ Kelly reported on his behalf that there are no boat registrations for approval pending.

Correspondence – Several e-mails have come in regarding lake treatments and weeds in the lake. Some pictures were forwarded to Lake Advocates for inspections and advice. No action necessary at this time.

Status July motions to the Board: ALL APPROVED BY BOD

Move to approve proposal from Lake Advocates 6/30/2021 for 4 core samples of Lake Leprechaun and testing at a cost not to exceed \$19,000.

Move to establish a rule that managed lawns are not allowed within 20 feet of the mean water level on the lake front property (both lakes). Managed means mowed and or fertilized.

MANAGERS REPORT

1. Roger Milliman and Joel are meeting once a week to review the status of L/D Committee work orders. Joel has created a spreadsheet for tracking and provided it to the committee members after their August 4th, 2021 meeting.

Community Asset Managers Report/Projects/Maintenance Work Orders:

- Assigned to Joel, working with Roger – was not present
 - Roger presented highlights of his report – copy attached.
 - Roger presented overview of the recent BOD budget work study session. Made budget modification suggestions and requested missing PARS including one for the budget request for the maintenance dredging/permit. Also discussed need for project manager and subcontracting it out as a possibility (the committee doesn't believe that would meet the need for continuity, and multiple year project management needs.)

OLD BUSINESS

2. Park Inspection
 - Maureen & Steve
 - The parks inspection report dated July 31, 2021, was submitted in advance of the meeting by Maureen and Steve. Parks look great. New maintenance team effective and the improvements are noticeable and appreciated.
3. Lake Level
 - The lake level has stabilized.
 - 2 Level loggers have been ordered and are anticipated to arrive around the 18th of August. One will be installed at the Inn dock and the 2nd at the spillway.
 - 2 more Level loggers are needed, one to be placed at the outlet for Lake Leprechaun, one to use rotationally to periodically remove a logger for maintenance and / or emergency data logger replacement. 4 were requested for the 2021 budget per Lake Advocates recommendation. Motion was made to obtain remaining 2 before end of current year.
4. Community Signage
 - Assigned to: Dennis
 - Status: A PAR for the signs has been submitted as part of our Budget proposal. This is on hold pending budget approval. Rather than wait for the upcoming budget year, a motion was made to purchase them in the current year.

❖ SEE MOTIONS TO BOD

❖ SEE MOTIONS TO BOD

- Signs have been designed – will be reviewed by this committee prior to ordering.
 - A Lake Leprechaun sign was installed at the outlet.
5. Prepare Phased Project Proposal for Lake Leprechaun Clean Out Project
- Assigned to Maureen, Steve, and Tim
 - Status: We need to complete Phase 1 which is obtaining core samples and testing in order to move to Phase 2. Motion to obtain core samples approved. Original contract provided by Lake Advocates were approved by Kelly and Debbie. CAM requested Lake Advocates rework their contract to meet LLCC contractual requirements. Rob of Lake Advocates is working on it.
6. Park Hosts
- Assigned to: Dave – not present
 - Status: Kelly reported that Dave has spoken with all of the park hosts. Some have been challenged by unruly members and non-members.
7. Dock Inspections
- Assigned to: Teddy
 - Status: Teddy continues his efforts to address the non-compliant docks on our lakes.
 - Dean Dyson of the compliance committee and Teddy have been working with responsive members to remove Styrofoam floats. They will be making another lake inspection to verify progress and note where there is none.
 - There are 4 – 5 members who have remained unresponsive to requests to bring the floats under their docks into compliance. They will make a final attempt to communicate with unresponsive members before releasing to the compliance committee for further action.
 - Teddy will be recommending updates to the dock permit rules to improve clarity and ease of application.
8. Budget Work Team
- Assigned to: Debbie, Tim, Joel, Kelly, Dennis, Dave and Teddy
 - Status: Several PARS to accompany Projects were missing – Cranberry Creek Sediment and Bird Sanctuary
 - Roger requested a couple of changes be made to the budget; one reducing the budget for Lake Razers as they've already been purchased, the other reducing the \$6,000 plus for buoys, chains etc. The second was questioned as it a general catch-all for expenses as they arise that are beyond standard maintenance. Roger stated he already included \$15,000 in the budget for such costs so the \$6,000 is redundant.
 - Roger asked for clarity regarding the \$75,000 in the maintenance section of the budget for maintenance dredging and permit required to do so. Roger requested a PAR to support that request.
9. Weed Treatment 2021 Review
- Assigned to: Debbie
 - Treatments have been taking place. Lake Leprechaun looks great – at the surface.

- Water sampling – per Rogers report, all of the assets to do the testing were found. Norm is reviewing the written protocols. The Lab who conducts water samples for the water system is also capable of processing these samples for \$30 per sample. Roger requested guidance as to where to take the samples and how frequently. Debbie committed to obtaining that information.

10. Lake Patrol

- Assigned to: Jared – not present
 - The committee discussed standard protocol related to actions to be taken for aggressive or repeat violators. There doesn't appear to be a cohesive process and several Patrol Boat members are frustrated because nothing appears to be done about it by the association.
 - John Ignemi encouraged and urged the Lake Dam Committee, and the Lake Patrol to file infraction reports to the compliance committee so the Compliance Committee can send letters and assess fines as the circumstance warrants.
 - Lou and Dennis have committed to work with Jared to work on a mission statement and Lake Patrol guidelines and procedures.
 - Teddy would like to serve on the Lake Patrol and Pat Paradise has indicated he'd like to as well.

11. Lake Long Term Health and Welfare

Regulations regarding lawn maintenance throughout the lake need to be reviewed. This would include drainage from the golf course (and lawns adjacent to the golf course) into the lake as well as the park beaches.

NEW BUSINESS

1. Water testing program:
 - See above under item #9.
2. Boat registration process:
 - Roger reported Christy is continuing to build the data file linking member names with boats registered to them including the boat license number. When complete will be able to look up the member of a boat by its WA State Identification numbers.
3. Guest Pass Guidelines
 - Guest pass guidelines are on the LLCC website under "documents".
4. Light Pollution
 - Joel has brought up On-Shore Light pollution. PUD has set all park lights at lowest setting. In a couple of parks shades have been added.
 - i. Not sure if this is actionable by the committee.
5. Long term vision for Park Restrooms and Park Improvements. Tabled until the fall
6. Venue for Meetings.
 - Due to Covid 19 resurgence the next meeting will be by Zoom

7. Fall Fish Plant:

- Dennis brought up the possibility of a fall fish plant. With members of the BOD encouragement, a motion was made to do a fall fish plant, lake temperatures permitting.

❖ SEE MOTIONS TO BOD

8. End of summer bash:

- Unknown if there will be a Water-Skiing competition. Tim will follow up.

GUEST INPUT

Ed and Mary Hill, Div. 3, Lot 121 brought up a concern regarding excessive speeds occurring regularly in the Bird Sanctuary and requested another sizable speed sign buoy on the inside of the sanctuary where there used to be one. Roger stated another sign had been purchased and will be installed soon. Another suggestion was a speed sign along the road adjacent to the lake, but not sure how to go about it.

COMMITMENTS

Item	Assigned To
Develop Lake Patrol Mission and Guidelines for Lake Patrol to operate by	Dennis, Lou working with Jared (if he's willing – he wasn't at the meeting.)
Complete PARS for Bird Sanctuary and Cranberry Creek	Teddy, Kelly and Debbie
Obtain Water testing sites and frequency of testing needed from Lake Advocates	Debbie

MOTIONS TO BOD

Motion #1 – Motion made by Dennis Muretta to purchase 2 more data loggers, one for the Lake Leprechaun outlet and one to rotate for maintenance not to exceed \$3,000 – identical to the 2 already purchased. Seconded by Teddy Lovgren, approved unanimously.

Motion #2 – Motion made by Dennis Muretta to purchase park signage not to exceed \$9,000 in fiscal year 2020-2021. Seconded by Teddy Lovgren, approved unanimously.

Motion #3 – Motion made by Dennis Muretta to authorize expenditure of \$2,000 for a 2021 Fall Fish Plant in Lake Limerick. Seconded by Teddy Lovgren, approved unanimously

Next Meeting – Saturday, September 11th, 2021 commencing at 10:00 am – to be conducted via ZOOM.

Motion to Adjourn made by Dennis Muretta, seconded by Maureen Glenn, unanimously approved at 11:45 am.

Attachments:

Work Order Status Report

Look Ahead:

September 4th – End of Summer Bash

September 11th – Lake Dam Committee Meeting (moved from September 4th)
note to begin Otter mitigation discussion, lake leprechaun valve repair
Draft Long Term Vision/Standards for maintenance of our Parks

September 15th – Last day for Park Hosts

September 15th – Start Weir Board removal from Lake Limerick

September 15th – Removal of Ski Course to be done by the Ski Club.

September 26th – Deadline for Newsletter Article

October 1st – Start Weir Board removal from Lake Leprechaun

October 2nd – Lake Dam Committee Meeting

October 15th – Weir Board removal complete Lake Leprechaun

October 16th – Semi-Annual Meeting and 2021-2022 Budget Approval

October 30th – Weir Board removal complete Lake Limerick

October 31st – Last Day of Fishing

October 31st – Winterize Parks

November 6th – Lake Dam Committee Meeting

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PROFESSIONAL SUPPORT AGREEMENT (OCTOBER 1, 2020): AMENDMENT 1 FOR SEDIMENT CORING AND ANALYSIS AND SEDIMENT REMOVAL FROM LAKE LEPRECHAUN August 16, 2021

LAKE ADVOCATES (Lake Advocates is a 501C3 nonprofit organization), will assist the Lake Limerick Country Club (LLCC) with *FY2021 Sediment Core Collection in Support of developing plans for a future dredging project* according to the terms of this agreement.

GOAL STATEMENT: SEDIMENT CORING TO INFORM ON SEDIMENT REMOVAL STRATEGY FROM PORTIONS OF LAKE LEPRECHAUN

The NE portion of Lake Leprechaun has captured a significant amount of sediment from the upstream inflow and construction activities over the years. This has resulted in a significant decrease in lake water depth and volume. The result is an adverse impact on water quality within the lake and downstream in Limerick. The sediment has also allowed for the increase in rooted aquatic plant coverage and density as well as reduction in recreational opportunities.

To achieve lake management goals in Lake Leprechaun, the first step in planning before sediment removal is collection of sediment cores at strategic locations in the lake. A feasibility study will be developed to consider alternatives/approach to sediment removal and effectiveness of this effort in managing invasive aquatic plants. Alternatives for sediment removal from Lake Leprechaun were discussed in the Technical Memorandum dated November 23, 2020. The need for sediment core data is to estimate nutrient content and composition of the material to make final recommendations on how to restore beneficial uses in the lake.

SCOPE OF SERVICES

LAKE ADVOCATES will conduct the project following the work plan and budget in accordance with the attached Scope of Work.

Compensation

- A. Professional Services. For performance of services described above, the LLCC agrees to pay **LAKE ADVOCATES** as detailed in Attachment A. **LAKE ADVOCATES** will submit requests for payments periodically and the LLCC will pay within 30 to 45 days.
- B. Travel Expenses and Per Diem. The LLCC agrees to reimburse **LAKE ADVOCATES** for travel expenses and per diem in accordance with Attachment A.
- C. Other Direct Expense (ODC) Reimbursements. The LLCC agrees to reimburse **LAKE ADVOCATES** for ODC expenses, when authorized by the LLCC, in accordance with the rates shown in Attachment A.
- D. Subcontractor. LLCC will reimburse **LAKE ADVOCATES** for time and materials as outlined in sections A, B, and C above.

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LAKE ADVOCATES' Responsibilities

LAKE ADVOCATES is responsible for:

1. Implementing the work plan as specified in the Scope of Work (Attachment A and Attachment B).
2. Submitting written requests for payment consistent with this agreement.

CLIENT's Responsibilities

The CLIENT is responsible for:

1. Providing required staff or volunteer support when appropriate.
2. Providing access and boat(s) when appropriate.
3. Paying Laboratory directly for analytical services.
4. Paying **LAKE ADVOCATES** according to this agreement.
5. Providing **LAKE ADVOCATES** access to information needed to perform the work plan.

TERM

This agreement will be effective on July 1, 2021, and continue through December 31, 2021, upon the completion of the project or until the parties agree to terminate.

TERMINATION

This agreement will terminate upon completion of the scope of services or upon sixty (60) days written notice by either party to the other party.

CONSULTANT NOT AN EMPLOYEE

The LLCC will not provide benefits, nor will they withhold income for tax purposes, nor make any payment on behalf of **LAKE ADVOCATES** or its contractors or subcontractors for FICA, unemployment, or any other purpose.

In witness thereof, **LAKE ADVOCATES** and LLCC have executed this agreement as of the indicated date:

Robert Plotnikoff

Robert Plotnikoff President
LAKE ADVOCATES (EIN: 47-3933992)

08-17-2021

Date

By:

Brian J. Arch
LLCC

PRESIDENT

Title

8/20/2021

Date

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INDEPENDENT NON-PROFIT ORGANIZATION (LA) AGREEMENT

THIS NON-PROFIT ORGANIZATION (LA) AGREEMENT (the "Agreement") dated this

17th day of August, 2021

BETWEEN:

Lake Limerick Country Club of 790 E St Andrews Dr, Shelton, WA 98584, USA
(the "Client")

- AND -

Lake Advocates
9515 Windsong Loop NE
Bainbridge Island, WA 98110
(360) 286-0921
(EIN: 47-3933992)

(LA Independent Non-Profit).

BACKGROUND:

- A. The Client is of the opinion that LA has the necessary qualifications, experience and abilities to provide services to the Client.
- B. LA is agreeable to providing such services to the Client on the terms and conditions set out in this Agreement.

IN CONSIDERATION OF the matters described above and of the mutual benefits and obligations set forth in this Agreement, the receipt and sufficiency of which consideration is hereby acknowledged, the Client and LA (individually the "Party" and collectively the "Parties" to this Agreement) agree as follows:

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Services Provided

1. The Client hereby agrees to engage LA to provide the Client with services (the "Services") consisting of:

- a) Lake Leprechaun sediment coring plan
- b) Data interpretation from sediment core results

(Detailed description of services are in Attachment A of this document)

2. The Services will also include any other tasks which the Parties may agree on. LA hereby agrees to provide such Services to the Client. Laboratory analysis of sediment cores will be performed independently by IEH and shall include applicable taxes and assume liability for services.
3. The term of this Agreement (the "Term") will begin on the date of this Agreement and will remain in full force and effect until the completion of the Services, subject to earlier termination as provided in this Agreement. The Term of this Agreement may be extended by mutual written agreement of the Parties.
4. In the event that either Party breaches a material provision under this Agreement, the non-defaulting Party may terminate this Agreement and require the defaulting Party to indemnify the non-defaulting Party against all reasonable damages.
5. The Parties agree to do everything necessary to ensure that the terms of this Agreement take effect.
6. Except as otherwise provided in this Agreement, all monetary amounts referred to in this Agreement are in US Dollars.
7. For the services rendered by LA as required by this Agreement, the Client will provide compensation (the "Compensation") to LA as follows:

After completing interpretation of data and providing results to the Client, compensation for completion of sediment core collection and interpretation of laboratory results is a total of \$6,660 (Attachment B).

Services to be provided per the scope of work are planned to be conducted during September 2021.

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Lab results will be analyzed with result reports (Element B under item 1 of this contract) and recommendations provided to the Client.

8. The Compensation as stated in this Agreement does not include sales tax. Any sales tax required by law will be charged to the Client in addition to the Compensation.
9. LA will be reimbursed for expenses incurred by LA in connection with providing the Services of this Agreement.
10. Confidential information (the "Confidential Information") refers to any data or information relating to the business of the Client which would reasonably be considered to be proprietary to the Client including, but not limited to, accounting records, business processes, and client records and that is not generally known in the industry of the Client and where the release of that Confidential Information could reasonably be expected to cause harm to the Client.
11. LA agrees that it will not disclose, divulge, reveal, report or use, for any purpose, any Confidential Information which LA has obtained, except as authorized by the Client. This obligation will survive the expiration or termination of this Agreement and will continue indefinitely.
12. All written and oral information and materials disclosed or provided by the Client to LA under this Agreement is Confidential Information regardless of whether it was provided before or after the date of this Agreement or how it was provided to LA.
13. LA understands and agrees that any attempt on the part of LA to induce other employees or contractors to leave the Client's employ, or any effort by LA to interfere with the Client's relationship with its employees or other service providers would be harmful and damaging to the Client.
14. During the term of this Agreement and for a period of five (5) years after the expiration or termination of this Agreement, LA will not in any way directly or indirectly:
 - a. induce or attempt to induce any employee or other service provider of the Client to quit employment or retainer with the Client;

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- b. otherwise interfere with or disrupt the Client's relationship with its employees or other service providers;
 - c. discuss employment opportunities or provide information about competitive employment to any of the Client's employees or other service providers; or
 - d. solicit, entice, or hire away any employee or other service provider of the Client.
15. Upon the expiry or termination of this Agreement, LA will return to the Client any property, documentation, records, or Confidential Information which is the property of the Client.
16. In providing the Services under this Agreement it is expressly agreed that LA is acting as an independent entity and not as an employee. LA and the Client acknowledge that this Agreement does not create a partnership or joint venture between them and is exclusively a contract for service.
17. All notices, requests, demands or other communications required or permitted by the terms of this Agreement will be given in writing and delivered to the Parties of this Agreement as follows:
- a. Harry Gibbons or Robert Plotnikoff
Lake Advocates
9515 Windsong Loop NE
Bainbridge Island, WA 98110
 - b. Lake Limerick Country Club
790 E St Andrews Dr, Shelton, WA 98584, USA

or to such other address as any Party may from time to time notify the other.

18. Except to the extent paid in settlement from any applicable insurance policies, and to the extent permitted by applicable law, each Party agrees to indemnify and hold harmless the other Party, and its respective affiliates, officers, agents, employees, and permitted successors and assigns against any and all claims, losses, damages, liabilities, penalties, punitive damages, expenses, reasonable legal fees and costs of any kind or amount whatsoever, which result from or arise out of any act or omission of the indemnifying party, its respective affiliates, officers, agents, employees, and permitted successors and assigns that occurs in connection with this Agreement. This indemnification will survive the termination of this Agreement.

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19. LA does not provide engineering or design services and therefore neither LA nor our associates carry professional liability insurance (although Harry Gibbons and Robert Plotnikoff do maintain personal insurance policies including coverage for bodily injury and property damage, including car and medical insurance) at a level that would be considered reasonable for activities performed by LA associates and due to the low risk associated with the scope of work in this Agreement. Operating as a non-profit, LA is not required to carry liability insurance. If LLCC requires professional liability insurance, then LA would pass this cost on to LLCC as part of the project, which we estimate to be from \$800 to \$3,000, pending on quote from the insurance company.
20. In the event that legal action is brought to enforce or interpret any term of this Agreement, the prevailing Party will be entitled to recover, in addition to any other damages or award, all reasonable legal costs and fees associated with the action.
21. Any amendment or modification of this Agreement or additional obligation assumed by either Party in connection with this Agreement will only be binding if evidenced in writing signed by each Party or an authorized representative of each Party.
22. Time is of the essence in this Agreement. No extension or variation of this Agreement will operate as a waiver of this provision.
23. LA will not voluntarily, or by operation of law, assign or otherwise transfer its obligations under this Agreement without the prior written consent of the Client.
24. It is agreed that there is no representation, warranty, collateral agreement or condition affecting this Agreement except as expressly provided in this Agreement.
25. This Agreement will ensure to the benefit of and be binding on the Parties and their respective heirs, executors, administrators, successors and permitted assigns.
26. Headings are inserted for the convenience of the Parties only and are not to be considered when interpreting this Agreement.
27. Words in the singular mean and include the plural and vice versa. Words in the masculine mean and include the feminine and vice versa.

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28. It is the intention of the Parties to this Agreement that this Agreement and the performance under this Agreement, and all suits and special proceedings under this Agreement, be construed in accordance with and governed, to the exclusion of the law of any other forum, by the laws of Washington, without regard to the jurisdiction in which any action or special proceeding may be instituted.
29. In the event that any of the provisions of this Agreement are held to be invalid or unenforceable in whole or in part, all other provisions will nevertheless continue to be valid and enforceable with the invalid or unenforceable parts severed from the remainder of this Agreement.
30. The waiver by either Party of a breach, default, delay or omission of any of the provisions of this Agreement by the other Party will not be construed as a waiver of any subsequent breach of the same or other provisions.

IN WITNESS WHEREOF the Parties have duly affixed their signatures under hand and seal on this

17th day of August, 2021.

Harry Gibbons or Robert Plotnikoff doing business as Lake Advocates (LA)

Name Robert Plotnikoff

Date 08-17-2021

Lake Limerick Country Club

Name Brian J. Smith, PRESIDENT

Date 8/20/2021

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Attachment A of Amendment 1

Scope of Services

For

FY2021 Sediment Core Collection in Lake Leprechaun: a component of Management Plan Services

Lake Limerick Country Club Aquatic Plant and Lake Management

**Lake Advocates
LakeAdvocates.org
9515 Windsong Loop NE
Bainbridge Island, WA 98110**

July 1, 2021, through December 31, 2021

The purpose of this scope of work is to outline a proposal for sediment core collection in Lake Leprechaun as part of on-call services that Lake Advocates (LA) will provide LLCC. This activity in support of managing Lakes Leprechaun and Limerick for the safe recreation of LLCC members and guests and to help maintain and enhance the aquatic environmental quality of the lakes. Fees are based on time and materials (labor and direct expenses). Specifically, this scope of work is to provide LLCC with on-going services related to aquatic plant management Services as well as on-call environmental support.

Scope of Work

1. Lake Leprechaun Sediment Coring Plan

Initial investigation about sediment composition and depth is necessary in order to begin developing a strategy for sediment removal at specific locations in Lake Leprechaun. The following are components of the sediment coring effort proposed for 2021:

- a. Collection of sediment cores samples at four (4) locations in Lake Leprechaun (see attached map).
- b. Delivery to the environmental laboratory for analysis.

2. Laboratory Analysis of Sediment Cores

- a. Each sediment core will be partitioned into segments (5 cm for the first 10 cm, 2 segments: and 10 cm segments for remaining core depth).
- b. Sediment will be examined for the following:
 - i. Total Water Content,
 - ii. Total Solids,
 - iii. Total Phosphorus,

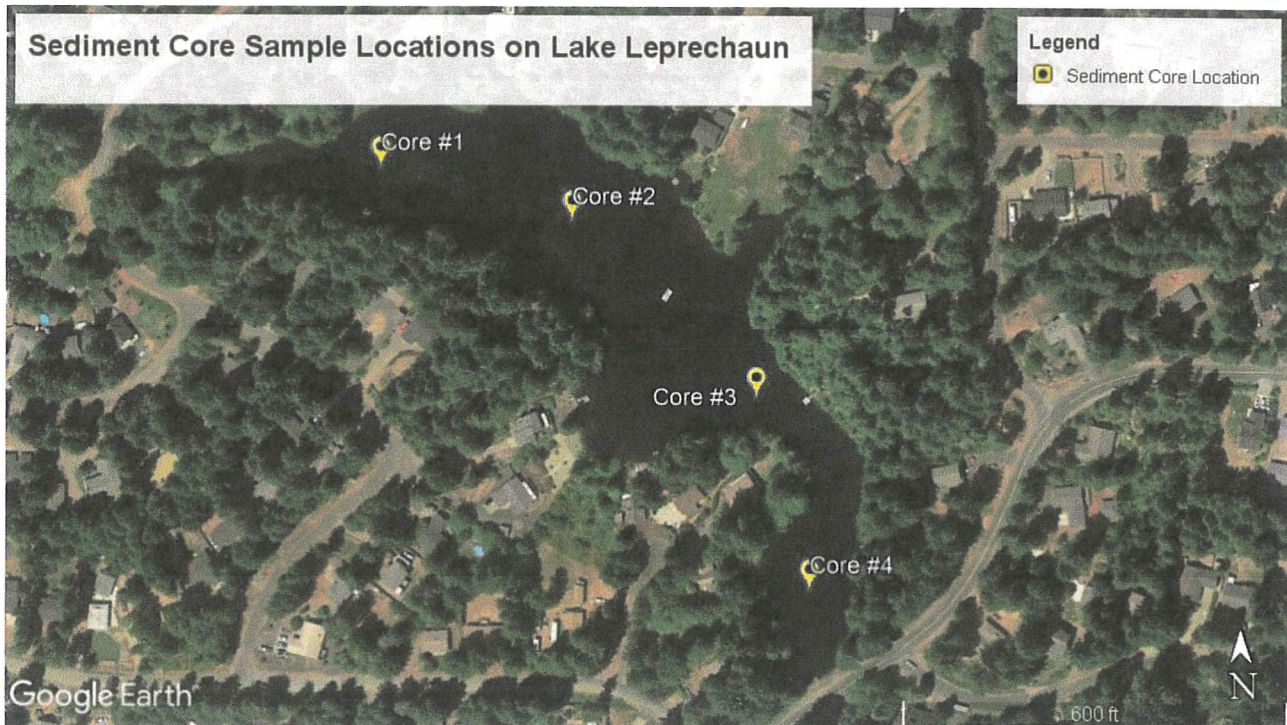
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- iv. Total Organic Phosphorus,
- v. Total Biogenic Phosphorus,
- vi. Total Mobile Phosphorus (iron bound P plus soluble available P)
- vii. Total Organic
- viii. Total Iron,
- ix. Total Calcium,
- x. Total Aluminum.

3. Data analysis of Sediment Core Samples

- a. Sediment core samples will be analyzed to determine nutrient content and composition of sediment; determines quantity and effectiveness of proposed treatments; including identification of potential sediment “seal” to retain water within the lake)
- b. The set of results will be examined by segment (e.g., each 5 cm and 10 cm segment). Data will inform on nutrient content and composition of sediments in past and more recent deposition.
- c. This Data will be used to assess the depth of sediment to be removed at different areas of the lake.



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Attachment B of Amendment 1

**Fee Estimate
For
FY2021 Sediment Coring
for Lake Leprechaun**

**Lake Limerick Country Club
Aquatic Plant and Lake Management
Services through July 1, 2021, through December 31, 2021**

Tasks	Labor/Expenses	Sub-Contractor-Laboratory
Task 1 Sediment Core Collection	\$4,200	
Task 2 Laboratory Analysis*		\$12,000*
Task 3 Technical Memorandum	\$2,100	
Total Labor	\$6,300	
Mileage at \$0.55/mile	\$80	
Expenses (Sediment Corer)	\$280	
Total Contract for LA	\$6,660	\$12,000

* Laboratory cost for sediment core at \$3,000 per sample (total \$12,000) to be paid for directly by LLCC to reduce overhead and tax cost to LLCC by LA.

LD report 8.07.2021

2021-22 Budget update

Last week Shauna Sharpes and I conducted a BOD budget study session with no decisions made.

A budget model is developed with conservative revenue forecasts for LL's 4 retail operations. Inflation is running 5.4% driving expense assumptions. To date the HOA needs to make up \$142K to achieve a zero-based balanced budget.

I'm recommending 2 LD budget changes with R&M

1. For buoy anchor hardware change from \$6050 to \$1800; at \$120 per unit this will allow 15 replacements next year.
2. Eliminate \$400 for lake rakes. We have 4 rakes available from the Pro Shop

There was confusion re the lake dredge @\$75K expense for permitting without a PAR.

There was discussion re department headcount to create awareness.

I'll be presenting at the August 21 BOD meeting a high level expense and capital projects budget overview.

Work Orders

Joel and I have worked out a good reporting system. He emailed Thursday current status.

Here's some highlights:

Jack and Norm on July 28 installed 13 new buoys and realigned buoy lines.

Leprechaun Core Sampling. I reviewed Lake Advocates scope of work this week as did Kelly and Debbie. I then requested Rob incorporate into a provided contract template.

Lake Level Data loggers. Recommending the 2 ordered be installed at the Inn dock and Limerick Dam spillway adjacent to the gauge. E/W Blue tooth access. Data will be collected, stored on a LL server with reports available.

Anglia park electronic gate. We've waited too long for the ordered modem for remote access. I contacted Southgate Fence to provide a quote of a new system including the gate located on the dam.

The barge motor died this week. BOD approved purchase of a new 40HP Yamaha engine and controls currently being installed. It will be broken in next week with 4 hours of run time.

Monitoring Lake Limerick water quality. Former kit was located and Norm is reviewing the plan for implementation. He has confirmed LL's Water department test lab can test our sampling requirements.

- Recommend taking 4 periodic sample locations:
 - o Leprechaun dam
 - o Cranberry stream
 - o Bird sanctuary
 - o Limerick dam

Olde Lyme swing set was repoured this week and tape will come off next week allowing concrete to cure.

Tree and brush debris removed from upstream and downstream sides of Cranberry retention dam.

Inn park bench repaired.

Questions/Comments?

On Schedule
Schedule Risk
Behind Schedule
Completed

Lakes, Dams and Parks Work Orders Log: 11 August 2021

Date	Priority (1,2,3)	Work Order Number	Task	Safety Issue (Y/N)	Assigned to	Due Date	Completion Date	Requestor/ Task POC	Project Status
6/30/2021	1	2021-01	Lake Lep Dredge Phase I (core sampling)	N	Roger	Pending contract with Lake Advocates.		Tim Reber	<p>8/11/21 - Contract yet to be provided by Lake Advocates to LLCC. Roger took the action to follow up with LA again.</p> <p>8/5/21--- New specific contract requested from Lake Advocates. No ECD from Rob at Lake Advocates. Reminded Roger of the urgency on this project with the hope the schedule can be accelerated.</p> <p>7/20/21 - Updated motion approved by BOD. LLCC awaiting contract from Lake Advocates with price and schedule.</p> <p>7/10/21 - Motion updated to increase value of project to reflect Harry Gibbons proposal for 4 core samples.</p> <p>7/7/21 - No Action Taken: Motion needs to be reworded and resubmitted by Kelly for submittal to the BOD. LD Task POC needs to be clarified. Debbie? Tim? Steve/Maureen?</p>
6/30/2021	1	2021-02	Lake Level Data Loggers	N	Norm	20-Aug-21		Kelly Evans	<p>8/11/21 - On Schedule.</p> <p>8/5/21-- Due date still good. Goal is to use the Data Loggers to establish data base for future mgt decisions. Data gathering will be added to Maintenance's recurring activities Things-to-do-List.</p> <p>7/7/21 - 2 ordered. Delivery expected 18 August.</p>

6/30/2021	1	2021-03	Replace missing buoys and align all buoys in Lake Lim	Y	Norm	TBD	28-Jul-21	Jack Betterley	<p>8/2/21 - Jack worked with Norm to successfully replace / reposition buoys since last reporting period.</p> <p>7/20/21 - 2 anchors received and installed with buoys near Lake Lim dam. 11 buoys expected this week from Builders First Choice. Install to proceed once second maintenance person is on board 2 August.</p> <p>7/10/21- Buoys received. Norm to work with Jack for final placement.</p> <p>6/30/21 - ordered 15 - A1 buoys (2 spares) on 23 June to be installed with 3/8" galvanized chain ECD TBD.</p> <p>7/7/21 - Anchor continues to fail making log boom out of position. Roger to notify Jack/subteam once materials are received and Maintenance is ready to install.</p> <p>LD to provide direction re: log boom placement.</p>
6/30/2021	3	2021-04	Dim and shade lights at all LLCC Parks to minimize light pollution on Lake Lim	N	Roger	Pending further direction from LD to CAM		Joel Gray	<p>8/11/21 - Remains on hold until LD provides additional direction regarding park lights to be dimmed / shaded. Update direction expected from 9/11 LD Committee meeting.</p> <p>8/5/21-- Log Toy and Anglia Parks completed 8/3/21. Lake Dam needs to determine and advise Roger whether the balance of Park lighting should also be addressed (including public launch). Action to be remained open as the objective of the action was to have all Parks addressed.</p> <p>7/20/21 - Work order placed with PUD to dim lights at Log Toy and Anglia Parks along with new lights at Olde Lyme. PUD does not provide expected completion dates.</p> <p>7/7/21 - Roger to work with PUD to dim/shade lights at Log Toy and Anglia only as no one has complained about other parks. PUD has not advised when this will be accomplished.</p>

6/30/2021	1	2021-05	Repair concrete on ramp at Anglia Park	Y	Norm	31-Oct-21		Roger Milliman	8/11/21 - Norm on personal leave for a couple of day's this week. New ECD 8/13/21. 8/5/21--- Temporary fix expected on 6 August. 7/7/21 - Work to be performed after summer season.
6/30/2021	1	2021-06	Replace missing board on dock at Lake Lep	Y	Norm	8/15/21 8/6/2021 7/16/2021	8/6/2021	Tim Reber	8/11/21 - Completed 8/6/21. 8/5/21-- Completion expected on 6 August. 7/20/21 - Temporary fix to be replaces with final fix once 2nd Maintenance person is hired 2 August. 7/7/21 - Material received this week for install by end of next week.
6/30/2021	3	2021-07	Provide Park Host Sign to Host at Anglia Beach	N	Roger	TBD	7/7/2021	Anglia Park Host	
6/30/2021	2	2021-08	Complete gravel path, top dress lawn, add lighting, address drainage at Olde Lyme Park	N	Roger	9/30/2021 10/30/2021		Joel Gray	8/11/21 - On Schedule 8/5/21-- On Schedule. 7/10/21 - New ECD report by Roger at LD monthly meeting. 6/23/21 - On schedule
6/30/2021	3	2021-09	Remove 10 hazard trees from park and improve path access to fishing dock.	Y	Roger	7/2/2021 TBD	7/8/2021	Roger Milliman	7/10/21 - Reported by Roger during 7/10 LD meeting as complete on 8 July. 7/7/21 - Trees removed. Chipping and completion of path to fishing dock remains pending.
6/30/2021	1	2021-10	Treat Lake Lep with chemicals to eradicate mares tail vegetation	N	Roger	30-Jun-21	6/30/2021	Debbie Moore	7/10/21 - Reported by Roger during 7/10 LD meeting as complete on 29 June.
6/30/2021	1	2021-11	Treat Cranberry Creek delta for vegetation eradication	N	Roger	8/3/2021 10/31/2021		Debbie Moore	8/5/21-- Completed this week IAW DSO direction re: veg removal. 7/7/21 - Confirmation received that treatments may begin 15 July and last through 31 October

6/30/2021	3	2021-12	Provide current Dam Safety Manual to LD Committee	N	Norm	30-Nov-21		Tim Reber	<p>8/11/21 - On Schedule</p> <p>8/5/21-- Still on schedule. Norm continues to review and come up to speed.</p> <p>7/20/2021 - updated manual to include emergency access planning.</p> <p>7/10/2021 - Input from WA State received. Norm updating document for release to LD Committee.</p> <p>6/30/21 - Requested by Tim in April 2021</p> <p>7/7/21 - Norm to inspect Lake Lep. Roger to invite Tim to support Norm's review of Lake Lep.</p> <p>CAM currently reviewing State's feedback re: Dams Safety Review from last year.</p>
6/30/2021	2	2021-13a	Clean diverter at Lake Lep dam of debris build up	Y	Norm	8/3/2021 7/30/2021 10/30/2021 30 Nov 2021		Tim Reber	<p>8/5/21--- Completed this week.</p> <p>7/20/2021 - Roger to add gate cleaning to Maintenance's weekly things to do list.</p> <p>6/30/21 - Tim willing to work with Norm to help clean out grate.</p> <p>Roger to have diverter valve repaired when weir boards are removed in Oct 2021.</p> <p>7/7/21 - CAM/Norm to address Task after weir boards are removed.</p>
7/20/2021	2	2021-13b	Make Gate Valve at Lake Lep dam operational	Y	Norm	30-Nov-21		Tim Reber	<p>8/11/21 - No Change / on schedule</p> <p>7/20/2021 - Former project (2021-13) broken into 2 projects for better tracking.</p>
6/30/2021	3	2021-14	Make electronic access to Anglia Park operational	N	Roger	TBD 7/30/2021		Roger Milliman	<p>8/11/21 - CAM awaiting call back from Frank at South Gate Fencing.</p> <p>8/5/21-- Quote to replace entire system requested from South Gate Fencing.</p> <p>7/20/2021 - No update from Hood Canal Communications.</p> <p>6/30/21 - Held for HCC Modem ECD TBD</p> <p>7/7/21 - Parts still on back order for this unique modem.</p>

6/30/2021	1	2021-15	Make motor operational re: lever for forward/backward	Y	Roger	7/30/2021 TBD		Tim Reber	<p>8/5/21-- Motor died since last reporting period. New motor with controls purchased this week (\$7,300). Removed from 2021 2022 budget request.</p> <p>7/20/2021 - Acquisition of new motor and linkage included in 2021/22 budget. Budget approval held for BOD action.</p> <p>7/10/2021- Project to be removed from Log Sheet if new motor is authorized via 2021-22 LD Budget.</p> <p>7/7/21 - No further action will be taken on this Project. Expected new motor as part of 2021-22 Budget will address the issue.</p>
6/30/2021	2	2021-16	Establish a program to monitor Lake Lim water quality in order to proactively address issues to prevent algae blooms etc	N	Roger	30-Aug-21		Debbie Moore	<p>7/10/21 - Dave to provide history of Program to Joel support development of new program. Project for CAM implementation to reinstated once new program is established.</p> <p>7/7/21 - LD to establish Program based on history of Debbie working with "Mindy" from a couple of years ago.</p>
7/7/2021	3	2021-17	Stablize Olde Lyme Park swing set verticals (currently slightly wobbly)	Y	Norm	<p>8/27/2021</p> <p>8/4/2021</p> <p>7/21/2021</p>		Joel Gray	<p>8/11/21 - Action re-opened as previous fix did not work. Rework in process. New updated schedule assigned.</p> <p>8/5/21-- New concrete poured in deeper tubes with re-bar to help stabilize. Swing taped off until 12 August to allow for curing.</p> <p>7/20/2021 - Tubes to hold concrete for new foundation acquired. Work to install new foundation held for new Maintenance person coming on board after 2 August.</p> <p>7/7/21 - Requested by Dan Cossano after playing with Grandchildren at park on 5 July</p> <p>Norm to review and advise of possible need to re-cement the vertical posts.</p>

7/17/2021	2	2021-18	Reposition log boom	Y	Norm	8/27/21 8/13/2021		Jack Betterley	<p>8/11/21 - Plan is to move log boom toward island, attach swim bouy to logboom and reassess acceptability of updated position.</p> <p>8/5/21-- To be addressed once Barge engine is installed and operational. Advised Roger that Norm and Jack Betterley worked well together re: Buoy realignment and Jack will continue to help with log boom realignment.</p> <p>7/26/21- LD Committee provided direction to CAM to reposition log boom to where the old log boom / swim area boundry previously existed. Styrofoam buoys to be connected from the shore to the end of the log boom (approx 30').</p> <p>7/10/21 - objective is to create a safer environment for boating and swimming and to better meet the intent of the permit. New position to result in swim area boundry.</p>
7/17/2021	3	2021-19	Install Survey Monuments at Dams IAW State Dam Review Action	N	Roger	10/29/21 9/30/2021		Roger Milliman	<p>8/11/21 - Surveyor unavailable for 2 months. New ECD established.</p> <p>8/5/21-- Survey Ordered. Still a couple of months out. Will hold current ECD until further information is obtained from Surveyor.</p> <p>7/20/2021 - Surveyor contacted. Awaiting response.</p> <p>7/10/2021 - Action reported by Roger during 7/10/2021 LD Monthly Meeting.</p>
7/20/2021	2	2021-20	Clean out dam retention structures at Cranberry Lake	N	Roger	8/3/2021 8/15/2021		Roger Milliman	<p>8/5/21-- Done</p> <p>7/20/2021 New Action brought forward by CAM.</p>
8/2/2021	1	2021-21	Remind Park Hosts to be on duty during weekends.	N	Dave	8/11/2021 8/6/2021		Dave Kohler	<p>8/11/21 - Joel to Request Dave Kohler touch base and remind hosts of their duties.</p> <p>8/5/21-- Responsibility to oversee Park Hosts falls into a grey area. Roger requests Dave contact hosts to remind them of their on-site weekend duties.</p> <p>8/2/21 - Per 7/31/21 Park Maintenance Monthly Report</p>

8/2/2021	2	2021-22	Clean Inn Gutters	N	Roger	8/6/2021 8/27/2021		Maureen Glenn	8/5/21-- To be addressed this week. 8/2/21 - Per 7/31/21 Park Maintenance Monthly Report
8/2/2021	1	2021-23	Repair Bench by Inn Swings	Y	Roger	8/4/21 8/6/2021		Maureen Glenn	8/5/21-- Completed 8/4/21. 8/2/21 - Per 7/31/21 Park Maintenance Monthly Report
8/2/2021	1	2021-24	Inspect (and repair if necessary) Inn Island sprinklers	N	Roger	6-Aug-21		Maureen Glenn	8/5/21--Not broken. Most likely had recently been sprinkling and making ground wet. 8/2/21 - Per 7/31/21 Park Maintenance Monthly Report



▼ 321225000084 X Q

Show search results for 32122...

321225000019

E SHANNON

41 E TINTAGEL PL

321225000370
1161 E ST ANDREWS DR

10 E SHANNON PL

321225000372

31 E TINTAGEL PL
321225000371

321225000008

Ivy + Craig
Heembrook

.47 Acres

200ft

Dan Sweet

.48 Acres

1121 E ST ANDREWS DR

321225000515

321280000000

Frank Family
Foundation

495.55
Acres

(Same folk our
Dan Probably
Sits on.

39'

206'

321225000502 - owned by
LLCC

207'

Cranberry Creek

108'

37'

119'

E ST ANDREWS DR

1091 E ST ANDREWS DR
321225000373

321225000375

321225000376

Paradise Metal
Products Inc -
Pat Paradise
.59 Acres

Paradise Metal
Products, Inc.
Pat Paradise
.43 Acres

321225000374

321225000379

321225000377

70 E BLENHEIM PL

-NH

60ft

North Arrow 237 Degrees



Mason County WA GIS

Mason County WA GIS

E TINTAGEL PL



321225000084



Show search results for 32122...

321225000011

41 E TINTAGEL PL

321225000370
1161 E ST ANDREWS DR

321225000372

31 E TINTAGEL PL
321225000371

321280000000

Parcel Number: 321225000502

Parcel Number: 321225000502

Legal Description:

LAKE LIMERICK 3 LOT: 502 GREENBELT

Size in Acres: 0.51

Information may be outdated, please visit
[Taxesifter](#) for up to date information.

Owner:

LAKE LIMERICK COUNTRY CLUB INC,
790 E SAINT ANDREWS DRIVE
SHELTON WA 985849688

Range: 3W

Township: 21N

Section: 27

Taxable Value: \$0

Market Total Value: \$25,930

Market Land Value: \$25,930

[Zoom to](#)

321225000370

Creek

1091 E ST ANDREWS DR

321225000373

321225000376

321225000375

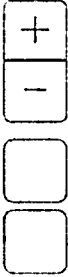
321225000374

321225000377

70 E BLENHEIM PL

60ft

105.058 17.264 Degrees



Show search results for 32122...

41 E TINTAGEL PL

321225000372

31 E TINTAGEL PL

321225000371

1161 E ST ANDREWS DR
321225000370

1121 E ST ANDREWS DR

321225000515

Cranberry Creek

3502

321280000

Parcel Number: 321280000000

Parcel Number: 321280000000

Legal Description:

ENTIRE SECTION

Size in Acres: 495.55

Information may be outdated, please visit
[Taxesifter](#) for up to date information.Owner:
FRANK FAMILY FOUNDATION,
PO BOX 789
SHELTON WA 985840789Range: 3W
Township: 21N
Section: 28Taxable Value: \$245,245
Market Total Value: \$1,128,785
Market Land Value: \$922,570[Zoom to](#)

321225000376

321225000375

321225000374

70E BLENHEIM I

321225000377

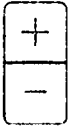
60ft

1/1 01.7 47.256 Degrees



Mason County WA GIS

Mason County WA GIS



321225000084



Show search results for 32122...



246 ft

Parcel Number: 321280000000

Parcel Number: 321280000000

Legal Description:

ENTIRE SECTION

Size in Acres: 495.55

Information may be outdated, please [visit](#)
[Taxesifter](#) for up to date information.

Owner:

FRANK FAMILY FOUNDATION,
PO BOX 789
SHELTON WA 985840789

Range: 3W

Township: 21N

Section: 28

Taxable Value: \$245,245

Market Total Value: \$1,128,785

Market Land Value: \$922,570

[Zoom to](#)Cranberry
CreekCranberry
Lake

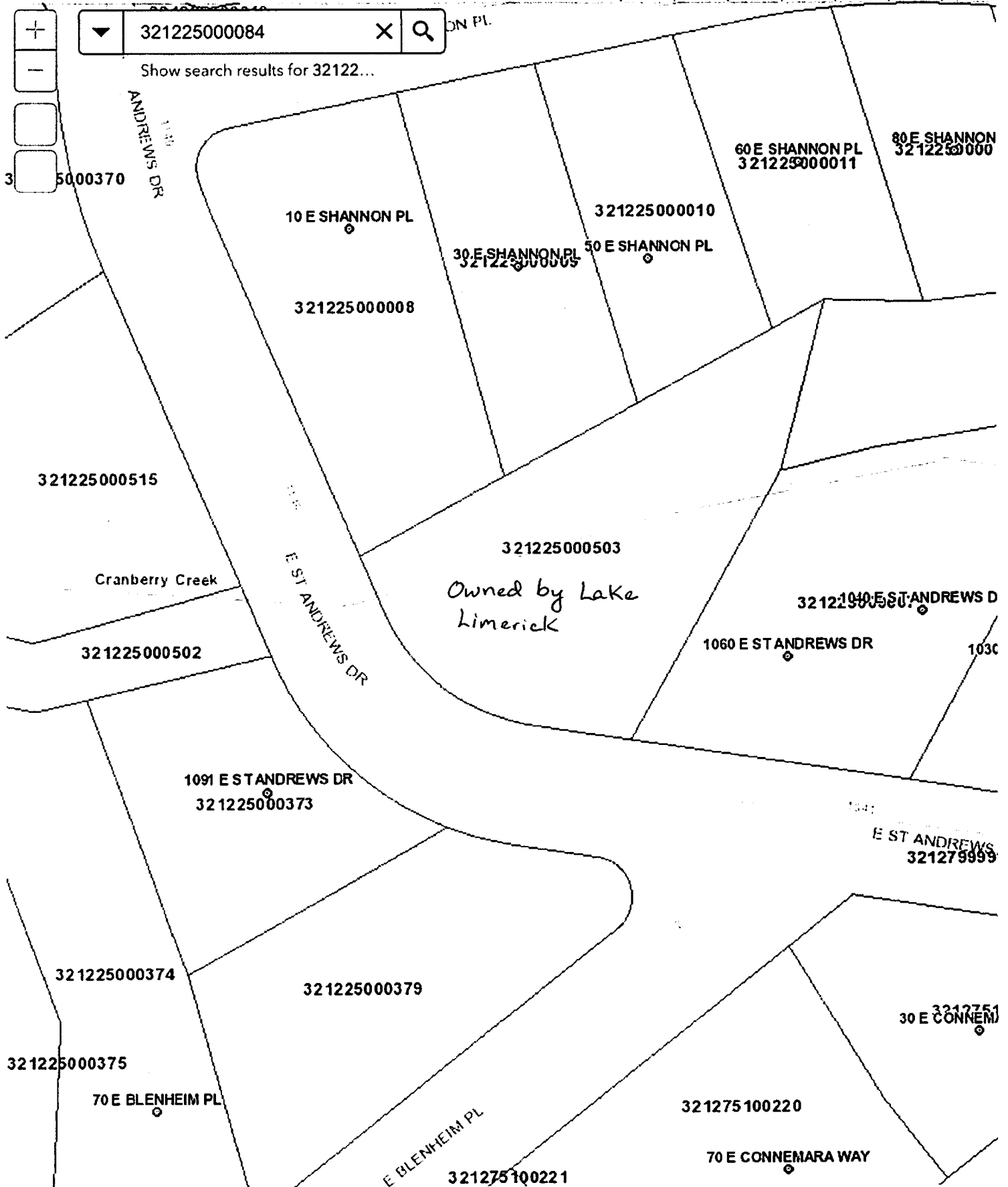
60ft

-123.06347264 Degrees



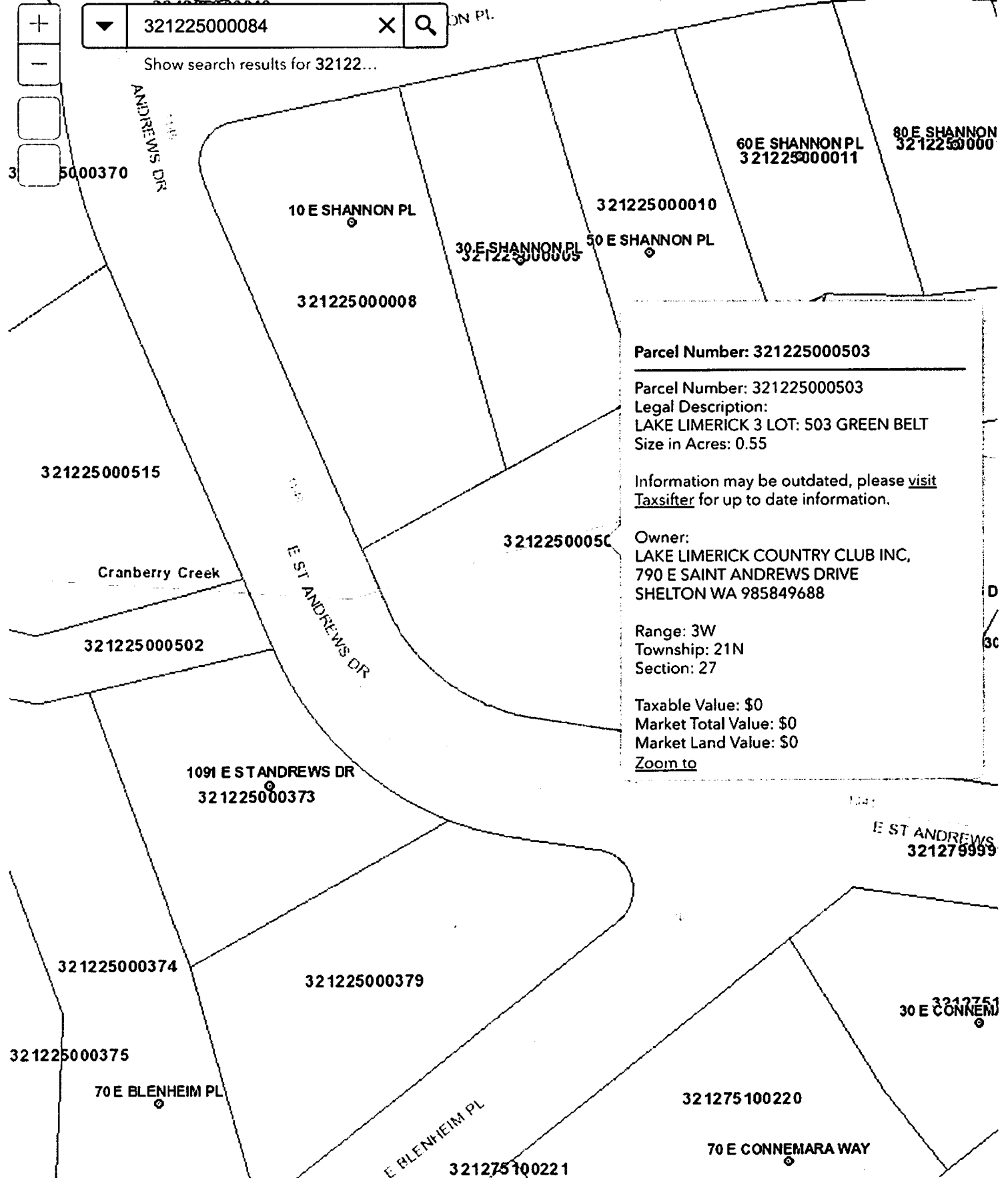
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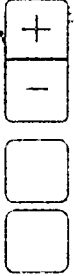
Show search results for 32122...



60ft

1.170944 / 286 Degrees





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Show search results for 32122...

32122500001:



60ft

123.857471257010

PROJECT APPROVAL REQUEST

1. Project name:

Bird Sanctuary Bay Dredging – Phase 1 Design/Feasibility Study

2. The person or Committee proposing the project.

The LLCC Lake / Dam Committee is sponsoring this project.

3. The project's description/scope including:

a. Narrative description of the project:

Overall project scope would include selective plant harvesting and/or employment of bottom barriers to limit rooted plant coverage followed by periodic Channel maintenance via hydraulic dredging to allow improved boat movement in and out of the bay and application of phosphorus inactivation treatment to reduce overall bay production (sediment, etc.) and to prevent algae blooms.

Lake Limerick's Bird Sanctuary Bay ecological condition reflects the flooding of pre-existing wetlands when the Limerick reservoir was created and the on-going drainage it receives from an upstream wetland system and residential development surrounding the bay. Hence, it is shallow with relatively nutrient rich sediments. Over the last several decades sediment depth has increased both due to sediment input from its drainage area, as well as organic material build up from rooted emergent and submersed plants. In recent years, this sediment deposition has increased due to increased production of both rooted plants and filamentous algae that is taking advantage of the available nutrients released from the sediment. The sediment internal loading of nutrients is the result of external loading from its immediate drainage area and the decomposition of organic plant matter. Hence, this portion of the lake is eutrophic (high productive and nutrient rich) and more reflective of a wetland than open water and littoral lake environment. To maintain its historic recreation access and diverse aquatic habitat, steps are needed to reduce sediment build-up and aquatic production.

b. The project's purpose and the value LLCC members will receive from the completed project, including any health and safety improvement aspects:

Lake Limerick members rely on Lake Limerick to supply various water consumption needs including but not limited to household and property maintenance. The golf course owned and operated by LLCC derives all its water from Lake Limerick. Should Lake Limerick experience a significant algae bloom(s), the entire community could find itself relying on bottled water for an undetermined amount of time, the golf course would suffer a water shortage, which would damage an expensive asset, and all water-based recreation would be prohibited for a period of time. It is possible members who consumed or were in contact with such algae could become ill or suffer ill effects. Should such blooms result in damaging our fish habitats or cause a salmon/fish kill, the

Squaxin Tribe could sue us for both compensation for their losses and court orders directing us as to enact corrective actions we would be required to take, including removing the dam (Like a tribe forced the government for the Elwa Dam.) We would lose our lake-based recreations such as swimming, boating, and fishing.

There are also financial consequences to not choosing to at least investigate this solution to the Bird Sanctuary Bay's excessive nutrient problem. Emergency Algae treatments could also be expensive. The costs are incalculable at this time, but the need would be immediate and the opportunity to budget would be lacking. With enough Algae Blooms, the government could require us to build and maintain a sewer system.

c. Such drawings and sketches as necessary to understand the project:

Not available at this time. To be provided as part of feasibility study.

d. The approximate cost for the project, and the basis and assumptions for that cost estimate:

The overall project cost is based on a two-phase approach, with each phase having its own project approval request form. The two phases are Phase 1 - Design (feasibility) & Permits and Phase 2 - Construction. Total cost of this project is estimated at \$58,800 including 5% escalation applied to the 2018 estimates provided by Harry Gibbons of Lake Advocates in the memorandum drafted by Harry Gibbons, Lake Advocates on January 2, 2019. This Project Request is for Phase 1 and is estimated at \$12,200.

Bird Sanctuary Habitat Management

Barrier/Plant Harvesting, Dredging, Treatment

	Labor Hours	Cost	ODC	Total	5% Escal.
2018 Estimate plus 5% escalation					
Total Cost of Project estimated Nov 2018		\$53,800	\$2,225	\$56,025	\$58,826
Estimated Cost Per Member					\$52
Phase 1 Effort:					
Design	48	\$7,200	\$1,800	\$9,000	\$9,450
Permits	24	\$2,400	\$185	\$2,585	\$2,714
Subtotal - Phase 1	72	\$9,600	\$1,985	\$11,585	\$12,164
Estimated Cost Per Member					\$11
Phase2 Effort:					
Construction Management	24	\$4,200	\$240	\$4,440	\$4,662
Construction		\$40,000	\$0	\$40,000	\$42,000
Subtotal - Phase 2		\$44,200	\$240	\$44,440	\$44,680
Estimated Cost Per Member					\$41

- e. **A recommendation as to whether the project should be delivered in-house with LLCC staff, use outside contractors or consultants, or be carried out by a combination of in-house and outside resources:**

We believe that the project could be carried out by a combination of experts, such as project management and consultants in such fields as surveying, engineering, designing, consulting as to what solutions are optimum and acquisition of required permits. It's highly unlikely that in-house LLCC staff has the expertise required to perform the needed tasks. Should LLCC decide to purchase their own dredging/harvesting equipment the associated tasks could be performed by in-house labor for the ongoing maintenance activities.

- f. **An approximate schedule, including any time constraints regarding project activities or completion date:**

The initial project is to determine the extent, feasibility, and specific requirements to perform the needed tasks while complying with all regulatory requirements. We need a survey of the Bird Sanctuary Bay that maps and identifies the areas to be barriered/dredged as well as the areas targeted for chemical treatment. We would proceed to gather bids from companies experienced in applying barriers, dredging and chemical treatment along with costs estimates, timeline estimates, and permitting requirements as well as schedules and cost estimates for follow-on maintenance.

4. **The budget status of the project:** (e.g. Has a Committee, and/or the Board, already included the project in the current year's budget? Is it in a longer-range capital improvement plan? Is it a new idea coming in outside the normal budget cycle?):

Planning for the Bird Sanctuary Dredging was initiated in the 2012-2015 Long-Range Plan.

Funding for this project has been requested in the 2021-2022 request from the L/D committee. Harry Gibbons, Lake Advocate prepared a memorandum dated November 23rd, 2018, and in the subsequent Memorandum "Future Potential Alternative Management Activities Eng. Cost Est. for Lake Sustainability" dated January 2, 2019. Accordingly, the project was updated in the Lake Dam Committee's Long-Range Plan for 2019-2024. It was included in the Long-Range Plan for 2020-2025 and is included in the current Long-Range plan for 2021-2026.

5. **Any additional considerations the Board may need to consider, including any foreseeable project risks or liabilities:**

None that have not already been identified and previously addressed above.

6. **The proposed project manager:**

It is anticipated that the LLCC Facilities Project Manager can manage the project. It is likely that Kelly Evans, Chairman of the Lake Dam Committee along with members of the Lake Dam Committee can provide additional assistance.

7. Evidence of coordination with the appropriate staff departments and management and the staff's recommendation.

As the first step of the project is to perform a detailed survey/mapping of the Bird Sanctuary Bay which is outside the expertise of the staff to conduct, they have not been approached yet. However, Lake Advocates Reports "Prioritizing of Potential Management Activities for Lake Beneficial Use Sustainability", dated November 23, 2018, and "Future Potential Alternative Management Activities Eng. Cost Est. for Lake Sustainability" dated January 2, 2019 has been provided to the LLCC BoD, Lake/Dam Committee and the LLCC CAM.

PROJECT APPROVAL REQUEST

1. Project name:

Cranberry Creek Retention/Sediment Pond Approval Request – Phase 1 (Planning/Feasibility) and Phase 2 (Design and Permits).

2. The person or Committee proposing the project.

The LLCC Lake/Dam Committee is sponsoring this project.

3. The project's description/scope including:

a. Narrative description of the project:

The overall project scope is to design and build a Retention Pond (or ponds) between Cranberry Lake and Lake Limerick for the purpose of collecting and removing sedimentation from the over-abundance of nutrients and silt travelling from the 200+ acre shallow Cranberry Lake / Wetlands via Cranberry Creek into the Cranberry Creek delta in Lake Limerick. There is currently no lake management at Cranberry Lake. Its significant portion of wetland (based on maps, the wetland comprising 30% - 45% of the lake) is producing an ever-increasing amount of nutrients that drain into Lake Limerick. The effects of such, despite the dredging efforts in 2016, has accumulated to the point where Lake Limerick is facing dealing with expensive Algae control in addition to its on-going weed treatment efforts. The best plan is to intercept the sediment and nutrients via a retention pond(s) just upstream of the culvert. This pond would only treat high flow events to avoid any adverse impact on stream aquatic life and low flow fish passage. The pond(s) would be located on LLCC land and potentially be a two-cell pond or two ponds that would trap sediment and some associated nutrients. Both sediment and nutrient retention would be enhanced if an alum injection would also be applied to the high flow volumes. This would effectively remove both sediment and phosphorus by increasing the settling rate and chemically capturing the phosphorus increasing sediment removal from 30 to 50% to 75 to 90% and nutrient removal from 30 to 40% to 80 to 95% removal. While creating these retention ponds up front may be expensive, the periodic clean out of them is significantly less expensive than periodic dredging. It would fall under "maintenance," require fewer permits if any, could be done by a qualified backhoe user (potentially LLCC employees), the materials could go to property we own as it would be in the form of solids. This is an extremely cost-effective measure when compared to the costs of permitting and dredging Cranberry Cove every 2 to 10 years. While Cranberry Cove would be a primary beneficiary, the entire Lake would benefit from the ponds and nutrient removal.

b. The project's purpose and the value LLCC members will receive from the completed project, including any health and safety improvement aspects:

Lake Limerick members rely on Lake Limerick to supply all their water consumption

needs including but not limited to drinking, bathing and household and property maintenance. The golf course owned and operated by LLCC derives all its water from Lake Limerick. Should Lake Limerick experience a significant algae bloom(s), the entire community could find itself relying on bottled water for an undetermined amount of time, the golf course would suffer a water shortage, which would damage an expensive asset, and all water-based recreation would be prohibited for a period of time. It is possible members who consumed or were in contact with such algae could become ill or suffer ill effects. Should such blooms result in damaging our fish habitats or cause a salmon/fish kill, the Squaxin Tribe could sue us for both compensation for their losses and court orders directing us as to enact corrective actions we would be required to take, including removing the dam (Like a tribe forced the government for the Elwa Dam.) We would lose our lake-based recreations such as swimming, boating, and fishing.

There are also financial consequences to not choosing to at least investigate this solution to the Cranberry Cove excess nutrient problem. Emergency Algae treatments could also be expensive. The costs are incalculable at this time, but the need would be immediate and the opportunity to budget would be lacking. The alternatives to not doing this project would be dredging every 2 – 10 years (which is significantly more expensive) or ongoing expensive on-going alum treatments. With enough Algae Blooms, the government could require us to build and maintain a sewer system.

c. Such drawings and sketches as necessary to understand the project:

Lake Limerick owns parcels of land to the north and south of St. Andrews Drive along Cranberry Creek where it may be possible to build sediment ponds. It is possible owners of adjacent properties may be willing to sell easement rights to support such an effort which would expand the available space. It is possible we own easement rights north of the dam large enough to place a pond or ponds. If that proves to be impossible, another site to consider would be to put it somewhere on land owned by the Frank Family Foundation which appears to own a vast swath of land from the north end of Cranberry Lake through where the property abuts against that owned by LLCC. The attached property reports A through G that provide insight to the land we are looking at for this project. Until a site can be determined, there are no drawings at this time of what the sediment pond or strings of ponds would look like.

d. The approximate cost for the project, and the basis and assumptions for that cost estimate:

The overall project cost is based on a three phased approach with each phase having its own Project Approval Request form. The three phases are Phase 1 – Planning (feasibility), Phase 2 – Design & Permits and Phase 3 – Construction. Total cost of this

project (all phases) is estimated between \$150,000 (low) and \$350,000 (high) with 5% escalation added based on the 2018 estimates provided by Harry Gibbons of Lake Advocates in the memorandum drafted by Harry Gibbons, Lake Advocates on November 23, 2018. This Project Request is for Phases 1 & 2. Phase 1 is estimated at a range between a low of \$ 9,450 to a high of \$22,050. Phase 2 is estimated at a range between \$22,050 and \$51,450. Due to the unknowns regarding the location of the retention ponds we are requesting the BoD to approve \$22,000 (estimated High value) for establishing the budget for Phase 1 and \$40,000 for the Phase 2 budget (\$10K below the High value).

Cranberry Creek Retention Pond Project

Below is a breakdown of the Cost Estimates Going Forward on All Big Projects

Planning, Design & Permits 13% to 20% of total Estimate

Planning, Design, Permits & Construction Management 26% of total Estimate

	Low Estimate	High Estimate
Total Cost of Project estimated Nov 2018 plus 5% Escal.	\$157,500	\$367,500
Estimated Cost Per Member	\$143	\$334
Phase 1 Effort:		
Planning/Feasibility (4 - 6%) at 6%	\$9,450	\$22,050
Phase 2 Effort:		
Design (8 - 12%) at 12%	\$18,900	\$44,100
Permits (1 - 2%) at 2%	\$3,150	\$7,350
Subtotal - Phase 2	\$22,050	\$51,450
Phase 3 Effort:		
Construction Management (6 - 8%) at 6%	\$9,450	\$22,050
Construction at 74%	\$116,550	\$271,950
Subtotal - Phase 3	\$126,000	\$294,000
Annual O&M Cost	\$8,000	\$20,000
Estimated Cost Per Member	\$7	\$18
Cost to "Empty Retention Pond" every 5 - 10 years	\$25,000	\$50,000
Estimated Cost Per Member	\$23	\$45
Estimated Cost Per Member over a 50 Year period in current \$s	\$666	\$1,561

Assuming clearing out retention pond occurred every 7 years.

Other options for removal of sediment and nutrients is a combination of mechanical dredging every 2 to 5 years plus chemical Alum treatments of Lake Limerick. Below for comparison purposes are the estimated costs for dredging based on the last dredging effort conducted in 2016.

Alternate to Cranberry Creek Retention Pond Project

Dredge Cranberry Creek Every 2 – 5 years plus Alum Treatments

	Low Estimate	High Estimate
Dredging Cranberry Creek estimated costs at today's prices for every 2 - 10 years	\$300,000	\$1,800,000
Plus related required alum treatment for each dredge	\$25,000	\$50,000
Total cost per Dredge	\$325,000	\$1,850,000
Estimated Cost Per Member	\$295	\$1,682
Estimated Cost over a 50 Year period in current dollars assuming dredging occurred every 7 years.	\$2,068	\$11,773

- e. **A recommendation as to whether the project should be delivered in-house with LLCC staff, use outside contractors or consultants, or be carried out by a combination of in-house and outside resources:**

We believe that the project could be carried out by a combination of experts, such as project management and consultants in such fields as surveying, engineering, designing, consulting as to what designs are optimum and acquisition of required permits. It's possible that in-house LLCC staff has the expertise required to build access roads and dig out the ponds to plan specifications.

- f. **An approximate schedule, including any time constraints regarding project activities or completion date:**

The initial project is to discover if Lake Limerick Country Club owns the resources available to build a retention pond(s). We need a Survey map for dimensions and topography with precise measurements as to how and where Cranberry Creek Flows through parcels #321225000502 and 321225000503, which are located South and North of the culvert on St. Andrews Dr. respectively, such that someone could look at it and advise if that property provided enough space for any type of retention pond. If the answer is yes, we would proceed to gather bids from companies experienced in

designing such a pond(s) along with costs estimates, timeline estimates, and permitting requirements as well as cost estimates for maintenance and ease of maintaining the designed ponds. If our parcels are not big enough to support such ponds, we could approach owners of adjacent lots to see if we could obtain easement rights to acquire the land necessary to access, build and maintain such ponds.

4. **The budget status of the project:** (e.g., Has a Committee, and/or the Board, already included the project in the current year's budget? Is it in a longer-range capital improvement plan? Is it a new idea coming in outside the normal budget cycle?):

Funding for this project has been requested in the 2021-2022 request from the L/D committee. In the Fall of 2018, during the Lake Inspection Harry noted that Cranberry Creek delta didn't look good. As depth couldn't be the issue, as having been recently dredged, the problem of too many nutrients coming into the Cranberry Cove area for which the source of the excessive nutrients had to be coming down from Cranberry Lake and Lake Leprechaun. That conversation led to the question "what can we do to at least slow down the nutrients without dredging Cranberry Cove frequently". Harry Gibbons, Lake Advocate prepared a memorandum dated November 23rd, 2018, and subsequently included in the Technical Status and Monitoring Results Memorandum for Lake Limerick 2019 dated December 2019. Accordingly, the project was added to the Lake Dam Committee's Long-Range Plan 2019-2024 and subsequent Long-Range Plans.

5. **Any additional considerations the Board may need to consider, including any foreseeable project risks or liabilities:**

None that have not already been identified and previously addressed above.

6. **The proposed project manager:**

It is anticipated that the LLCC Facilities Project Manager can manage the project. It is likely that Kelly Evans, Chairman of the Lake Dam Committee along with members of the Lake Dam Committee can provide additional assistance.

7. **Evidence of coordination with the appropriate staff departments and management and the staff's recommendation.**

As the first step of the project is to obtain a survey of the land available that is owned by Lake Limerick, which is outside the expertise of the staff to conduct, they have not been approached yet. However, Lake Advocates Reports "Prioritizing of Potential Management Activities for Lake Beneficial Use Sustainability", dated November 23, 2018, and "Future Potential Alternative Management Activities Eng. Cost Est. for Lake Sustainability" dated January 2, 2019 has been provided to the LLCC BoD, Lake/Dam Committee and the LLCC CAM.

PROJECT APPROVAL REQUEST

1. Project name:

Recurring Permit for Lake Limerick Dredging

2. The person or Committee proposing the project.

The LLCC Lake/Dam Committee is sponsoring this project.

3. The project's description/scope including:

a. Narrative description of the project:

Dredging of Lake Limerick which was last accomplished in 2016 has been incorporated into the LLCC Reserve Fund Recommendation as an on-going Maintenance item. The dredging frequency is every 7 years establish on the frequency recommendation of every 2 to 10 years from Lake Advocates. The dredging effort requires obtaining permits from Washing State as well as Mason County and involves other interested parties, specifically the Squaxin Indian Tribe. The cost of the permitting is estimated at \$75,000 based on the last dredging effort. As a cost savings it is proposed that LLCC obtain a one-time recurring dredging permit thus avoiding the cost as well as time it takes to obtain the permits and coordination time with other interested parties.

b. The project's purpose and the value LLCC members will receive from the completed project, including any health and safety improvement aspects:

Lake Limerick members rely on Lake Limerick to supply all their water consumption needs including but not limited to drinking, bathing and household and property maintenance. The golf course owned and operated by LLCC derives all its water from Lake Limerick. Should Lake Limerick experience a significant algae bloom(s), the entire community could find itself relying on bottled water for an undetermined amount of time, the golf course would suffer a water shortage, which would damage an expensive asset, and all water-based recreation would be prohibited for a period of time. It is possible members who consumed or were in contact with such algae could become ill or suffer ill effects. Should such blooms result in damaging our fish habitats or cause a salmon/fish kill, the Squaxin Tribe could sue us for both compensation for their losses and court orders directing us as to enact corrective actions we would be required to take, including removing the dam (Like a tribe forced the government for the Elwa Dam.) We would lose our lake-based recreations such as swimming, boating, and fishing. Emergency Algae treatments could also be expensive. The costs are incalculable at this time, but the need would be immediate and the opportunity to budget would be lacking. LLCC is already incurring expensive on-going alum treatments to battle the Algae. With enough Algae Blooms, the government could require us to build and maintain a sewer system.

- c. **Such drawings and sketches as necessary to understand the project:**
Same data used to support obtaining permits for the dredging accomplished in 2016.
 - d. **The approximate cost for the project, and the basis and assumptions for that cost estimate:**
Cost is estimated at \$75,000 based on the 2016 Dredging effort.
 - e. **A recommendation as to whether the project should be delivered in-house with LLCC staff, use outside contractors or consultants, or be carried out by a combination of in-house and outside resources:**
It is envisioned that the permitting effort would be accomplished by the Facilities Project Manager assisted by the LLCC CAM/Office Staff, Board of Directors and Lake Dam Committee.
 - f. **An approximate schedule, including any time constraints regarding project activities or completion date:**
The permitting process is the lead activity to performing the actual dredging. The permitting activities are estimated to take a minimum of 6 to 9 months based on the last dredging effort. There are no known time constraints other than the unknown impacts of potential delays from on-going Covid pandemic.
4. **The budget status of the project:** (e.g., Has a Committee, and/or the Board, already included the project in the current year's budget? Is it in a longer-range capital improvement plan? Is it a new idea coming in outside the normal budget cycle?):
Funding for this project has been requested in the 2021-2022 request from the L/D Committee. Accordingly, the project was added to the Lake Dam Committee's Long-Range Plan 2020-2025 when the idea was first brought to our attention and is included in the current Long-Range plan for 2021-2026.
5. **Any additional considerations the Board may need to consider, including any foreseeable project risks or liabilities:**
None that have not already been identified and previously addressed above.
6. **The proposed project manager:**
It is anticipated that the LLCC Facilities Project Manager can manage the project. It is likely that Kelly Evans, Chairman of the Lake Dam Committee along with members of the Lake Dam Committee can provide additional assistance.
7. **Evidence of coordination with the appropriate staff departments and management and the staff's recommendation.**
This project has previously been broached/coordinated with the LLCC CAM and the Board of Directors in conjunction with the Reserve Study Recommendations. In addition, Lake Limerick Dredging recommendations are included the Lake Advocates Reports "Prioritizing of Potential Management Activities for Lake Beneficial Use Sustainability", dated November 23, 2018, and

“Future Potential Alternative Management Activities Eng. Cost Est. for Lake Sustainability”
dated January 2, 2019 have been provided to the LLCC BoD, L/D Committee and the LLCC CAM.