

Lake-Dam Committee Meeting Minutes
29 June 2023

Call to Order - Meeting called to order at 6:30 PM.

Roll Call Committee Members: (P)=Present; (A)=Absent; (E)=Excused

Lou Jackson (P)	Joel Gray (E)	Deanne Landsverk (A)
Dennis Muretta (P)	Teddy Lovgren (P)	Duane Landsverk (A)
Tim Reber (E)	Brian Smith (P)	Dave Kohler (A)
John McRoberts (P)	Jarred Foss (A)	Karen Kohler (A)
Maureen Glenn (P)	Gary Wilson (P)	Hannah Landsverk (A)
Steve Glenn (P)	Pat Paradise (A)	Eric Landsverk (A)
		Kelly Wieland (A)

Guests: Steve Pierce 2-221

Chairperson's Opening Comments: Teddy Lovgren

Teddy requested a volunteer to take notes for today's meeting; no one volunteered so the minutes will be limited. Roger is in the BoD Budget meeting and will not be in attendance. There are two PARs that Brian re-wrote that need Committee approval: Cranberry Creek Retention Pond and Bird Sanctuary Dredging.

Meeting Minutes approval [\[Attachment 1\]](#)

Dennis made a motion to accept the June 3rd meeting minutes as written and Brian seconded the motion. No discussion occurred and the minutes were unanimously approved.

Motions to the Board – BoD approved Chain Locking of the Anglia Park pedestrian gate adjacent to the car gate; Facilities plans to install a cypher lock on the pedestrian gate. Brian noted that the pedestrian gate was locked open because the car gate had apparently failed. Also approved \$12.5K expenditure for Lake Advocates Cranberry Creek Stream Walk and purchase of 14 swing mats for \$3,250. Purchase of video cameras for Parks is on hold pending BoD discussion of security cameras for Parks, Wells, etc. The BoD accepted our FY 2023/24 budget submittal. Also noted was the previous Facilities Manager is no longer employed at LLCC which will likely impact the start/completion of our 4 Park improvement projects. Gerardo has been promoted to an interim Facilities Manager position. He's very familiar with our HOA facilities and wish him success.

CAM REPORT: Roger [\[Attachments 2, 3, 4 & 5\]](#)

Roger was not in attendance, so Teddy summarized his written report (see attached).

Parks Report: Maureen/Steve [\[Attachment 6\]](#)

Mo and Steve summarized the results of the monthly park walk-thru. The parks overall are in good condition; exception is the chronic goose poop on the Inn Island. There's grass growing in the water at the shoreline at Log Toy and Way To Tipperary that needs to be removed. Teddy suggested contacting Jarred about removal of the grasses as one of the Park Volunteer Projects.

Docks/Floats Permits: Teddy - None.

Boat Registrations: Gary

Gary reported there are a couple of new boats that haven't had permits submitted.

LD Action Item List: Teddy [\[Attachments 7\]](#)

Teddy briefly reviewed action items and status. No significant progress was reported on any of the open actions. There was a brief discussion regarding a meeting with Erica Marbet, Water Resources Biologist for the Squaxin Island Tribe. This would be a follow-on meeting from a year ago to continue to exchange

Lake-Dam Committee Meeting Minutes
29 June 2023

and discuss water quality conditions of the lakes, creeks, estuaries, etc. Roger has the action to coordinate the meeting.

SUBTEAM REPORTS

Long Term Lake Health: The PARs (re-written by Brian) covering next years planned Phase 1 Feasibility studies were reviewed using Joel's Redline versions.

Bird Sanctuary dredging: Due to the time it takes to get budget approval it was determined unlikely that funding would be available immediately (this fiscal year) so those proposed changes to paragraphs 3.d and 3.f were not accepted. Proposed change to paragraph 3.c was accepted. Dennis made a motion to approve the PAR and Teddy seconded. The PAR was approved unanimously. [\[Attachment 8\]](#)

Cranberry Creek Retention Ponds/Sediment Control Options: The Committee agreed to Joels redline change to paragraph 3.b and replaced reference to maps in 3.c with "not applicable at this time". Dennis made a motion to approve the PAR and Teddy seconded. The PAR was approved unanimously. [\[Attachment 9\]](#)

Brian briefly discussed the meeting with Ken Martig on June 28th regarding his report on the Cranberry Lake Detention structure and its status as a functional fish passage. During the meeting Ken provided pictures of a portable suction dredge that was used at one-time to perform spot dredging of soft sediment on Lake Limerick shoreline. He recommended that Lake Limerick consider this as an economical approach for "maintenance dredging" of both Lake Limerick and Lake Leprechaun. LLCC could lease or buy the equipment that would be operated by LLCC Facilities employees and HOA volunteers.

ACTION: LTLH Subteam to investigate feasibility to lease/purchase a portable suction dredge.

Parks Improvement: Dennis discussed status of the currently approved park improvements in light of recent changes in the Facilities Manager position. As previously mentioned, Gerardo is now the Facilities Manager. Installation of the new metal restroom doors with cypher locks at Old Lyme Park will be his first priority. The impact to the start/completion of the other Park restroom projects is TBD.

Installation of security cameras at our parks, dam, wells, and entrances was discussed. John McRoberts raised a concern about the number of cameras, storage costs and the ability to analyze the volume of data collected; focus should be where we are experiencing vandalism problems. These concerns will be discussed with Bruce Loftin (WMG Security) in conjunction with finalizing the camera installations.

Lake/Dam Operations – Joel was not in attendance. Teddy provided the following status: The Dam Operations Manual is being updated to incorporate recommended changes to address lake level management. In addition, Gerardo is reviewing the document for LLCC's ability to perform maintenance tasks as currently prescribed. Those tasks not understood or unable to be performed, Roger will review with LD and Ken Martig for direction on document updates prior to submittal to the State (ECD 8/31).

OLD BUSINESS:

1. Changes Process: Dennis – see action items status.
2. Reserve Study Updates – Final Reserve Study Team meeting held June 28th. Final report/recommendations will be provided to the BoD and Associates Reserves.
3. Special Projects Manager – see CAM report
4. Network Drive for Committee Use – no new status; BoD looking for expertise within the HOA membership to identify solutions.
5. Lake Shore Compliance Audit – see action items status.

Lake-Dam Committee Meeting Minutes
29 June 2023

NEW BUSINESS None.

Guest Input None.

Review of Commitments & Action Items: Action items updated.

Review of Motions to the Board: None.

Motion to Adjourn: Brian made the motion to adjourn, Dennis seconded and it was unanimously approved; meeting was adjourned at approximately 8pm.

Next Meeting – Saturday, August 5th, 9:30am in the Crows Nest & via Zoom

Look Ahead:

July 1 – “Lake Limerick Daze”

Aug 5 – Lake-Dam Committee Meeting

Aug 19 – Board of Directors Meeting

Aug 31 – Lake-Dam Committee Meeting at 6:30pm

Sept 2 – “End of Summer Bash”

Sept 16 – Board of Directors Meeting

Oct 7 – Lake-Dam Committee Meeting

Lake-Dam Committee Meeting Minutes
3 June 2023

Call to Order - Meeting called to order at 9:30 AM.

Roll Call Committee Members: (P)=Present; (A)=Absent; (E)=Excused

Lou Jackson (E)	Joel Gray (P)	Deanne Landsverk (P)
Dennis Muretta (P)	Teddy Lovgren (P)	Duane Landsverk (A)
Tim Reber (E)	Brian Smith (E)	Dave Kohler (E)
John McRoberts (A)	Jarred Foss (P)	Karen Kohler (E)
Maureen Glenn (P)	Gary Wilson (P)	Hannah Landsverk (P)
Steve Glenn (P)	Pat Paradise (A)	Eric Landsverk (P)
		Kelly Wieland (P)

Guests: John Ingemi 3-244, Dan Bussler 5-92, Dean Dyson 2-200

Chairperson's Opening Comments: Teddy Lovgren

Teddy opened the meeting by reminding everyone of the following: 1) a celebration of life for Dorothy Powder was being held later in the day (2pm to 6pm) at Dorothy Powder's residence. Dorothy was a Lake Dam Committee member, and all members are encouraged to attend, and 2) a celebration of life is being held for Roger Alberts, a long time Lake Limerick resident, on June 4, 1:30pm in the Big Hall at the Inn. Family and friends are invited. Teddy also reminded everyone that Maureen Glenn's new email is meglenn58@gmail.com. Teddy requested a volunteer to take notes for today's meeting. Dennis volunteered to take notes for this meeting.

Meeting Minutes approval [\[Attachment 1\]](#)

Jarred made a motion to accept the May 6th meeting minutes as written and Dennis seconded his motion. No discussion occurred and the minutes were unanimously approved.

Motions to the Board – None for May.

CAM REPORT: Roger [\[Attachments 2, 3, 4 & 5\]](#)

Roger was not in attendance, so Teddy summarized his written report (attached).

1) Roger thanked Jared and his work team for clean-up of Log Toy park. His team is planning a similar cleanup at another (TBD) park in the near future.

2) LLCC has received an arborist recommendation that a number of dead trees be removed from Log Toy and Olde Lyme parks. Several Committee members (Dennis, Teddy, Jarred, Joel, Gary) volunteered to do an on-site assessment and provide recommendations to the L/D committee.

ACTION: Committee volunteers to review tree removal recommendations)

3) Roger noted that the pedestrian gate at Anglia provides no control for park entrance (no cypher lock). This will be added as a budget item in next year's forecast. In the interim, Roger recommends it be chain locked so non-members cannot access the park. **A motion was made by Joel and seconded by Dennis to request authorization from the BOD to chain lock the pedestrian gate on Anglia park until a permanent fix can be installed. The motion was approved. - See Motions to the Board**

4) It has been reported that a green algae slime exists on some lake shorelines and in some cases, there are dead fish nearby. It was recommended by Dennis that WDFW be contacted and requested to do an on-site assessment.

ACTION: Roger to contact WDFW and request they do an assessment of the algae and dead fish.

Lake-Dam Committee Meeting Minutes
3 June 2023

Parks Report: Maureen/Steve

Mo and Steve summarized results of the monthly park walk-thru. General condition of the parks is good. [\[Attachment 6\]](#)

Docks/Floats Permits: Teddy - Approved one new dock permit for Huston Swain (03-73).

Boat Registrations: Gary

Gary reported he has received two new boat registration requests. He also informed the committee of a serious incident he had with a boater. The boater was driving inappropriately, and Gary cautioned him. The boater got verbally abusive with Gary and continued this behavior for an extended period. The issue is under further investigation by the BOD.

LD Action Item List: Teddy [\[Attachments 7\]](#)

Teddy briefly reviewed action items and status. Several action items are discussed in other sections of the meeting. No significant progress was reported on any of the open actions.

SUBTEAM REPORTS

Long Term Lake Health: Brian was not in attendance, so Teddy summarized Brian's monthly report. Highlights were; 1) Brian has rewritten/updated the PARs covering next years planned Phase 1 Feasibility studies for Bird Sanctuary dredging and Cranberry Creek retention ponds, 2) the Lake Advocates work statement and proposal update (\$12,468.48) for the Cranberry Creek Stream Walk including evaluation of the Cranberry Lake Storm Water Detention Structure sediment was reviewed the LTLH team and recommended for approval. The approved budget for this effort is \$14,000. It is anticipated that this effort will be accomplished in July. **A motion was made by Dennis and seconded by Joel that the BOD authorize the \$12.5K expenditure for conducting the Cranberry Creek Stream Walk. The motion was approved. - See Motions to the Board**

Parks Improvement: Dennis discussed status of several park improvement initiatives.

1) Swing Mats; Facilities is recommending that swing mats be procured and placed under park swings to control depressions created from children dragging their feet while swinging. Swing mats are heavy rubber mats designed to act as a solid surface under swings. Dennis and Teddy visited Emerald Lake's park that uses a similar mat. We determined the mat was the appropriate size and recommend proceeding with the procurement of these mats for our park swings. **A motion was made by Dennis and seconded by Joel to request the BOD authorize the purchase of 14 swing mats for all park swings, Estimated cost is \$3,250. The motion was approved. - See Motions to the Board**

2) Security Cameras An estimate has been received from Bruce Loften (WMG Security) on the cost of procuring and installing security cameras in all parks. The cost estimate is \$16,156 plus tax. **A motion was made by Teddy and seconded by Joel to request the BOD authorize \$17,800 for the procurement of security cameras in all parks. It was also noted that the Water Committee, who will also be procuring camera systems, should take the lead in evaluating cost reasonableness of the WMG proposals. The motion was approved. - See Motions to the Board**

Lake/Dam Operations – Joel noted that all Lake level survey/erosion control survey stakes are in place. Joel's team is also working on a Lake Level management plan.

OLD BUSINESS:

1. Changes Process: Dennis – see action items status above.
2. Reserve Study Updates – Meetings being held with Reserve Study Team every Wednesday thru June.
3. Special Projects Manager – see CAM report

Lake-Dam Committee Meeting Minutes
3 June 2023

4. Video Conference Capability – Hybrid Meetings being conducted in the Crows Nest.
5. Network Drive for Committee Use – no new status; BoD looking for expertise within the HOA membership to identify solutions.
6. Adopt-a-Park – Jarred: The first Park Cleanup activity held at Log Toy on May 20th to spread bark. Good support from the community.
7. Lake Shore Compliance Audit – see action items status above.

NEW BUSINESS

New business discussions centered exclusively on the Lake Dam input to the current budget planning process. Both the expense budget and project budget proposals for the 2023/2024 budget plan are provided as attachments. The Expense budget input was reviewed and accepted as presented. The Projects budget was discussed at length and the following changes agreed to: 1) the park restroom/outbuilding reroof estimate was increased from \$17,450 to \$30,000 based on newly received roof bids. If this project is started/completed prior to October 2023, FY2023/24 funding may not be required. 2) Security Camera funding was increased from \$10,000 to \$18,000 based on the recently received cost estimate. Again, if this project is started/completed prior to October 2023, FY2023/24 funding may not be required. 3) funding for a replacement patrol boat was deferred to 2024/2025. **A motion was made by Dennis and seconded by Gary to approve the Expense and Projects budget plan and submit it to the BOD for inclusion in the LLCC 2023/2024 budget plan. The motion was approved. -**

See Motions to the Board

A brief discussion took place at the end of the meeting concerning the upcoming July 4th boat parade. It was agreed the parade was the responsibility of the Lake/Dam committee. The committee will start planning for the parade, which includes posting awareness bulletins during the month of June.

ACTION: Gary Wilson to plan for July 4th boat parade

Guest Input None

Review of Commitments & Action Items: Action items updated.

Review of Motions to the Board: See Below.

Motion to Adjourn: Meeting was adjourned at approximately 11:32pm.

Many thanks to Dennis for providing notes for the Meeting Minutes.

Next Meeting – Thursday, June 29th, 6:30pm via Zoom

Look Ahead:

June 17 – Board of Directors Meeting
June 29 – Lake-Dam Committee Meeting at 6:30pm
July 1 – “Lake Limerick Daze”
Aug 5 – Lake-Dam Committee Meeting
Aug 19 – Board of Directors Meeting
Aug 31 – Lake-Dam Committee Meeting at 6:30pm
Sept 2 – “End of Summer Bash”
Sept 16 – Board of Directors Meeting
Oct 7 – Lake-Dam Committee Meeting

Lake-Dam Committee Meeting Minutes
3 June 2023

MOTIONS TO THE BOARD

Motion 1 – Recommend the Anglia Park pedestrian gate adjacent to the car gate be chain locked until a permanent fix can be installed (cypher gate/lock) to ensure no access by non-members. This action is supported by both the CAM and Anglia Park Host. *[See Attachment 2 - CAM Report.]*

Motion 2 - The BOD is requested to authorize the \$12.5K expenditure for conducting the Cranberry Creek Stream Walk as proposed by Lake Advocates latest SOW/Proposal submittal. The approved budget amount for this activity is \$14,000. See Attached Proposal. *[See Attachment 8 – Lake Advocates CCSW Proposal]*

Motion 3 - Request the BOD authorize the purchase of 14 swing mats for all park swings, Estimated cost is \$3,250. *[See Attachment 9 - Swing Safety Mat data]*

Motion 4 - The BOD is requested to authorize \$17,800 for the procurement of security cameras in all parks based on the proposal submitted by Bruce Lofton of WMG Security. It is recommended that the Water Committee, who will also be procuring camera systems, should take the lead in evaluating cost reasonableness of the WMG proposals. *[See Attachment 10 - Security Camera Quote/Specs]*

Motion 5 - The BOD is requested to accept the Lake-Dam FY2023/24 Expense and Projects budget plan, dated 3June2023 for inclusion in the LLCC 2023/2024 budget planning. See Attached Expense and Project budget Spreadsheets. *[See Attachment 11 & 12- LD FY23-24 Operations/Projects Budgets]*

LD CAM Report

June 29, 2023

Parks

- Park swing mats ordered
- Tree removal bid recommendation to be discussed at July 15 Board meeting
- Washington Guard Services contract signed; starting July 1; 30 random day/night patrols per month including walking 7 parks, 3 HOA buildings and 6 water sites; Park Hosts have been notified.
- Anglia walker gate adjacent to the car gate has been chain locked
 - o Facilities is assessing installing a mechanical 2-sided keypad lock

Dams

- The LTLH Team met with Ken Martig to develop Lake Limerick response to the Cranberry Lake Foundation desire to replace the Cranberry dam structure with a fish friendly culvert. This would eliminate the current storm water detention structure that was designed, permitted, and installed 30 years ago to control downstream flooding.

Lakes

Water quality testing plan

1. Monthly water quality samples are being taken; IEH labs analyzes; April, May, June YTD
2. Results sent to LA for graphing/reporting; awaiting YTD report

Data level loggers

1. Weekly measurements taken

Lake Advocates

1. LA reminded Bathymetric analysis report is due this week
2. Cranberry Creek soft sediment stream walk to be scheduled in August
3. Leprechaun weed treated last week and Limerick to start after July 15 due to WDFW regulations

Lake Patrol

1. Boat is operational

Future projects:

1. Lake Leprechaun dredge will require a bathymetric survey analysis to identify soft sediment locations to create a plan.
2. Plan to mitigate/dredge the Bird Sanctuary based on the Limerick bathymetric survey

PM position

1. Executives are reviewing a recommended candidate. Follow-up information to be provided.

Lake Limerick
BUDGET TO ACTUAL
May 2023

Variance	Lake Dam HOA Budget	Lake Dam HOA Actual		Lake Dam HOA Actual	Lake Dam HOA Budget	Variance	Lake Dam HOA Budget	67%
Revenue								
\$ 1,032	\$ 0	\$ 1,032	Lake Dam - Fishing Derby	\$ 2,732	\$ 0	\$ 2,732	\$ 0	
1,032	0	1,032	Total Revenue	2,732	0	2,732	0	
Cost of Goods Sold								
0	0	0	Total Cost of Goods Sold	0	0	0	0	
1,032	0	1,032	Gross Profit	2,732	0	2,732	0	
Operating Expenses								
0	0	0	Advertising and Promotion	99	0	99	0	
(94)	773	679	Insurance Expense	8,597	6,582	2,015	9,674	89%
(15,068)	17,500	2,432	Lake Expense	19,782	39,900	(20,118)	83,600	24%
0	0	0	Licenses and Permits	4,086	3,700	386	3,700	110%
994	0	994	Parks Expense	2,744	12,550	(9,806)	12,550	22%
(6,318)	6,350	32	Repairs and Maintenance	32	13,000	(12,968)	16,800	0%
(100)	100	0	Small Tools and Equipment	0	800	(800)	1,200	0%
(100)	100	0	Supplies	339	800	(461)	1,200	28%
(20,686)	24,823	4,137	Total Operating Expenses	35,679	77,332	(41,653)	128,724	28%
21,718	(24,823)	(3,105)	Operating Income (Loss)	(32,947)	(77,332)	44,385	(128,724)	26%
Other Income								
21,718	(24,823)	(3,105)	Income (Loss) Before Income Taxes	(32,947)	(77,332)	44,385	(128,724)	26%

Line#	Date	Diff Pressure	Water Level (MX-	Barometric	Temperature	Absolute
		(MX-DP	DP	Pressure (MX-BP	(MX-WT	Pressure (MX-
		21156419:21156	21156419:21156	21156419:21156	21156419:21156	21156419:21156
		419-1), psi,	419-5), feet,	419-6), psi,	419-3), *F,	419-2), psi,
		21156419	21156419	21156419	21156419	21156419
1	05/30/23 13:11:58	1.0046	1.1914	14.6678	66.7	15.6724
2	05/31/23 01:11:58	1.0038	1.1895	14.6733	67.1	15.6771
3	05/31/23 13:11:58	1.001	1.1831	14.6849	66.7	15.6859
4	06/01/23 01:11:58	0.9972	1.1744	14.6887	66.7	15.6859
5	06/01/23 13:11:58	1.0012	1.1837	14.6785	67.1	15.6798
6	06/02/23 01:11:58	0.9975	1.1751	14.6881	66.2	15.6856
7	06/02/23 13:11:58	1.0058	1.1942	14.6991	69	15.7049
8	06/03/23 01:11:58	0.9992	1.179	14.7199	65.4	15.7191
9	06/03/23 13:11:58	1.0058	1.1943	14.7009	67.4	15.7067
10	06/04/23 01:11:58	0.9999	1.1807	14.7467	66.4	15.7466
11	06/04/23 13:11:58	0.9965	1.1729	14.7502	69	15.7467
12	06/05/23 01:11:58	0.9952	1.1698	14.736	69.7	15.7312
13	06/05/23 13:11:58	0.9866	1.15	14.7061	69.7	15.6927
14	06/06/23 01:11:58	0.9736	1.1199	14.654	69.5	15.6276
15	06/06/23 13:11:58	0.9653	1.1009	14.5809	70	15.5463
16	06/07/23 01:11:58	0.9639	1.0975	14.5509	71.6	15.5148
17	06/07/23 13:11:58	0.9597	1.0878	14.5673	71.2	15.527
18	06/08/23 01:11:58	0.9527	1.0717	14.6176	69.1	15.5703
19	06/08/23 13:11:58	0.9556	1.0785	14.6352	70	15.5908
20	06/09/23 01:11:58	0.9457	1.0555	14.6571	68.5	15.6028
21	06/09/23 13:11:58	0.9616	1.0923	14.6693	67.3	15.6309
22	06/10/23 01:11:58	0.9685	1.1082	14.6716	66.4	15.6401
23	06/10/23 13:11:58	0.9684	1.1079	14.6896	66.2	15.658
24	06/11/23 01:11:58	0.9675	1.1058	14.6807	66.1	15.6482
25	06/11/23 13:11:58	0.9671	1.1049	14.6662	66.7	15.6333
26	06/12/23 01:11:58	0.9667	1.104	14.6456	67.4	15.6123
1	06/13/23 01:11:58	0.9694	1.1102	14.6246	68.5	15.594
2	06/13/23 13:11:58	0.9336	1.0277	14.6329	67.1	15.5665
3	06/14/23 01:11:58	0.9658	1.1019	14.6662	66.4	15.632
4	06/14/23 13:11:58	0.9592	1.0867	14.7038	66.7	15.663
5	06/15/23 01:11:58	0.9574	1.0826	14.7222	65.5	15.6796
6	06/15/23 13:11:58	0.959	1.0864	14.746	67.6	15.705
7	06/16/23 01:11:58	0.9566	1.0807	14.7527	65.9	15.7093
8	06/16/23 13:11:58	0.95	1.0655	14.7122	67.8	15.6622
9	06/17/23 01:11:58	0.9595	1.0875	14.6944	66.6	15.6539
10	06/17/23 13:11:58	0.9654	1.1009	14.6565	66.4	15.6219
11	06/18/23 01:11:58	0.9588	1.0858	14.6018	65.4	15.5606
12	06/18/23 13:11:58	0.9624	1.0942	14.582	65.7	15.5444
13	06/19/23 01:11:58	0.9588	1.0859	14.5873	65.2	15.5462
14	06/19/23 13:11:58	0.953	1.0725	14.5963	66.6	15.5493
15	06/20/23 01:11:58	0.9532	1.0729	14.6736	64.7	15.6268
16	06/20/23 13:11:58	0.9578	1.0836	14.738	65.2	15.6958
17	06/21/23 01:11:58	0.9598	1.0882	14.7664	64.5	15.7263
18	06/21/23 13:11:58	0.9615	1.0921	14.7424	65.5	15.7039
19	06/22/23 01:11:58	0.9581	1.0841	14.7051	68.3	15.6631
20	06/22/23 13:11:58	0.957	1.0818	14.6326	68.3	15.5896
21	06/23/23 01:11:58	0.9551	1.0772	14.5989	70.5	15.554
22	06/23/23 13:11:58	0.9547	1.0764	14.6127	71.9	15.5674
23	06/24/23 01:11:58	0.9545	1.0759	14.6848	67.4	15.6393
24	06/24/23 13:11:58	0.9524	1.071	14.7026	68.6	15.655
25	06/25/23 01:11:58	0.9508	1.0673	14.7035	69.3	15.6543
26	06/25/23 13:11:58	0.955	1.077	14.6894	70.5	15.6444
27	06/26/23 01:11:58	0.9522	1.0705	14.6859	69.3	15.6381

Rating Status Color Definitions: Behind Schedule Schedule Risk On Schedule Completed

Lakes, Dams and Parks Work Orders Log: 22 June 2023

Date	Priority (1,2,3)	Work Order Number	Task	Safety Issue (Y/N)	Assigned to	Due Date	Completion Date	Requestor/ Task POC	Project Status
6/20/2022	3	2022-16	Inspect Banbury boat ramp for tree root damage and advise LD committee re: recommended next steps.	N	Rob	11/30/23 6/30/23 11/30/22 11/1/22 7/8/2022		Roger Milliman	<p>6/23/23 -- CAM now investigating using an asphalt composite material. If successful, materials may be used for golf course and parking lot applications.</p> <p>6/8/23 -- Due to 7 day curing time for concrete, Rob proposed to move WO to 11/30 completion date and do the entire ramp with roughed up concrete for tire traction and long term reduction in maintenance costs.</p> <p>5/25/23 -- Met new Facilities Manager (Rob). Rob to rent cement mixer and repair boat ramp with concrete rather than asphalt. On shedule to revised / updated due date.</p> <p>5/11/23 -- Maintenance to fill with concrete rather than wait for asphalt availability.</p> <p>04/28/23 -- No change in status</p> <p>04/13/23 -- No change in status.</p> <p>3/30/23 -- No change in status</p> <p>2/23/23 -- Current plan is to use asphalt to repair. Held for availability. CAM will discuss use of concrete as a fix with Norm since sections of the ramp are made from concrete.</p> <p>02/02/23 -- No Change in status</p> <p>12/29/22 -- No Change in status</p> <p>12/16/22 -- No Change in Status.</p> <p>11/30/22 -- No Change in Status.</p> <p>(Reference 11/30/22 for historical status)</p>
6/23/2022	3	2022-19	Update Dam Operations Manual to address DOE email dated 9 June 2022 regarding emergency drawn down at both Lake Limerick and Lake Leprechaun.	Y	Rob / Roger	TBD 3/31/23 11/15/22 9/30/2022		Roger Milliman	<p>6/23/23 -- No change in status</p> <p>6/8/23 -- No change in status</p> <p>5/25/23 -- No change in status.</p> <p>5/11/23 -- No change in status.</p> <p>04/28/23 -- No change in status. Still held for State personnel availability.</p> <p>4/13/23 -- No change in status.</p> <p>3/30/23 -- Meeting held with Ken on 3/1; need mtg with DSO to confirm reqmnts; pending DSO personnel to support.</p> <p>2/23/23 -- Meeting scheduled for 3/1/23 with Ken, CAM and LD to confirm Statement of Work and Deliverables.</p> <p>02/02/23 -- Recommend 2 hr meeting with Ken Martig/LTLH subteam to scope SOW; Roger to coordinate.</p> <p>12/29/22 -- Proposal received from Ken Martig. CAM awaiting feedback from LD (requested feedback by 13 January). CAM to also coordinate final agreement with DSO to ensure it addresses DSO's concerns.</p> <p>12/16/22 -- Ken has yet to respond to proposal request. Roger to reach out to Ken again.</p> <p>11/30/22 -- Ken Martig has confirmed he needs to work on proposal. No ECD provided.</p> <p>11/3/22 -- LLCC awaiting proposal from Ken Martig. Inflows to be measured at Cranberry Creek, Leprechaun, and Bird Sanctuary.</p> <p>10/11/22 -- Video of butterfly valve test provided to DSO. Ken to provide proposal for in flow/out flow analysis to support modifying emergency Lake Limerick draw down process. New Due Date established.</p> <p>Status prior to October is archived</p>

Rating Status Color Definitions: Behind Schedule Schedule Risk On Schedule Completed

Lakes, Dams and Parks Work Orders Log: 22 June 2023

Date	Priority (1,2,3)	Work Order Number	Task	Safety Issue (Y/N)	Assigned to	Due Date	Completion Date	Requestor/ Task POC	Project Status
12/29/2022	3	2022-38	Replace 15 Buoys on Lake Limerick as part of plan to replace 15 buoys per year. Year after year. Status Limerick Buoy Replacement Progress	N	Gerardo	6/30/23 5/31/2022	6/20/2023	Roger Milliman	<p>6/23/23 -- Completed. WO Closed</p> <p>6/8/23 -- All materials received. Install to start next week. BTW Maintenance to reinforce log boom connectors and anchor system and install swim floats at log toy where floats are currently missing.</p> <p>5/25/23 -- Rob still purchasing materials. LD provided LLCC a BOM spreadsheet to support LLCC Book of Standards. Buoys will be numbered with GPS locations for future management of the buoy system. On schedule to revised due date.</p> <p>5/11/23 -- inventory assessed. Parts ordered. Project ECD now 30 June.</p> <p>4/28/23 -- Gerardo to assess current inventory of parts. Rob will work with Roger to order the balance of needed parts to replace this year's 15 buoys. Replaced buoys that are still in good condition will be used to replace worn buoys in other areas of Lake Limerick.</p> <p>4/13/23 -- Held for new Maintenance Manager (Rob Greves) to assess current inventory and order new materials.</p> <p>3/30/23 -- No change in status</p> <p>2/23/23 -- Facilities has been tasked to order 15-A2 buoys. Good buoys will be saved for spares/reuse and old unusable buoys to be discarded. On schedule.</p> <p>02/02/23 -- Budget in place; plan is to replace 15 buoys annually.</p> <p>12/29/22 -- Budgeted. Roger to request Norm price out obtaining new anchors, tether lines and buoys with the expectation 10 of the approximate 55 buoys on Lake Limerick be replaced on a rotational basis.</p>
2/21/2023	1	2023-02	Remove dead snags in the water from at Log Toy park fish dock. Also remove dead trees from Log Toy Park and Olde Lyme Park.	Y	Gerardo / Beco?	TBD 4/21/2023		Dennis Muretta	<p>6/23/23 -- CAM recommending Green Diamond to cut / removed trees from parks. Trees in common areas will be delimbed, but trees will remain in their felled position. Large maple in Log Toy will not be felled.</p> <p>6/8/23 -- Report Received. LD input provided to CAM re: interest in keeping some viable trees for wildlife and esthetics. 3 bids currently in work with tree removal companies.</p> <p>5/25/23 -- Report expected on 26 May.</p> <p>5/11/23 -- Arborist hired to assess Log Toy, Olde Lyme and Common Area trees. Report due soon. Request to BOD to remove trees will be based on report.</p> <p>4/28/23 -- Tree in water at Log Toy removed. CAM to meet with arborist on 1 May to access Log Toy, Olde Lyme, and other LLCC common areas.</p> <p>4/13/23 -- LLCC to hire arborist to assess trees in parks and certain common areas for safety. Tree removal will be based on arborist's report.</p> <p>3/30/23 -- No change in status</p> <p>2/23/23 -- CAM to review and advise.</p> <p>2/20/23 -- WO Based on park review with LLCC/LD Members 2/20/23</p>

Rating Status Color Definitions: Behind Schedule Schedule Risk On Schedule Completed

Lakes, Dams and Parks Work Orders Log: 22 June 2023

Date	Priority (1,2,3)	Work Order Number	Task	Safety Issue (Y/N)	Assigned to	Due Date	Completion Date	Requestor/ Task POC	Project Status
4/13/2023	2	2023-03	Install Data Logger at Lake Leprechaun Dam/Spillway	N	Gerardo	5/1/2023		Roger Milliman	<p>6/23/23 -- No change in status.</p> <p>6/8/23 -- No change in status.</p> <p>5/25/23 -- No change in status.</p> <p>5/11/23 -- Limerick Dam data logger repaired. Inn data logger to be returned to vendor for repair. Install at Leprechaun once cellular coverage allows.</p> <p>4/28/23 -- CAM to replace batteries in data logger at inn confirm that it is functional then install at Leprechaun. Future data downloads will be via Blue Tooth until better cell coverage is available.</p> <p>4/13/23 -- Leprechaun held for better cell coverage. Lake Limerick datalogger is currently not reporting data correctly. CAM working with Hood Canal Cable for a solution.</p> <p>4/13/23 -- Action is a moved to this WO Log Sheet from LD Action Item Status.</p>
4/13/2023	1	2023-04	Request Lake Advocates to provide Report on the results of the Lake Leprechaun Survey. Report to address Comparison to 2015 survey depths, Dredging recommendations including locations, mechanical vs hydraulic, permit requirements, cost estimate, etc.	N	Roger	6/30/23 7/31/2023		Ted Lovgren	<p>6/23/23 -- On schedule. LLCC has provided all required data to LA for the report to be generated.</p> <p>6/8/23 -- No change in status.</p> <p>5/25/23 -- On schedule.</p> <p>5/11/23 --Report due 30 June.</p> <p>4/28/23 -- Bathymetric survey completed for both lakes on 28 April. Data to be provided to LA for reporting back to LLCC. CAM to remind LA of need for recommendation for dredging areas at Lake Leprechaun. CAM will also request an ECD for the report and provide to Lake Dam Comm.</p> <p>4/13/23 --Moved from LD A-I List 4/13/23 in order to capture all LLCC / CAM Actions in one place.</p>
4/13/2023	1	2023-06	We should add revising/updating the Project Manager job description. I pinged Roger and John on this action.	N	John Ingemi & Roger	ASAP		Ted Lovgren	<p>6/23/23 -- No change in status.</p> <p>6/8/23 -- No change in status.</p> <p>5/25/23 -- CAM tasked with updating job description for BOD review prior to interviewing candidate.</p> <p>5/11/23 -- BOD Executive Committee to review approach to fill position 20 May.</p> <p>4/28/23 -- Stake holders met on 27 April to update the PM roles and responsibilities. Executive Committee to review and provide feedback / path forward.</p> <p>4/14/23 -- Carry over from previous LD / BOD action items</p>
4/28/2023	1	2023-07	Obtain proposal from LA re: stream walk to assess impact of Cranberry Lake outflow into Lake Limerick.	N	Roger	TBD	5/25/2023	Ted Lovgren	<p>6/23/23 -- Proposal recieved and approved by BOD. CAM to request date for actual stream walk.</p> <p>6/8/23 -- No response from LA to CAM's email. Rob P from LA has had recent eye surgery.</p> <p>5/25/23 -- LD / LLCC comments provided to LA. LA response was expected 5/22ish. CAM to call LA for status.</p> <p>5/11/23 -- Proposal received. LD to provide comments to Brian Smith by 12 May in order to provide LA with a collective/comprehensive response to their proposal.</p> <p>4/28/23 -- Added to WO List as not to lose track of this action.</p>
5/23/2023	2	2023-12	Procure and install swing set safety mats in all parks with swings per Rob's proposal	N	Gerardo	TBD 6/23/2023		Roger Milliman	<p>6/23/23 -- All mats ordered. Mats to be installed once received at parks with hosts. Mats at Olde Lyme to be installed once mats have been successfully proved to meet LLCC's objective of reducing maintenance costs.</p> <p>6/8/23 -- WO held for BOD approval of LD's motion to procure 14 mats.</p> <p>5/25/23 -- Roger authorized Rob to procure 2 as a test case for possible application in all parks.</p> <p>5/23/23 -- Per Roger Email on 5/5/23 and addressed within Park Maintenance Monthly Report (Swing Divots)</p>

Rating Status Color Definitions: Behind Schedule Schedule Risk On Schedule Completed

Lakes, Dams and Parks Work Orders Log: 22 June 2023

Date	Priority (1,2,3)	Work Order Number	Task	Safety Issue (Y/N)	Assigned to	Due Date	Completion Date	Requestor/ Task POC	Project Status
5/23/2023	2	2023-13	Spray-paint(?) stripe and words "No Parking Beyond this Point" on ground at Tipperary and WDFW Boat Launch.	N	Gerardo	6/23/23 6/9/2023		Roger Milliman	6/23/23 -- Stencils recieved. Painting expected 6/23/23. 6/8/23 -- Rob to order larger stencils for "no parking" Will prep area and paint stripe on ground next to current no parking sign 5/25/23 -- "No parking" signs have been installed. Facilities to paint ground to indicate boundary of parking area. 5/23/23 -- Parking issue addressed within Park Maintenance Monthly Report and observed by Park Host, neighbors and LD members as being an issue.
5/25/2023	3	2023-14	Meet with CLF regarding their desire to install fish-friendly culvert at Cranberry Creek detention structure.	N	Roger	TBD		Roger Milliman	6/23/23 --Held for meeting with Ken, BOD, LD to discuss / agree on LLCC position in preparation for meeting with CLF. Internal meeting expected week of 26 June. 6/8/23 -- Report due 6/9/23 to help develop LLCC's position on the matter. 5/25/23 - Ken Martig to develop LLCC position re: detention structure culvert. LLCC to engage Cranberry Creek Foundation once position is developed, understood and agreed. ECD TBD based on Ken Martig's schedule.
6/7/2023	1	2023-18	Provide status - June Date re: Aquatechnix Lakes treatment	N	Roger	7/30/2023		LD / BoD	6/23/23 -- Lep completed 6/20. CAM to coordinate treatment schedule with Kyle from Aqua Technix for Limerick treatment. (Window for treatment starts 15 July) 6/8/23 -- CAM to obtain dates for Leprechaun (June) and Limerick (July)
6/7/2023	1	2023-19	Chain pedestrian entrance at Angella in order to restrict free access.	N	Rob	6/9/2023	6/16/2023	LD	6/23/23 -- Completed. WO Closed. 6/8/23 -- Maintenance to install chain 6/9/23. Rob to propose locking mechanism rather than wait until next season in order to reduce wear and tear on car gate entrance.
6/7/2023	1	2023-20	Water quality report from May testing - Provide due date	Y	Roger	6/8/2023		LD/BoD	6/23/23 -- Data received from IEH. Provided to LA for Reporting. June samples taken and provided to IEH 6/8/23 -- Report requested. ECD TBD.
6/7/2023	2	2023-21	Confirm dam maintenace was performed and Rob is on board with process and documentation	N	Rob	6/8/2023		Roger Milliman	6/23/23 -- Gerardo reviewing document for understanding and ability to perform. Questions regarding tasks to be performed will be posed to Ken Martig for clarity and whether the tasks are truly required. 6/8/23 -- Joel to meet with Rob on 6/12 to review Document in order to help with Maintenance's understanding of process and schedule.
6/7/2023	3	2023-22	Maintenance to remove debris / garbage from fish ladder (need key and ladder to access)	N	Rob	6/16/2023	6/16/2023	LD	6/23/23 -- Completed. WO Closed. 6/8/23 -- Maintenance to obtain key to fence to access fish ladder area where debris is located. On schedule.
6/9/2023	1	2023-24	Install mechanism to ensure limerick dam gate (railroad side) closes entirely after each use	N	Gerardo	6/28/2023		Roger Milliman	6/23/23 -- Spring procured. On schedule. 6/8/28 - Outcome of discussions during LD / CAM WO meeting on 8 June 2023.
6/23/2023	1	2023-25	Perform Cran Creek Stream Walk	N	Roger	7/31/2023		LD	6/23/23 -- Follow on to proposal received as part of WO 2023-07. This WO supports LTLH subcommittee actions related to sediment in Limerick.
6/23/2023	2	2023-26	Fix door of access panel at Dam Pedestrian gate so it cannot be pryed open more than it already has been.	N	Gerardo	6/28/2023		Roger Milliman	6/23/23 -- WO generated based on Joel's inspection of Dam access door on 23 June.

PARK MAINTENANCE MONTHLY REPORT

DATE _____

DATE June 23 2023

Friday

		Needs
	YES/NO	Attention
ANGLIA BEACH		
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Restroom is cleaned and stocked? (Done Mon & Fri May1-Oct 31)	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up?	Yes	
All debris removed from spillway?	Yes	
Safety floats are above the water at the spillway?	Yes	
Notes:		
man gate chained ☺		
Spillway cleaned out ☺		
BANBURY PARK		
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Restroom is cleaned and stocked? (Done Mon & Fri May1-Oct 31)	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up?	Yes	
Notes:		
CLUBHOUSE/INN		
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up?	Yes	
Are pathways swept?	Yes	
Is the roof free of debris?		
Notes:		
goose poop on island		X

		Needs
LEPRECHAUN PARK	YES/NO	Attention
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up?	No	
Debris removed from spillway?		
Notes:		
There is tree debris by the water left from the fallen tree		X
grass needs mowing by spillway		X
LOG TOY PARK	YES/NO	
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Restroom is clean and stocked? (Done Mon and Fri May 1-Oct 31)	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up? on trail toward point	No	X
Notes:		
No goose poop ☺		
OLDE LYME PARK	YES/NO	
Garbage can(s) empty? (They are emptied Mon & Fri) 1/4 full	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Restroom is clean and stocked? (Done Mon and Fri May 1-Oct 31)	Yes	
Lawn mowed recently?	Yes	
Ground debris cleaned up?		
Notes:		
Picnic table by ball court ☺		
Weeds growing in play area & walking path		X
WAY TO TIPPERARY	YES/NO	
Garbage can(s) empty? (They are emptied Mon & Fri)	Yes	
Dog Station has poop bags available?	Yes	
Litter picked up?	Yes	
Restroom is clean and stocked? (Done Mon and Fri May 1-Oct 31)	1 locked / 1 nailed up	
Lawn mowed recently?	N/A	
Ground debris cleaned up?	Yes	
Notes: Water grass need cutting or pulled		X
No parking signs look good ☺		
New Caution narrow boat ramp ☺		

Lake/Dam Committee Action Item Status

As of: 29June2023

Commitments & Action Items	Date Assigned	Assigned To	Due Date	ECD / Status
Define a process for coordinating rule changes with members prior to implementation.	1-Sep-22	Dennis	TBD	<p>Action resulted from discussion of e-foil concerns raised during Sept 1st mtg. Need to establish change process.</p> <p>6May2023 Dennis provided status update during the LDC meeting - see meeting minutes</p> <p>15April2023 Dave provided his writeup on a change process for review/evaluation.</p> <p>7Jan2023 Dave to coordinate with Dennis regarding existing processes for LLCC rules changes and coordination.</p> <p>5Jan2023 change process (Draft) sent to LD Committee for review/comment.</p>
Inn Island Repair options/contractor quotes need to be assessed for feasibility	1-Sep-22	Pat	TBD	<p>Pat will review the current contractor quotes and options; and provide his assessment to LD. Pat completed his review and recommended the shoreline be repaired with the granite block option. Hanson Excavating has not returned Pat's calls regarding their estimate - ECD for project update 1st Qtr 2023.</p> <p>4March2023 Pat has attempted contacting Hanson numerous times with no response/call back.</p> <p>Recommendation is for LDC to pursue other options.</p>
Establish Lake Limerick/Leprechaun Shoreline Guide for LD and Compliance Committees to use as an audit tool in order to begin reigning in the many violations observed (but not often reported) by members.	7-Jan-23	Duane	TBD	Steve and Maureen to assist.

Lake/Dam Committee Action Item Status

As of: 29June2023

Commitments & Action Items	Date Assigned	Assigned To	Due Date	ECD / Status
Perform Shorline audit in Spring 2023 for non-compliances; non-permitted boat lifts/docks/floats, unauthorized intrusions/constructions, e.g. beach retaining walls, fences, etc.	7-Jan-23	Lake-Dam	TBD	Placeholder for Spring/Summer LD Committee activity. Volunteers will be needed.
Provide Lake Level data history/files that is basis of motion for 12 inch wier board height.	4-Mar-23	Joel/Teddy	April LD Mtg	22May2023 Data forwarded to Office for conversion (PDF) and consolidation for posting to LLCC Website. 1May2023 Joel provided Teddy picture (JPEG) files of data located in LLCC paper files. Need to convert to PDF and store to LLCC data files for historical
Replacement Boat for Lake Patrol	6-May-23	Lou and Gary	Status at June LD Mtg	CLOSED 3June2023 FY23/24 Funding request for replacement of patrol boat has been moved to FY24/25. Lou and Gary to provide recommendation on Boat replacement. Existing 60hp outboard motor is working
Tree Risk Assessment Report - LLCC has obtained an arborists evaluation of trees within common areas including Parks, Green Space, etc. that are recommended for removal. Review the trees listed for Log Toy and Old Lyme Parks to confirm status of the trees.	3-Jun-23	Dennis, Teddy, Jarred, Gary, Joel	Next few days	COMPLETE 7June2023 LDC Team reviewed Trees at Log Toy & Old Lyme; comments provided to CAM. There are 11 trees at Log Toy and 3 at Old Lyme that are candidatesfor removal, topping or cutting/leaving as a wildlife snag tree.
Planning for the 4th of July Boat Parade	3-Jun-23	Gary	June	COMPLETE Establish plan and post awareness bulletins during Month of June

Lake/Dam Committee Action Item Status

As of: 29June2023

Commitments & Action Items	Date Assigned	Assigned To	Due Date	ECD / Status
LTLH Subteam to investigate feasibility to lease/purchase a portable suction dredge (including permit requirements).	29-Jun-23	LTLH	TBD	Ken Martig provided photos of a portable suction dredge being used on Lake Limerick (in the 80's/90's?). Suggested as a more economical approach to dredging of both lakes.

PROJECT APPROVAL REQUEST

1. Project name:

Bird Sanctuary Bay Dredging – Phase 1 (Planning/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:

This \$13,500 Feasibility study represents Phase 1 of an effort to address restoration of recreational and habitat functions and values in the Bird Sanctuary. It will analyze options for mitigating the impact of nutrient rich sedimentation in this former wetland. Sediments have made portions of the lake in this area inaccessible for recreation by LLCC members, reduced the surface area of navigable waters, and promoted the growth of nuisance aquatic and terrestrial plants. Phase 2 would take the results of Phase 1, and perform the necessary engineering design, permitting and construction activities.

Options include selective plant cutting and 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. Terrestrial plants growing on the islands may be mechanically trimmed, and the islands themselves downsized.

Lake Limerick's Bird Sanctuary 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 surrounding residential development. 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 and the decomposition of organic plant matter. As a result, this portion of the lake is eutrophic (highly productive and nutrient rich) and more reflective of a developing wetland than open water and littoral lake environment. To maintain its historic recreation access and diverse aquatic habitat, LLCC must act to reduce sediment build-up and aquatic productivity and make the Bird Sanctuary more consistent with the goal of maintaining Lake Limerick as a mesotrophic lake.

PROJECT APPROVAL REQUEST

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

Options for restoring the Bird Sanctuary for use by members residing there, as well as other users of Lake Limerick, could cost well in excess of \$50,000. Whatever options are selected should be those most likely to be effective, and able to be permitted by the appropriate regulatory agencies.

The goals of this project are to improve recreational access, make the area more navigable, and reduce nuisance aquatic plants. These improvements should also improve this area's value as fish and wildlife habitat. As mentioned previously there are various ways to remove sediments and aquatic and terrestrial weeds and try to prevent or slow their re-establishment, and to reduce the size of the plant/land islands which are growing and choking the waterways. The purpose of this feasibility study is to identify what actions might work to address the various problems present in the Bird Sanctuary, estimate costs of application, and select a slate of the most cost-effective actions for implementation in Phase 2.

Cleaning up sediment and nuisance aquatic and terrestrial plants supports Lake Limerick's overall lake management program which includes as a goal reducing the possible occurrence of toxic algae blooms, such as those plaguing other lakes in the greater Mason County and Thurston County region, which pose risks to pets, humans and wildlife.

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

Not available at this time. To be provided as part of this Phase 1 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 L/D Committee is requesting \$13,500 in the FY 2023-24 HOA budget for Phase 1 - Feasibility. Although Phase 2 – Design, Permits and Construction was originally estimated at approximately \$50K, it is currently listed in the proposed Reserve Study project list at over \$1M. A detailed feasibility study is a prudent first investment to refine the scope and cost of this 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:**

The L/D Committee believes a multi-disciplinary consultant should be procured for

PROJECT APPROVAL REQUEST

Phase 1. How Phase 2 could be carried out will depend on the options recommended in Phase 1.

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

Phase 1 should be completed in FY 2023-24 in time for a budget request for Phase 2 implementation in FY 2024-25 to be submitted June 2024. The consultant procurement process should begin immediately on inclusion of this project in the FY 2023-24 budget by the LLCC HOA BOD.

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 L/D Committee 2012-2015 Long-Range Plan. The L/D Committee requested funding for this project in the FY 2021-2022 and FY 2022-23 budget request cycles. The project was updated in the Lake Dam Committee's Long-Range Plan for 2019-2024 based in part on Lake Advocates input. It was included in the Long-Range Plan for 2020-2025 and is included in the current Long-Range plan for 2021-2026. The proposal was excluded by the BOD in the current FY 2022-23 HOA budget.

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 Project Manager position approved by the BOD for the FY 2022-23 budget, but as-of-yet unfilled, would manage the project. It is likely that knowledgeable members of the L/D Committee can provide additional assistance.

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

Coordination with appropriate staff and HOA managers will occur once the project is budgeted and the Project Manager position is filled.

PROJECT APPROVAL REQUEST

1. Cranberry Creek Retention Pond – Phase 1, Sediment Control Options Analysis (Planning/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:**

This project analyzes options to reduce the impact of sediments and nutrients flowing into Lake Limerick from the Cranberry Creek watershed. This analysis builds upon the results of previous work and studies including the sediment dredge project in 2016 which included several years of follow up studies of channel depth and the number and diversity of benthic organism species in the dredged area; bathymetric studies of Lake Limerick in 2023; a stream walk of Cranberry Creek in 2023, including examination of the Cranberry Lake Storm Water Detention Structure sediment basin, conducted to identify sources of sediment and erosion in the creek drainage between Lake Limerick and Cranberry Lake.

Sediments transported into Lake Limerick from major water sources like Cranberry Creek adversely impact the recreational uses of the lake, such as boating and swimming; they also carry nutrients stimulating growth of nuisance aquatic plants and harmful algae; and they can reduce the numbers and density of benthic organisms that act as food for small fish while also physically degrading spawning habitat.

Approaches to reducing the impacts of sediment transport into Lake Limerick include source control, that is reducing the amount of sediment entering the creek and/or removing sediment from the creek before it reaches lake Limerick; and mitigation, such as dredging to remove sediments once deposited in the Lake. For obvious reasons source control, preventing a problem, is usually preferable to mitigation, or cleaning up a problem once it has occurred.

The L/D Committee is currently considering two proposals for source control: (1) using the Cranberry Lake Storm Water Detention Structure sedimentation basin to reduce inflow to the creek (if current studies indicate that the pond has served to retain sediment since construction in the late 1980s); and (2) constructing new sediment retention ponds along Cranberry Creek just before it enters Lake Limerick to catch sediment and nutrients flowing in from Cranberry Lake and resulting from erosion along Cranberry Creek itself. In terms of mitigation, the LLCC HOA's answer in the past has been dredging several areas of the lake to remove nuisance sediments, coupled with aquatic vegetation control programs.

Sediment and nutrient control options are expensive. Constructing sediment retention

PROJECT APPROVAL REQUEST

ponds along Cranberry Creek would likely entail acquiring land, performing engineering design, and construction costs all nearing \$500,000 (based on 2018 estimates). Operating costs (periodic sediment removal) could run at least \$50, 000 every 5-10 years. Repeated dredging could run between \$400,000-\$2,000,000 every event (the 2016 dredge project cost about \$500,000 for permitting and actual dredging-its long-term effectiveness is still being evaluated). There is no current concept of what would be required to use the Cranberry Lake Storm Water Detention Structure sediment basin. The high price tags of the various options identified to date require further analysis to ensure LLCC selects the most cost-effective option for implementation.

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

This PAR proposes analyzing the relevant data most recently collected to develop conceptual designs of the source control and mitigation strategies described in "a." above; determining their likely feasibility and effectiveness in controlling the impact of sediments and nutrients flowing into Lake Limerick from the Cranberry Creek watershed; developing scoping level cost estimates and schedules; and recommending what would appear to be the most beneficial and best-value option to continue into Phases 2 and 3— design, permitting and construction.

Reducing sediment inflow to Lake Limerick will enhance LLCC members' recreational experience. Reducing the associated nutrients could have the effect of reducing future aquatic plant control costs from what they might have been otherwise, and greatly reduce the possibility of toxic algae blooms, which are dangerous for both people and domestic pets, and which regularly close other lakes in the region. This would also reduce the need for regular, routine, expensive dredging of Lake Limerick.

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

Not applicable at this time.

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

The overall project cost rests on a three phased approach with each phase having its own Project Approval Request form. Based on 2018 estimates provided by Harry Gibbons of Lake Advocates. Phase 1 (Planning/Feasibility) is estimated at \$23,760.

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 Phase 1 project should be carried out by a multiple staff expertise consultant.

PROJECT APPROVAL REQUEST

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

This project should be carried out ASAP and completed in time for its recommendations to be considered in FY 2024-25 budget development (June 2024). This will require LLCC begin the consultant procurement process (advertisement, RFQ/RFP, consultant selection, contracting) to begin immediately after FY 2023-24 begins in October 2023.

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 is being requested in the FY 2023-2024 request from the L/D Committee. In the Fall of 2018, during the Lake Inspection, Lake Advocates noted that the Cranberry Creek delta didn't look healthy. As depth couldn't be the issue, as having been recently dredged, Lake advocates believed the problem to be 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" Lake Advocates prepared a memorandum dated November 23, 2018, and subsequently included its content 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. LLCC has included periodic dredging into LLCC's draft reserve study future expenditure needs, where it is the major future expense category.

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:**

The L/D Committee anticipates that the Project Manager approved in the FY 2022-23 budget will manage the project with assistance from knowledgeable members of the Lake Dam Committee.

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

All relevant documents developed by Lake Advocates and the Lake Dam Committee have been shared with the LLCC HOA BOD. The BOD recently approved the studies mentioned earlier upon which this work will be based. The HOA BOD has not yet filled approved Project Manager position.