



Lake Lawrence
Lake Management District
Virtual Meeting
19 February 2026
6:30-8:30 p.m.

AGENDA for 19 February 2026 LMD Meeting

- **Call to Order**
 - Introductions
 - Approval of Agenda
- Approval of 16 October 2025 Meeting Minutes
- **Public Communications**
- **Recurring/Continued Business:** - Janice
 - 2025 End of Year Budget Recap
 - 2026 Budget as of January 2026
 - Work Orders/Purchases/Invoices
- **Old Business:**
 - Lake Water Level & Floating Island Issue update – Frank
 - Senate Bill S-3518.1 update – Barry
 - Cyanobacteria Mgmt. Plan (CMP) update – Barry
 - LMD Renewal 2027 Subcommittee Update – Barry/Janice
 - 2026-2027 Budget & Work Plan Update – Janice/Barry
- Continuing Discussion of “SHALLOW WATER SIGNS” update - Barry
- 2026 LMD Invasive/Nuisance Aquatic Weed/FWL/YFI Treatment Plan update – Barry
- 2026 Yellow Flag Iris Treatment Plan update – Barry
- 2026 Fragrant Water Lily Treatment Plan update/Recommendation – Barry
- 2026 Treatment Notification Card
- 2026 Meetings & Survey Dates
- GRANT Funding update – Kim Farnes
- **New Business:**
- **Other Business:**
- **Good of the Order**
- **Adjourn**

Call to Order

- Introductions/Roll Call/Attendance
- Approval of Agenda
 - MOTION:
- Approval of 16 October 2025 Meeting Minutes
 - MOTION:

Public Communications

- Please mute yourself until you are recognized to speak.
- Please Choose the “raise your hand” option to address the committee. You will be promoted to a panelist when it is your turn to speak and be seen. To be seen, please turn on your camera. If you are dialing in, press *9 to “raise your hand.” Make sure you also choose *6 to unmute yourself.
- After you have made your comments please mute yourself.

Recurring/Continued Business

- Budget – Janice Leitzke
 - 2025 End of Year Budget Recap
 - 2026 Budget as of end of January 2026
 - Work Orders/Purchases/Invoices (next slide)

Lake Lawrence Management District
Financial Report

	2025 Budget	2025 Actuals thru 12/31/2025	2025 Variance	2025 Actual Notes
REVENUE				
Penalties - Operating Assessment	-	423	423	Late Fee, Fines and Penalties
Investment Earnings	-	-	-	
Other Interest - Operating Assess.	-	13,526	13,526	
Operating Assessment Charges	118,450	115,648	(2,802)	TC will check into why low and if we are being credited with PY collections
Miscellaneous	-	26	26	CC Rebate
O/T - General Fund			-	
Algae Grant	25,000	8,983	(16,017)	TC says that we will receive full \$50,000 grant in 2026, \$8,983 rec'd May 2025 pays for Aug 2024 only. Hold up with TC paperwork.
TOTAL REVENUE	143,450	138,606	(4,844)	
EXPENSES				
Administrative Rate at 5%	6,000	7,880	(1,880)	Per TC report, 5.69% of total revenue
Nuisance Weed Program	70,000	62,959	7,041	Sonar Treatment 3 applications 2 weeks apart, 5/21 billed \$27k, 6/11 billed \$20.8k, 7/6 \$14.6k. 31 acres treated
Cyanobacteria Mgmt Plan (CMP)	60,000	25,442	34,558	Contract with Herrera has \$93,287 for 6/2024 to 6/2026, TC recorded Oct 2025 in 2026
Yellow Flag Iris	1,500	1,500	-	LLMD's portion of bill from Public Works
Lily Treatment	2,500	1,875	625	Treatment Aug 2025 est \$1,875 for 1.5 acres at south end from NW Aquatic
Prof Svcs - Advertising	600	-	600	RFP ads, expected \$144 reimbursement, TC says it will book in 2026
Total Professional Services	134,600	91,776	42,824	
Supplies	300	300	300	
Annual Meeting and Picnic	1,500	323	1,177	
Small Tools & Minor Equip	300	300	300	
Communications (Mailers)	1,100	961	139	Annual Postcard \$686, Sonar mailing \$275
Operating Leases/Rentals (LLCC)	160	60	100	Feb, May, Oct in person meetings
Website & admin technology				
Misc.	1,000	875	125	Mailings & postage, \$55 Dec reimb booked in 2026
Total Supplies & Operating Expenses	4,360	2,218	2,142	
TOTAL EXPENSES	144,960	101,874	43,086	
NET (Revenue-Expenses)	(1,510)	36,732	38,242	

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2/19/2026

February 19, 2026 LMD Virt

Lake Lawrence Management District
Details of Financial Report

Expense Detail		Thru Dec 31, 2025		
Date	Amount	Account	Payee	Notes
1/13/2025	\$ 686.20	Communications-Mailers	Nisqually Post, NPNP2012	Annual Postcard 659@.34 plus .60 postage +\$42+ 9.3% tax
2/20/2025	\$ 267.84	CMP Study C-2	Herrera #58439	Jan 2025
2/20/2025	\$ 142.62	CMP Study D-3	Herrera #58439	"
2/28/2025	\$ 1,638.94	CMP Study C-1	Herrera #58674	Feb 2025
2/28/2025	\$ 214.27	CMP Study C-2	Herrera #58674	"
2/28/2025	\$ 374.97	CMP Study D-3	Herrera #58674	"
4/15/2025	\$ 275.29	CMP Study C-1	Herrera #58890	Mar 2025
4/15/2025	\$ 214.27	CMP Study C-2	Herrera #58890	"
4/15/2025	\$ 267.84	CMP Study D-3	Herrera #58890	"
4/16/2025	\$ 275.08	Advertising	Nisqually Post & Print	Notice of Sonar chemical weed treatment early May
5/1/2025	\$ 1,500.00	Yellow Flag Iris	NW Aquatic Mgmt	\$3,500 but Environmental Health to fund \$2,000
5/14/2025	\$ 1,302.24	CMP Study C-01	Herrera #59093	Mar 29 - May 2
5/14/2025	\$ 696.38	CMP Study C-02	Herrera #59093	Mar 29 - May 2
5/14/2025	\$ 868.46	CMP Study C-03	Herrera #59093	Mar 29 - May 2
5/14/2025	\$ 89.05	CMP Study D-03	Herrera #59093	Mar 29 - May 2
5/21/2025	\$ 27,549.20	SonarOne Weed mgmt	AquaTechnex	Inv 19237
6/11/2025	\$ 20,791.43	SonarOne Weed mgmt	AquaTechnex	Inv 19404
6/26/2025	\$ 321.41	CMP Study C-3	Herrera #59385R	May 3-30, 2025
6/26/2025	\$ 89.05	CMP Study D-3	Herrera #59385R	May 3-30, 2025
7/6/2025	\$ 14,618.48	SonarOne Weed mgmt	AquaTechnex	Inv 19651
7/14/2025	\$ 53.57	CMP Study C-3	Herrera #59602	May 31-June 30, 2025
7/14/2025	\$ 124.53	CMP Study D-3	Herrera #59602	May 31-June 30, 2025
8/11/2025	\$ 1,068.17	CMP Study C-2	Herrera #59778	July1-Aug 1, 2025
8/11/2025	\$ 107.14	CMP Study D-3	Herrera #59778	July1-Aug 1, 2025
8/18/2025	\$ 1,875.00	FWL herbicide	NW Aquatic Mgmt	Inv 1610
9/22/2025	\$ 4,198.01	CMP Study C-2	Herrera #60166	Aug2-Aug 29, 2025
9/22/2025	\$ 160.00	CMP Study D-3	Herrera #60166	Aug2-Aug 29, 2025
9/26/2025	\$ 4.11	Annual Meeting	Barry Halverson	Table cloths
9/26/2025	\$ 105.44	Annual Meeting	Barry Halverson	Envelopes, Printer Ink Cart., Name Tags, Sugar
9/26/2025	\$ 213.02	Annual Meeting	Barry Halverson	Water, Napkins, Forks, Dessert, Coffee, copy paper
9/30/2025	\$ 4,794.26	TC Admin Cost	Thurston County	per TC fin rpt rec'd 30 Sept 2025 costs thru July 2025
10/22/2025	\$ 60.00	Rent	LLCC	May, Sept, Oct in person meetings
10/31/2025	\$ 1,498.09	TC Admin Cost	Thurston County	per TC Aug, Sep, Oct Admin costs
11/15/2025	\$	CMP Study	Herrera #60640R	Oct 2025 booked by TC in 2026
11/30/2025	\$ 1,035.77	TC Admin Cost	Thurston County	per TC Nov Admin costs
12/8/2025	\$ 874.54	Renewal expense	Nisqually Print	#NPNP2985, Public Hearing Notice Paper \$151, Envelope \$177, Postage @ .59, for 657 plus data processing \$42, Labor \$42 Tax \$74
12/10/2025	\$ 1,558.56	CMP C-02	Herrera #60899	11/1/2025-11/28/2025
12/10/2025	\$ 213.57	CMP D-03	Herrera #60899	11/1/2025-11/28/2025
12/31/2025	\$ 551.85	TC Admin Cost	Thurston County	per TC Nov Admin costs
1/14/2026	\$ 9,303.17	CMP C-02	Herrera #61233	Nov 29 2025-Dec 31,2025
1/14/2026	\$ 1,714.16	CMP C-03	Herrera #61233	Nov 29 2025-Dec 31,2025
1/14/2026	\$ 178.10	CMP D-03	Herrera #61233	Nov 29 2025-Dec 31,2025
	\$ 101,874.08	Total Expenses confirmed per Thurston Co Dec 2025 rpt \$101,874.08		
CMP Study:				
2024	\$ 42,210.70			
2025	\$ 25,441.61			TC missing Oct invoice from this total
	\$ 67,652.31			Agrees to Herrera Invoice Summary of \$71,159.63 less Oct 2025 invoice booked in 2026
	\$ 25,634.69			Budget Remaining from \$93,287 total
	\$ 8,982.83			Amount Reimbursed on Grant, Expenses through Aug 2024 only
	\$ 41,017.17			Amount owed on Grant

2025 Details 2025 12 LLMD Financial Report final

2/19/2026

Lake Lawrence Management District
Financial Report

	2026			2026 Actual Notes
	2026 Budget	Actuals thru 2/19/2026	2026 Variance	
REVENUE				
Penalties - Operating Assessment				- Late Fee, Fines and Penalties
Investment Earnings				-
Operating Assessment Charges	118,000		(118,000)	
Algae Grant	25,000		(25,000)	\$41,017 owed from Grant
TOTAL REVENUE	143,000	-	(143,000)	
EXPENSES				
Administrative Rate at 5%	5,900	-	5,900	
Nuisance Weed Program	80,000		80,000	
Algae Mitigation	210,000		210,000	
Cyanobacteria Mgmt Plan (CMP)	60,000	9,791	50,209	Herrera Contract of \$93,287 ends 6/2026, \$15,844 remaining as of 1/1/2026
Yellow Flag Iris	1,500		1,500	
Lily Treatment	3,500		3,500	
Nutrient Testing	15,000		15,000	
Prof Svcs - Advertising	1,100	(144)	1,244	\$144 reimb. from 2023 to be corrected in 2026
Total Professional Services	371,100	9,647	361,453	
Supplies	125		125	
Annual Meeting and Picnic	500		500	
Small Tools & Minor Equip	300		300	
Communications (Mailers)	1,290		1,290	
Operating Leases/Rentals (LLCC)	60		60	
Website & admin technology	400		400	
Misc.	5,000	1,446	3,554	Renewal Expenses-\$317 for public hearing ads, \$1,073 for ballot mailing, stamps \$55.52
Total Supplies & Operating Expenses	7,675	1,446	6,229	
TOTAL EXPENSES	384,675	11,093	373,582	
NET (Revenue-Expenses)	(241,675)	(11,093)	230,582	

Financial Report 2026 Feb 19 LLMD Financial Report

2/19/2026

2/19/2026

February 19, 2026 LMD Virtual Mee

Lake Lawrence Management District
Details of Financial Report

Expense Detail	Feb-26		Payee	Notes
	Date	Amount		
Prior Year		\$ (143.52)	Advertising	Correction for 2024
11/13/2025		\$ 210.35	CMP C-01	Herrera #60640R Sept 27-Oct 31 2025, coded incorrectly
11/13/2025		\$ 2,869.13	CMP C-02	Herrera #60640R Sept 27-Oct 31 2025, coded incorrectly
11/13/2025		\$ 107.14	CMP C-03	Herrera #60640R Sept 27-Oct 31 2025, coded incorrectly
11/13/2025		\$ 320.70	CMP D-03	Herrera #60640R Sept 27-Oct 31 2025, coded incorrectly
12/5/2025		\$ 55.52	Renewal expense	Barry Halverson 2 books of stamps and 4 certified Letters, problem with processing
1/5/2026		\$ 317.20	Public Hearing-Renewal	CR Publishing #307914 AD#136069 for Jan 8 and 15th
2/13/2026		\$ 6,091.33	CMP C-02	Herrera #61460 Jan 1-30 2026
2/13/2026		\$ 191.99	CMP D-03	Herrera #61460 Jan 1-30 2026
3/4/2026		\$ 1,072.82	Mailing ballots	Nisqually Print, #NPNP308 Postage \$305.55, Labor \$126, Envelopes \$393.82, Paper \$156.17, Tax 91.28
		\$ 11,092.66	Total of above	
		\$ 11,092.66	Total Expenses per LLMD Financial report	
		\$ 11,092.66	Less items submitted but not confirmed by Thurston County	
		\$ -	Total Expenses confirmed per Thurston Co rpt \$	
CMP Study:				
2024		\$ 42,210.70		
2025		\$ 25,441.61		
2026		\$ 9,790.64		
		\$ 77,442.95	Agrees to Herrera Invoice Summary of \$77,442.95	
		\$ 15,844.05	Budget Remaining from \$93,287 total	
		\$ 8,982.83	Amount Reimbursed on Grant, Expenses through Aug 2024 only	
		\$ 41,017.17	Amount owed on Grant	

Work Orders/Invoices

1. Certified ltrs. mailed to 4 State Departments & Purchase of 2 books of 1st Class Stamps = \$55.62
2. Notice of Public Hearing 20 January 2026. Actual cost was \$317.20
3. Resolution of Intent Public Hearing Notification to members – Quote = \$1007.80. Sent out 3 Dec 2025. Cost was \$874.54
4. Meeting Notification Card – Quote \$602.47. DID NOT NEED TO DO THIS BECAUSE WE INCLUDED THE MEETINGS IN THE PUBLIC HEARING NOTIFICATION ON 3 DECEMBER.
5. Ballot Letter sent to members 17 Feb 26 – Quote = \$1,633 (1st Class Postage). May be cheaper if bulk mail postage can be used. **Cost was \$1,072.82.**
6. Notice of LMD Establishment published in Local Paper within 10 days of Ordinance creating LMD – Notice published by BoCC Clerk of the Board. Estimated cost is \$320.00. Actual cost was \$ _____
7. Notice of Public Hearing for Roll of Rates & Charges – Notice published by BoCC Clerk of the Commission. Est. Cost is \$320.00. Actual cost was \$ _____
8. Special Assessment Public Hearing Notification – Quote = \$1,000. Send out 16 April 2026. Cost was \$ _____
9. Treatment Notification Card – Quote \$500. Send out 16-26 March 2026 cost was \$ _____.
10. Weed Treatment – Quote \$71,308+/- 34 Acres. Send WO to contractor March 26. Treatment April, May and June 2026. Cost was \$ _____
11. YFI Treatment - \$1,500. 5-15 May 2026. Same cost as last year.

Motion to approve Items 1-3 and 5-11 - \$55.62 for Certified ltrs and stamps; \$317.20 for Public Hearing Notice for January 2026; \$874.54 for Public Hearing Letter to members; \$320 for Notice of LMD Establishment; \$1,072.82 for Ballot Mailing; \$320 for Public Hearing Notice for April 2026; \$1,000 for Special Assessment Public Hearing Notification; \$500 for Treatment Notification Card; \$72,000 for Curly Pondweed Treatment; and \$1,500 for YFI Treatment.

2026-2027 BUDGET & WORK PLAN

- ★ G • 6 May 2025 emailed to SC Members for review/comment.
- ★ G • 15 May 2025 reviewed/discussed at LMD Meeting.
- ★ G • 17 July 2025 final review/discussion/approval at LMD meeting.
- ★ G • 20 July 2025 forward to EH.
- ★ G • Status as of 16 October 2025 – Budget accepted and approved by EH
- ★ G • Budget approved by BoCC Oct 2025.



BUDGET SPREADSHEET

	2026 Proposed Budget	2027 Proposed Budget
REVENUE		
Operating Assessment Charges	\$ 118,000	\$ 195,200
Algae Grant, Dept of Ecology	25,000	-
TOTAL REVENUE	143,000	195,200
EXPENSES		
Professional Services		
White Fragrant Water Lily Treatment	3,500	3,500
Yellow Flag Iris Treatment	1,500	1,500
Aquatic Weed Treatment	80,000	88,000
Cyanobacteria Management Plan Study	60,000	-
Cyanobacteria/Algae Treatment	210,000	184,000
Nutrient Testing	15,000	15,000
Advertising	1,100	600
Total Professional Services	371,100	292,600
County Administrative Rate at 5%	5,900	9,760
Miscellaneous		
Annual Member Meeting & Picnic	500	500
Website & technology	400	180
Total Miscellaneous	900	680
Supplies and Operating Expenses		
Office Supplies	125	950
Lake Survey Costs	-	575
Tools & Equipment	300	2,000
Total Supplies & Operating Expenses	425	3,525
Communication Expense		
Annual Education Postcards	690	710
Weed Treatment Notifications Cards	600	600
Meeting Room Rental (LLCC)	60	60
Total Communication Expense	1,350	1,370
LMD Renewal Expenses	5,000	-
TOTAL EXPENSES	384,675	307,935
NET (Revenue-Expenses)	\$ (241,675)	\$ (112,735)
Estimated Beginning Fund Balance	380,000*	138,325
Ending Fund Balance	\$ 138,325	\$ 25,590

Lake Lawrence Management District
Financial Report

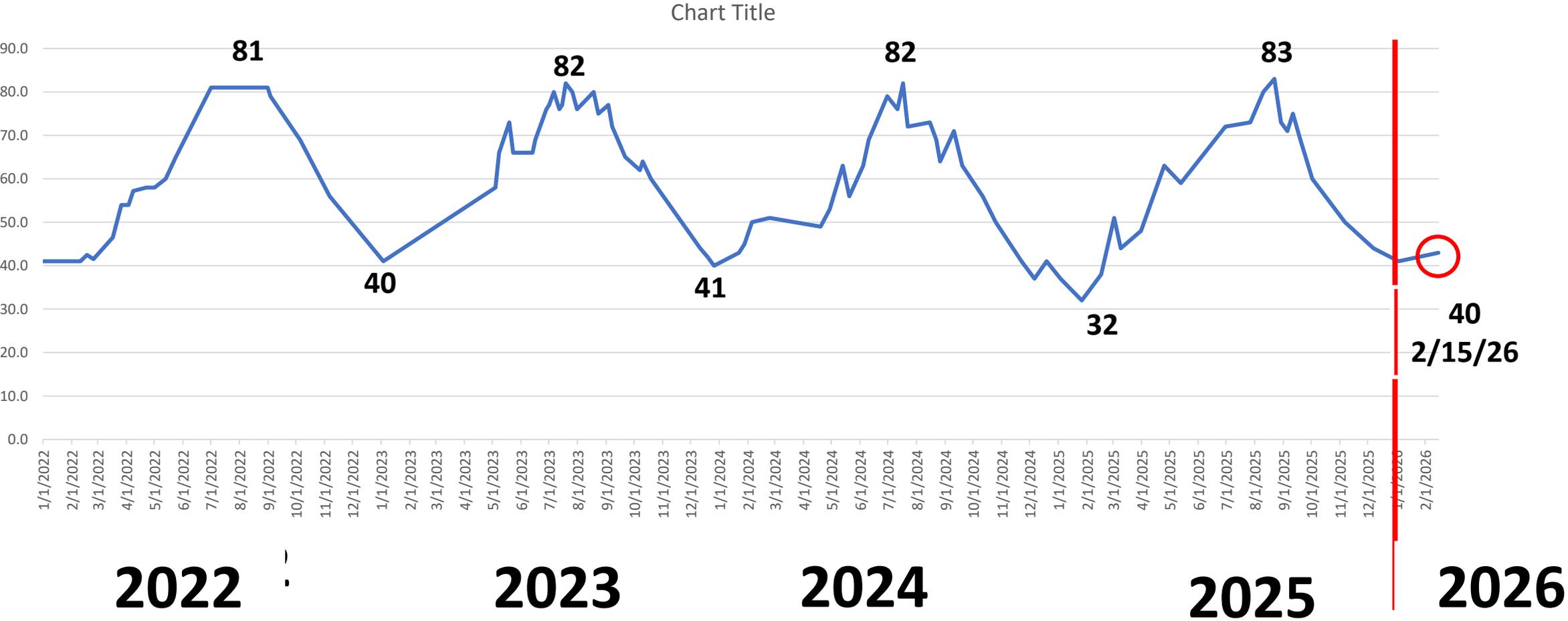
		9 year Average 2015-2023	2024 Actuals	2025 Actuals	2026 Budget	2027 Budget
REVENUE		108,370	134,370	138,606	143,000	195,200
EXPENSES						
	Thurston County Overhead	34,507	7,950	7,880	5,900	9,760
	Professional Services					
	Nuisance Weed Program	39,965	54,996	66,334	86,100	93,600
	Cyanobacteria Mgmt Plan Study		42,211	25,442	60,000	-
	Algae Mitigation, incl Nutrient Testing		-	-	225,000	199,000
	Total Professional Services	39,965	97,207	91,776	371,100	292,600
	LMD Renewal Expenses			875	5,000	
	Total Supplies & Operating Expenses	1,660	1,741	1,343	2,675	5,575
	TOTAL EXPENSES	76,132	106,897	101,874	384,675	307,935
	NET (Revenue-Expenses)	32,238	27,472	36,732	(241,675)	(112,735)
	Estimated Beginning Fund Balance		354,487	381,960	418,692	177,017
	Estimated Ending Fund Balance		381,960	418,692	177,017	64,282

OLD BUSINESS

LAWRENCE LAKE WATER MEASUREMENTS

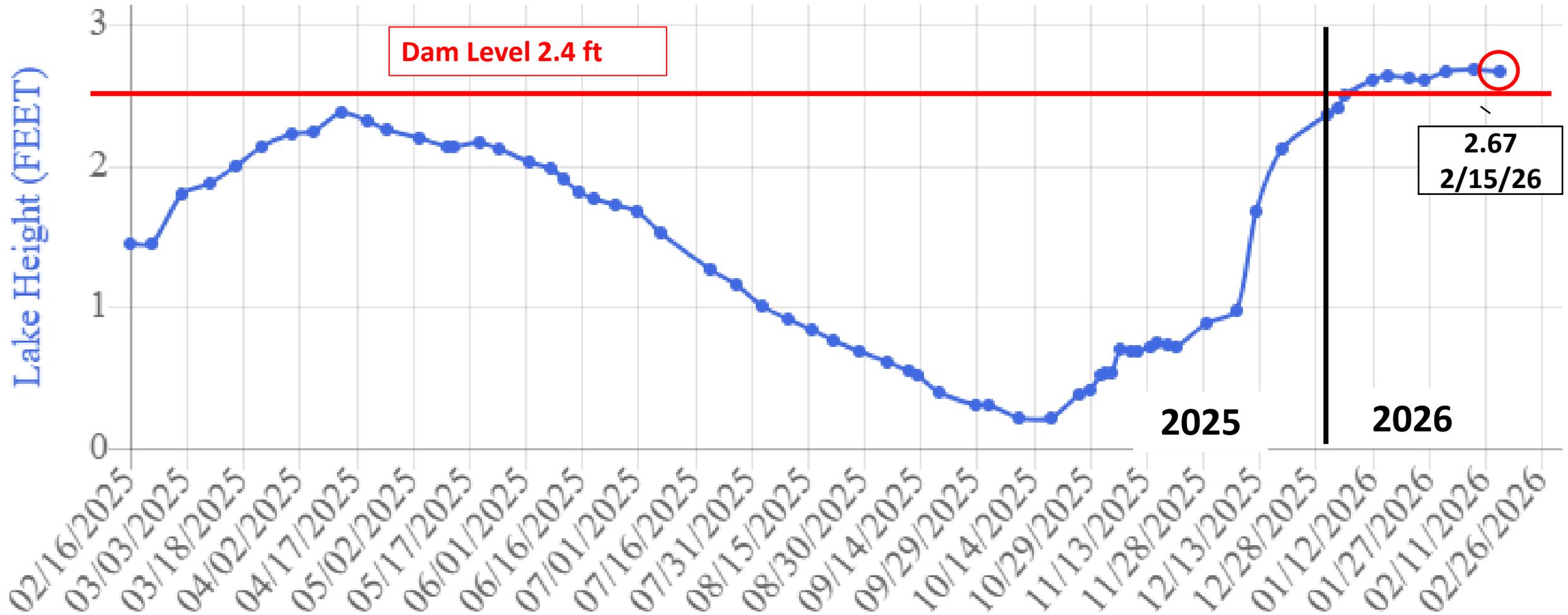
- 3 January 2026 – Water started flowing out of the Wier.

Lawrence Lake Surface Water Temperatures (LAW 2: West Basin near HOA Park)



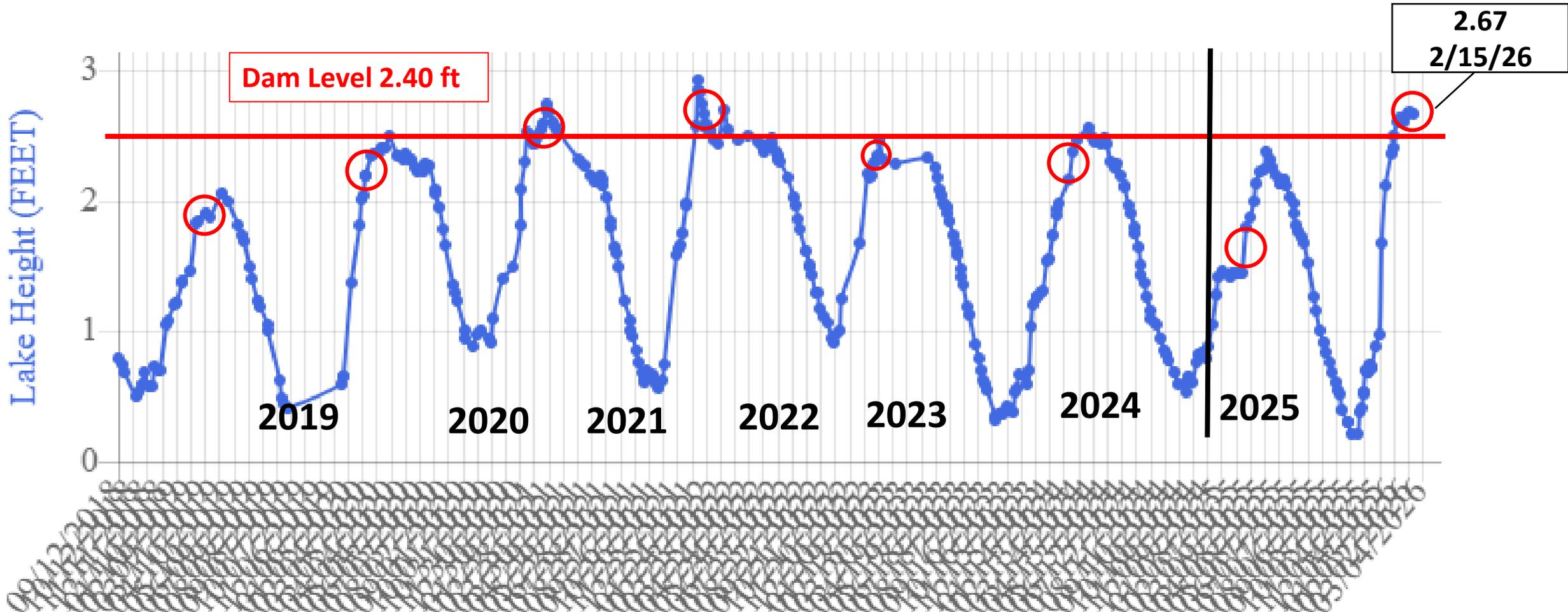
Lawrence Lake Water Surface Level LAW 2

ref: <https://liquidearthlake.website/gauge/scaledetailsall/47>



Lawrence Lake Water Surface Level

ref: <https://liquidearthlake.website/gauge/scaledetailsall/47>



○ Lake levels on 2/15/xx

Floating Island Issue

History retained for continuity.

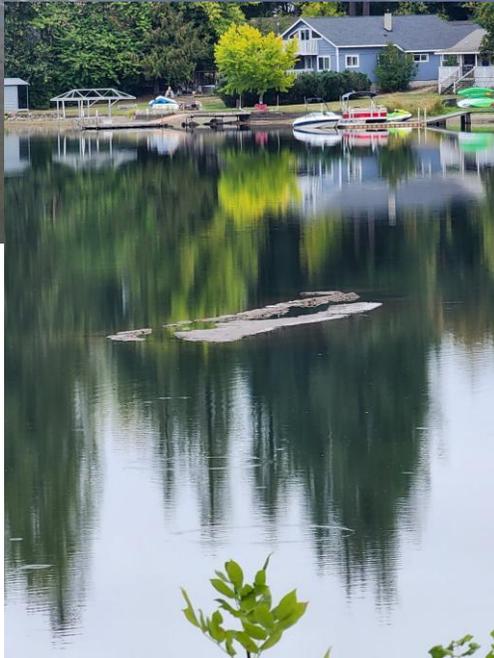
Updated 10/16/25

Floating Mat Issue

Mat sighted September 2025. Location: western shore of West Basin (~ 8' W x 60' L x 5' deep)



3 Oct 25 Floating Dirt/Mud Island



This one is about 60' x 8'

23 December 2025 YFI Floating Island –
West Lake Lawrence



6 January 2026 YFI Floating Island – possibly same
One as spotted on 23 Dec 25 in West Lake



Floating Island Issue History

Floating Mat Issue: status

- 2022-2023 Numerous communications LMD/T-County/WA DNR/WA FW
- Oct 23 Site survey by boat: LMD/FW/DNR
- Dec 23 DRAFT Presentation vetted through Lawrence Lake LMD Steering Committee
- Dec 23 Presentation sent to State Representative Abbarno's Office
- 26 January 2024 Presentation to Rep Abbarno, FW/DNR
- April 24 Lawrence Lake's State Voting District change: Reps Wilcox, Barkis; Sen McCune
- 4 April 24 New floating mat discovered, towed and secured in protected cove
- 13 May 24 LMD Floating Mat Presentation to Rep Wilcox
 - Staff directed to contact State DNR leadership for follow-up action
- 1 July 24 Follow up action: Presentation to WA State Agencies:
 - Presentation Major Point: State Constitution: DNR has Jurisdictional Authority for lake bottom beyond High Water Mark
 - Attended: Departments of Ecology, Fish and Wildlife representatives
 - **Did not attend: DNR, Hilary Franz – Commissioner of Public Lands (elected official)**
- 3 Sep 24 ECY/DNR/FW meeting with Rep Wilcox staff
 - *Lake Lawrence eutrophication is a "natural process"*
 - *"Human influence might be a beneficial premise for a study"*
 - *Sediment removal is LMD responsibility*

Floating Mat Issue: status/update

- 28 Oct 24 LMD presented the Floating Island Issue to Army Corp of Engineers (ACE) federal regulatory representative Alexandra Hammond, Seattle District Office
 - *Summary: ACE is at the tail end of any process or planning for dredging etc but can assist with any required federal permits including EPA*

Current Status: May 2025

- Floating Island issue remains a safety issue for Lawrence Lake
 - **New reported incident September 2025 “mudberg” lodged on western side of Western Basin (picture)**
- Presentations to Representatives Orcutt, Abarno negated by redistricting (20>2) Apr 2024
- Presentation to Representative Wilcox negated by Nov 2024 election/retirement
- State ECY/DNR/FW representatives assume no responsibility for the Floating Island Issue
- Federal ACE will only assist with federal “tail end” permitting (e.g., EPA)

Proposed actions for Steering Committee consideration

1. Tour Representative Marshall and ACE representative Hammond
2. Incorporate current Cyanobacteria lake study (contractor) findings/recommendations into presentation
3. Steering Cmte letter To: Commissioner of Public Lands, cc: BoCC, State Representatives: Barkis, Marshall

Senate Bill S-3518.1 Update

- 30 May DFW sent us a letter outlining their concerns
- 4 June sent email to WA LMDs to update their contact information
- 6 June sent DFW ltr and other info to WA State LMDs for their input by 14 Jun
- 14 June sent email to WA State LMDs with 2 dates for virtual mtg 19 & 20 Jun
- 19 & 20 June met virtually with WA State LMDs
- 24 June sent email with ltr to DFW addressing their concerns
- 30 Aug WALPA sent email – would like to be involved and support revision of RCW 36.61. Want to work with LMDs on changes. Waiting for date/time to set up mtg to discuss.
- 2 Sep sent email to DFW asking for a response – Responded that they will have an answer by mid-September.
- 18 Oct 2024 rec'd letter from DFW reiterating their position that the bill must include a change to the RCW regarding restructuring of public entity assessment fees in paragraph 36.61.160.
- 4 Nov 24 – Email to our legislative sponsors of the bill and WDFW representatives letting them know where the LMDs stood, asking for their input on the LMD Assessment Table and discontinuing any effort to pursue this legislation this coming session until we have had time to further discuss the bill with all City/County LMD managers and other stake holders.
- 21 Nov 24 – Email to all LMD Leadership, WALPA, and LMD City/County managers requesting their review/discussion of proposed changes to RCW 36.61 and WDFW's concerns.
- 16 Jan 25 – Virtual meeting with LMDs, WALPA and City/County LMD Representatives to discuss bill, identify any changes desired, confirm support for bill and existing changes and identify next steps. WALPA agreed to moderate discussion with DFW – Clark to reach out to them. WALPA agreed to reach out to all city/county LMD representatives to get them involved (ongoing).

Cyanobacteria Management Plan (CMP) Timeline

- ★ G • Nov 2023 - Grant request submitted
- ★ G • Jan 2024 - Grant approved by Ecology – funding not until July 2024
- ★ G • Feb 8, 2024 – RFP submitted for contractor to do plan.
- ★ G • 8 Mar 2024 – BoCC approved RFPs Clerk of the Board issued Public Notice
- ★ G • Apr/May 2024 – Bids received and evaluated
- ★ G • May/June 2024 – Contract issued (June 18th)
- ★ G • June/July 2024 – Contractor begins study – EH held virtual kickoff meeting with contractors 12 July
- ★ G • 25 July 2024 – Mtg #1 2hr Public Mtg to discuss project objectives & monitoring plan
- ★ G • July 2024 – SC receives 1st Draft of Quality Assurance Project Plan (QAPP) for review (we have 2 wks)
 - 6 Sep 2024 – Rec'd 1st Draft of QAPP for review - Reviewed same day.
 - 9 Oct 2024 – Rec'd Final Draft of QAPP for review – Signature copy going out 11 Oct.
- ★ G • August 2024 – Ecology reviews QAPP – 6 Sep – 8 Oct 24?
- ★ G • Aug/Sep 2024 – Final review of QAPP – 9 Oct 24



G = Green = Completed On Time



Y = Yellow = Late – Program Jeopardized



R = Red = Mission Fail

Cyanobacteria Management Plan (CMP) Timeline (continued)

-  • 25 Sep 24 – Lake Sediment Sampling (Completed)
-  • Oct 24-Oct 25 – LMD responsibility. Weekly water level monitoring/reporting (On track)
-  • May 2025 – Mtg #2 1 hr. w/SC to discuss monitoring update (Monday 5 May 2025)
-  • **May 2025 – Rec'd \$8,982.83 in Grant Funding. Additional funding expected Oct 25.**
-  • Dec 2025 – Mtg #3 2 hrs. w/SC to discuss Phosphorus Budget & Mgmt. Alternatives (Thursday 11 Dec 2025)?
 - Apr 2026 – Mtg #4 2 hrs. Public Mtg to go review/discuss DRAFT CMP (Thursday 17 April 2026)?
 - Jun 2026 – MTG #5 2 hrs. w/SC to discuss final CMP. (Thursday 11 June 2026)?
 - **Jun/Jul (Changed from April) 2026** – RFP issued for contractor to implement plan
 - **Aug/Sep (Changed from May) 2026** – Contractor identified
 - **Mar/Apr 2027 (Changed from Jun-Oct 2026)** – Plan/contract/treatment executed.

 G = Green = Completed On Time

 Y = Yellow = Late – Program Jeopardized

 R = Red = Mission Fail

Once we get the CMP Final Plan it will take 1-2 months to obtain approval of the plan from Ecology before we will be able to use a treatment regime recommended by the plan.

Teresi, Joseph (ECY)

30 Sep 25

to me

Hi Barry,

The LCMP must be reviewed and approved by Ecology prior to seeking additional algae program funding for implementation. As stated in the guidelines, algae control applications must have an approved plan in place prior to the end of the application period.

To accommodate extra time for completing and addressing comments for the Lake Lawrence CMP, it might be best to wait to apply until FY28. If the plan ultimately recommends a particular treatment, you may implement that treatment next fall, but at your own expense.

Generally, I work with Will Hobbs to review and provide comments/edits for recipients to address before finalizing the plan. It may take about a month to review depending on our capacity.

Best,

Joey

Joseph Teresi (he/him)

Aquatic Invasive & Algae Control Financial Assistance Project Specialist

Water Quality Program - Financial Management Section

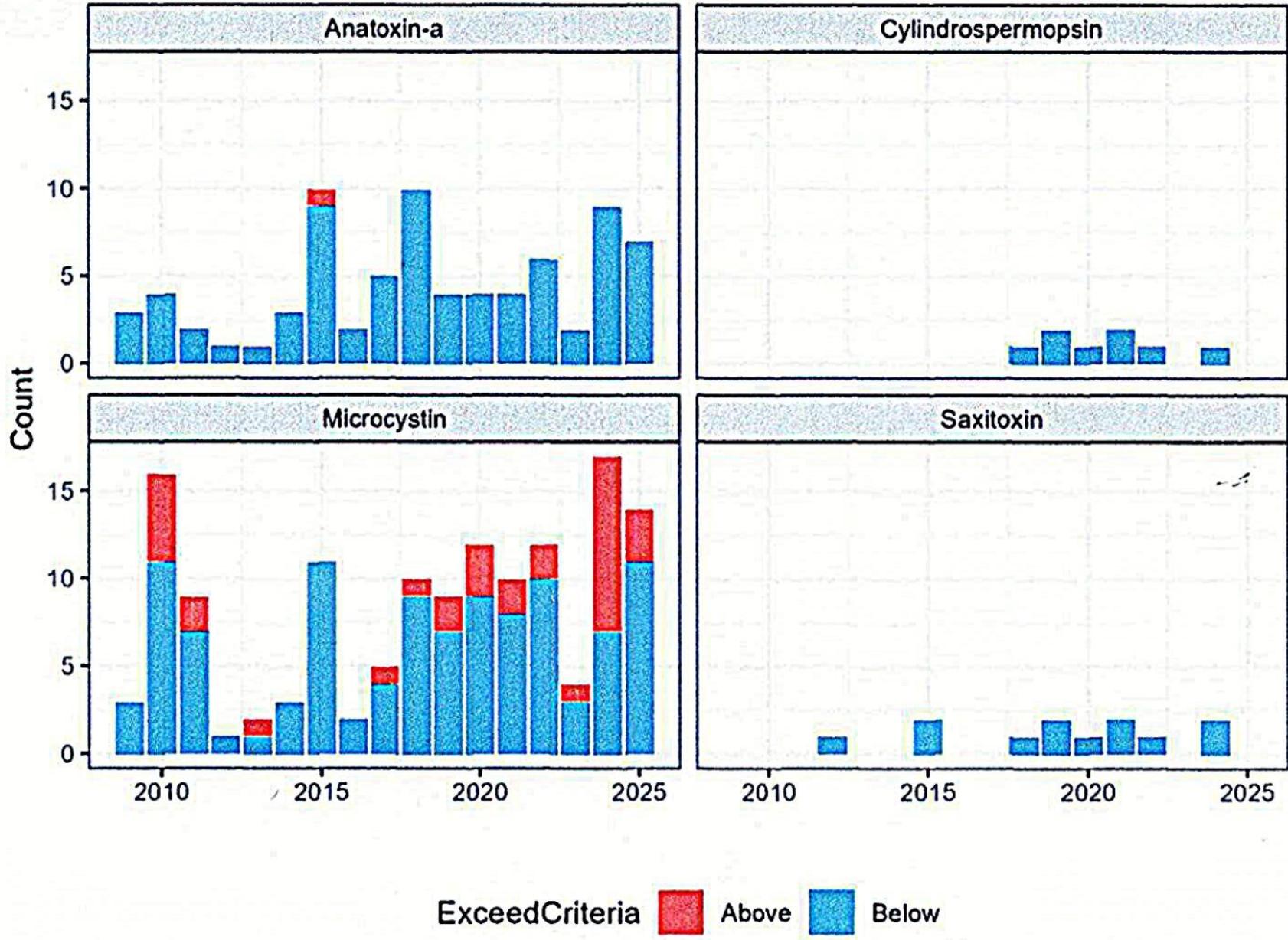
Washington State Department of Ecology

What are we attempting to control/Improve?

- Toxic Algae Blooms.
 - Total Phosphorus “P”
 - PHOSPHORUS SEQUESTRATION METHODS & COSTS Total “P” estimated at 6,717 – 7,709 lbs.
- Dissolved Oxygen Levels at deeper depths.

Days with Warning or Danger

Year	Days with Warning or Danger
2010	59
2011	35
2012	0
2013	16
2014	0
2015	35
2016	0
2017	13
2018	13
2019	19
2020	35
2021	29
2022	19
2023	13
2024	147 (includes blooms going through Feb 2025)
2025	28



ExceedCriteria Above Below

Phosphorus Inactivation Preliminary Comparison

	Alum	Lanthanum	Iron	Calcium
Commercial Products	Available from general chemical suppliers	PhosLock EuroSorb G	ZVI Iron Salts	OASE SeDox
Mode of Inactivation	Forms stable complexes with dissolved phosphorus. Forms floccules that pull particulate phosphorus from the water column. Stable at pH range 5.5 to 9	Forms stable complexes with dissolved phosphorus. Does NOT form floccules Stable at pH <9	Iron oxyhydroxides provide binding sites for phosphate and other ions. Iron-phosphate bonds may break down in low oxygen conditions.	Forms Calcite (CaCO ₃), stripping P from water column. Precipitates may dissolve in hypolimnion Less effective at pH <9
Mass Ratio (kg product to kg P)	2 to 20 Al : P	5 La : P	44 Fe : 1	50 SedDox : 1
Lawrence Dose	6,800 kg Al (unbuffered) 66,200 kg Al (buffered)	16,500 kg La (165,000 kg EutraSorb G; 331,000 kg Phoslock)	149,000 kg	165,000 kg SedOx
Potential Negative Consequences	Possible toxicity with improper application	Possible in-lake or sediment but not expected at planned doses and formulation. (La is applied bound to clay and will bind with P)	Not expected	Not expected
Permitting	Approved in Ecology Permit	Approved in Ecology Permit	Approved in Ecology Permit, but not for anoxic areas	Approved in Ecology Permit
Treatment Cost (does not include monitoring + permit)	\$90,000 (low dose; unbuffered) \$1,200,000 (buffered)	\$1,800,000	\$270,000	\$2,700,000
Longevity	1 year (unbuffered) 5 to 10 years (buffered)	5 to 10 years	1 to 2 years	<3 to 5 years
20 Year Cost Estimate (mid-point longevity; not adjusted; includes \$50K for monitoring/treatment)	\$2.8M (unbuffered) \$3.3M (buffered)	\$4.9M	\$4.3M	\$13.8M

Phosphorus Inactivation of the Lake Sediments

Remove phosphorus available for algae from the water column.

Several chemicals are available

- Alum
- Lanthanum
- Iron
- Calcium
- Additional proprietary blends

Does not improve bottom oxygen or fish habitat



Aluminum Sulfate (ALUM)

- **ALUM** (Info provided during work session with Solitude Lake Management 22 January 2026 & AquaTechnex 29 January 2026 – Videos posted)
- Alum is safe to use for people and fish when dosed correctly. A combination of aluminum sulfate and sodium aluminate is used in the treatment. Cyanobacteria thrive on phosphorous but the aluminum binds with it, settles it to the bottom and essentially forms a protective blanket locking the phosphorus into the lakebed.
 - Alum treatments inactivate the internal cycling of inorganic and organic phosphorus.
 - The alum is applied near the water surface, removing phosphorus from the water column as it flocculates and settles. It then covers the bottom sediments to further prevent the internal release of phosphorus from the sediments.
 - pH testing is done throughout treatment to ensure pH levels do not spike. Buffering agents can be added to keep pH levels consistent during application. **For our lake buffering agents would need to be added.**
 - Alum strips the water column of algae with the unintended effect of increasing light availability and therefore increasing the area of rooted plant growth in lakes. More aquatic plant growth in deeper areas of lake where it did not previously grow.
 - New testing requirements are being recommended in the updated APAM. Will require higher testing costs.
- ALUM applied to Green Lake, Seattle, WA 1991, 2004 and 2016 (\$800,000). (Info found online)
 - Repeat treatments needed every 5-10 years depending on volume of phosphorus entering lake through vents, streams, rivers, overland flow, etc.
- ALUM applied to Black Lake, Olympia, WA (Info provided by Lake Stintzi, Black Lake SUD)
 - 2017 – Light application ~\$500,000 – three years later toxic algae shows up again.
 - 2021 (\$1.4 Million – included testing and buffering agent). No blooms since. Hopefully will last 10+ years.

ALUM Testing Requirements (2026 APAM)

Table 5: Monitoring Schedule Summary for Alum

Frequency	pH (in situ)	(Vertical profile) pH, Temperature, Conductivity, Dissolved Oxygen, % Saturation	Hardness (as CaCO ₃)	Total alkalinity (mg/L)	Dissolved organic carbon (mg/L)	Total aluminum (µg/L)	Sulfate (mg/L)
Pre-treatment	—	✓	✓	✓	✓	✓	✓
During	✓	✓	—	—	—	—	—
Day after treatment	—	✓	✓	✓	✓	✓	✓
2 weeks	—	✓	✓	✓	✓	✓	✓
1 month	—	✓	✓	✓	✓	✓	✓
2 months	—	✓	✓	✓	✓	✓	✓
6 months	—	✓	✓	✓	✓	✓	✓
9 months	—	✓	✓	✓	✓	✓	✓
12 months*	—	✓	✓	✓	✓	✓	✓

Pre-treatment must include a minimum of 3 samples within 3 months of treatment.

*Some post-treatment sampling events may be suspended as described in S6.B.2.g.

BARE BONES ALUM TESTING COSTS (Herrera)

Cost Estimate for Alum Treatment Monitoring					
Herrera Project No. XX-XXXX-XXX					
2/6/2026					
Herrera Labor based on: Burdened Labor Rates					
		Task No.	1	2	Total
			Alum Monitoring	Reporting to Ecology	
Schedule	Task Start Date	1/1/2027	1/1/2027		
	Task End Date	10/1/2027	11/1/2027		
Staff	Labor Category	2026 Burdened Labor Rates			
Garcia, David	Scientist III	\$144.55	56	0	56
Clark, Timothy	Scientist V	\$231.38	7	13.5	20.5
		Total Hours per Task	63	14	76.5
		Subtotal Labor	\$9,715	\$3,124	\$12,838
		Subtotal Herrera Labor	\$9,715	\$3,124	\$12,838
Travel and Per Diem (PD)					
Item	Unit	Unit Cost			
Auto Use	Mile	\$0.725	910	0	910
		Subtotal Per Diem	\$660	\$0	\$660
Laboratory Costs					
Item	Unit	Unit Cost			
Aluminum	Sample	\$25.00	18	0	18
Alkalinity	Sample	\$21.00	18	0	18
Sulfate	Sample	\$32.00	18	0	18
DOC	Sample	\$55.00	18	0	18
Hardness	Sample	\$30.00	18	0	18
		Subtotal Lab Costs	\$2,934	\$0	\$2,934
Other Direct Costs (ODCs)					
Item	Unit	Unit Cost			
Courier	Cost	\$100.00	2	0	2
Water quality multimeter (YSI)	Day	\$125.00	7	0	7
		Subtotal ODCs	\$1,075	\$0	\$1,075
		Subtotal Per Diem, Lab Costs, and ODCs	\$4,669	\$0	\$4,669
		Grand Subtotal	\$14,383	\$3,124	\$17,507
		Grand Total			\$17,507

Note: Herrera adjusts labor rates annually in January unless contract specifies otherwise.

This assumes:

1. Thurston County EH collects required samples during their routine May and June events. Only the costs for additional lab analysis are included for those events.
2. A consultant travels to Lawrence for sampling on 7 occasions – during January, February, March, day after treatment, the 2-wk after sample in May, Sep (6 mos. after), and Dec (9 mos. after). Consultant will bring needed equipment, but would need a boat from lake resident to reach monitoring sites.
3. Two sites will be sampled for the additional analytes.
4. Additional chemical analysis will be conducted at IEH Lab in Seattle at rates recently quoted to Herrera.
5. Herrera rates are assumed for additional sampling and reporting to Ecology. (This could be done by applicator, TCEH, or with training LMD members).
6. Cost est. focuses on bare minimum reporting and does not include a summary report evaluating effectiveness and recommendations for adaptive management.

Bare Bones Cost if we get help from County = \$17,507

Eutrosorb G (Lanthanum)

- EutroSORB G - Has 10% **Lanthanum**. (Info provided during work session with EutroPHIX 15 January 2026 – Video posted)
- PHOSPHORUS SEQUESTRATION METHODS & COSTS Total “P” estimated at 6,717 – 7,709 lbs.
 - Total reset for all P \$1,624,500 to \$2,166,000
 - 10 Year Plan - \$162,450-\$216,600 per year
 - 20 Year Plan - \$81,225 - \$108,300 per year

Estimate provided by Aquatechnex
- Currently used in the following lakes:
 - Long Lake – routine applications – sometimes 2x a year \$200,000+ - no toxic algae blooms since 2021 when treatments started.
 - 2024 Application:
 - May 15, 2024 – 20,000 lbs. of Eutrosorb to 259.38 acres - \$62,552
 - May 29, 2024 – 16,400 gals of Aluminum Sulfate (to strip water column) to 259.38 acres - \$62,552
 - August 14, 2024 – 12,700 lbs. of Eutrosorb G to 165 acres (12” and deeper areas) - \$78,703
 - Did not include testing costs – Long Lake did their own – Those cost would be ~ \$22,100

Total: \$203,807
Not including testing
 - Spanaway Lake – Once a year whole lake application \$160,000 2023, Aug 2024, Late May and Early Aug 2025 – Have still had toxic algae blooms. Still studying Oxygenation System
 - Kitsap Lake – ~\$200k a year – good success. Prior to 2024 Phosloc was used (\$175,000). They are now using Eutrosorb G.

Eutrosorb SI (Lanthanum & Iron)

- **Iron-Bound Lanthanum.** (Info provided during work session with EutroPHIX 15 January 2026 – Video posted)
- New product. Environmental Impact Statement (EIS) in process. Out in Dec 25.
- Granular product – does not strip water column of algae like ALUM and ZVI.
- Should be authorized in March 2026 with publishing of new APAM.
- Will continue to monitor progress and evaluate EIS when completed.

EutroSORB G & SI Testing Requirements (2026 APAM)

Table 6: Monitoring Schedule Summary for Lanthanum Products

Frequency	pH, Temperature, Conductivity, Dissolved Oxygen, % Saturation	Hardness (as CaCO3)	Total alkalinity (mg/L)	Dissolved organic carbon (mg/L)	Total Lanthanum (µg/L)	Filterable Lanthanum (µg/L)
Pre-treatment	✓	✓	✓	✓	✓	✓
Day after treatment	✓	✓	✓	—	✓	✓
1 month	✓	✓	✓	—	✓	✓
2 months	✓	✓	✓	—	✓	✓
3 months	✓	✓	✓	—	✓	✓
6 months	✓	✓	✓	—	✓	✓
9 months	✓	✓	✓	—	✓	✓
12 months*	✓	✓	✓	—	✓	✓

Pre-treatment must include a minimum of 3 samples within 3 months of treatment.

*Some post-treatment sampling events may be suspended as described in S6.B.2.g.

Zero Valent **Iron** (ZVI)

- **Zero Valent **Iron** (ZVI) – Hepure Product – inert product** (Info provided during work session with Hepure 29 January 2026 – Video posted)
 - **Approved by APAM – not experimental.**
- **Benefits of Zero Valent Iron Remediation (ZVI):**
 - **Cost-effective** – ZVI remediation provides the most value in consideration of reactivity and longevity in comparison to chemical oxidants
 - **Safe** – does not contain harmful chemicals and are safer to handle when compared to chemical oxidants
 - **Long-term treatment (3-15 years longevity)** – zero valent iron powder provides a long-term treatment solution
 - **Sustainable/recycled/green** – Hepure’s ZVI is recycled iron cuttings from production facilities which may be otherwise disposed at a landfill
 - **Destroys contaminants with no toxic end products or by-products** – ZVI is a biotic reaction which destroys the contaminate with no intermediation by products such as dichloroethane and vinyl chloride
 - **Synergistic with bioremediation treatments** – conditions the aquifer for ongoing bioremediation without providing potential bio-toxic chemicals or unfavorable aquifer conditions such as pH
 - **Not impacted by Soil Oxidant Demand (SOD)** – does not react with the soil so all reactivity can be directed to the contaminant

Zero Valent Iron (ZVI) (Info provided by NW Aquatic)

- Currently being used at Steilacoom Lake, Pierce County, WA. Don't know of any other lakes using ZVI in WA State.
- Granular ZVI used as a targeted product over vents in lake floor or water entry locations (Streams, etc.)
- Powder ZVI used to strip water column over large areas of lake.
- 2024
 - April/May granular over vents. Treated with Hydrothol (algicide) prior to using ZVI.
 - July 14,000 lbs. of powder in both basins of lake.
 - Regular testing done.
- 2025 
 - Apr/May granular used over vents.
 - July 7,000 lbs. of powder used in south basin only.
 - Sep 7,000 lbs. of powder used in south basin only.
 - Regular testing done (monthly).
 - Used some Hydrothol (algicide), not necessary to control toxic algae – used to get rid of excess filamental algae at member's request.
 - No toxic algae blooms in 2025
- May work here at Lake Lawrence. **We have been quoted a cost of \$193k +**

Granular – 12,000 lbs. = \$30,000
Shipping = \$5,950
Application Costs = \$9,000
Sub Total = \$44,950
Power – 14,000 lbs. = \$50,820
Shipping = \$4250
Application Costs = \$61,095
Sub Total = \$116,165
TOTAL = \$161,115

ZVI PROS & CONS (Herrera)

Pros	Cons / Questions
<p>Cheaper (~10 to 15% of the cost of alum for a sediment dose)</p>	<p>Uncertain effectiveness: sediment anoxia and production of iron-sulfide may prevent stable iron sequestration by ZVI. Initial dosing <i>may</i> initially overcome the existing sulfate, but ongoing inputs of sulfate (e.g., organic matter, surface and subsurface weathering of sulfur-containing minerals). This would require future ZVI-dosing.</p>
<p>No human health impacts are expected.</p>	<p>Potential Aesthetic Impact? When iron is oxidized, it generates a rusty orange color. Could a high iron dose result in "orange water events" during lake turnover? Chemical equilibrium modeling could be done to evaluate this possibility.</p>
<p>No toxicity impacts expected for fish/aquatic life (but some concern for gill-clogging during treatment; see con).</p>	<p>Nano ZVI may cause respiratory distress in fish by clogging gills. (However, we would expect fish to avoid areas of treatment and the clouds of turbidity).</p>

ZVI Testing Requirements (2026 APAM)

Table 7: Monitoring Schedule Summary for Iron Products

Frequency	pH, Temperature, Dissolved Oxygen, % Saturation	Nitrate (mg/L)	Total Iron (µg/L)
Pre-treatment	✓	✓	✓
Day after treatment	✓	✓	✓
1 month	✓	✓	✓
2 months	✓	✓	✓
3 months	✓	✓	✓

Pre-treatment must include a minimum of 3 samples within 3 months of treatment.

* Some post-treatment sampling events may be suspended as described in S6.B.2.g.

OASE Lake Therapy Product (Calcium Chloride)

(Info provided during work session with OASE Living Water 22 January 2026 – Video posted) (Info provided by OASE Distributor)

- OASE Lake Therapy – Using Calcium Chloride based products – Not currently approved by APAM. Would require an experimental use plan.
 - OASE Recommends:
 - SeDox initially to address water quality (striping P from water column) which would also address bio-available P at the water/sediment interface and provide oxygen to the water and a dose of dissolved inorganic carbon (Total Alkalinity). This would restore the overall health of the lake, making it more resilient to conditions that lead to HABs. Cost is \$254 per 50lb bag and would require one 50 lb bag to eliminate 1.5 lbs of P. With our lake having ~ 6,700 to 7,700 lbs of P the cost would be ~ \$11.1 Million.
 - SchlixX Plus costing \$319 per 50 lb bag and applied in the early part of the season (April) over time to reduce sediment levels. Estimated cost for this ~\$1.2 Million. What time frame are we talking about? This will help with overall lake health by digesting the organics while binding up nutrients given off from the digestion of said organics.
 - Our CMP Contractor has suggested this product may not be best product for our lake based on our low or soft water pH levels. This calcium based product performs better in hard water. After reviewing our water tests OASE does not feel pH would be a problem.
 - Product currently not approved by WA State. Would require Experimental Phosphorus Sequestration Product Use Plan through WA State Dept of Ecology. OASE had agreed to pay for this cost.

Hypolimnetic Oxygenation System (Mechanical System)

(Info provided during work session with Clarity Resources Group 22 January 2026 – Video posted)

- **Oxygenation System** (info provided by Sandy Williamson, Spanaway Lake & Herrera Inc.)
 - Currently being studied by Pierce County for use in Spanaway Lake.
 - Air injection system pumped into deepest parts of lake to pump oxygen into lake.
 - Multiple basins/deep areas may require multiple pumping stations.
 - Requires land to install generators, tubes from generators into water at deepest points.
 - 24/7 electricity to run system. ~ \$25,000 a year.
 - Frequent maintenance. Requires maintenance contract.
- Cost – Very expensive, but exact costs dependent on lake. Costs are “forever costs”. Initial costs about \$2 Million.

POSSIBLE LOCATIONS OF OST SYSTEM

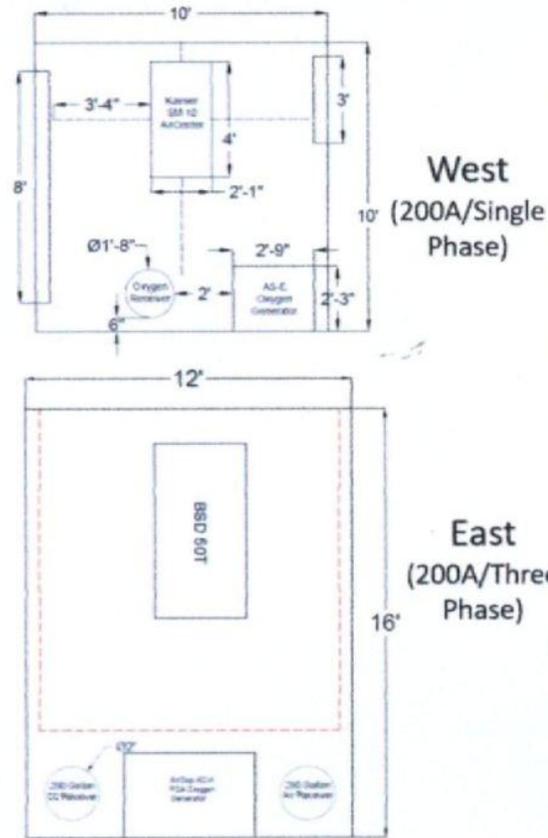
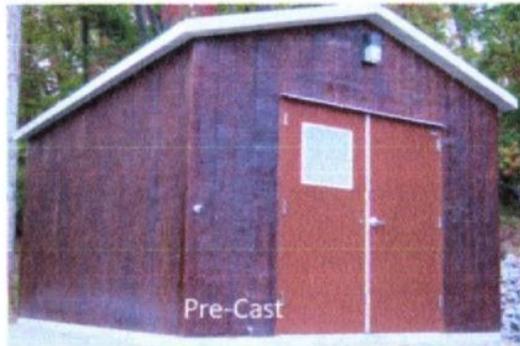
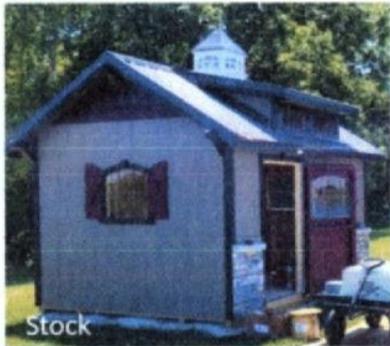
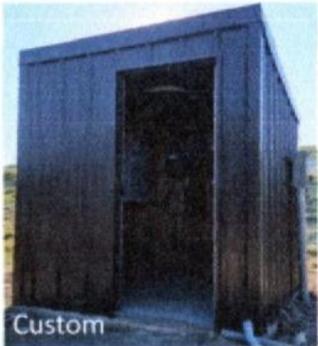
West Lake Location:
James & Ruth Boyle
Property
Have not discussed
with them yet – plan to
do so prior to March
LMD Mtg



East Lake Location:
Wildaire HOA Property
Have discussed with
them – Willing to do
this. 25 Feb Mtg with
HOA Board to discuss
further. I will be
attending to answer
HOA Board questions.

OST SHORE BLDG FOOTPRINT EXAMPLES

Building Footprint and Examples



Electrical Connection with PSE – Frank Hudik

Trenching for electrical – Frank/Mark
Permitting requirements – Barry
working with County Permit Dept.

Design – Barry working with Pierce Cty
Water Resource Dept Project Mgr for
Spanaway Lake – Brianne Blackburn

Hypolimnetic Oxygenation

Oxygen Saturation Technology (OST)

- Ensures that the deepest waters of the lake remain oxygenated throughout the summer.
- Maintains chemical conditions such that phosphorus is immobilized in the lake sediments.
- Will increase binding opportunity for phosphorus introduced from groundwater.
- *Added benefit:* Provides cool habitat for cold-water fish, like trout

Recommended Timeline

Design, permitting, and construction will take two to three years. Operational by 2026.

Estimated Cost

\$1.8 million for construction

\$20 thousand in annual operation

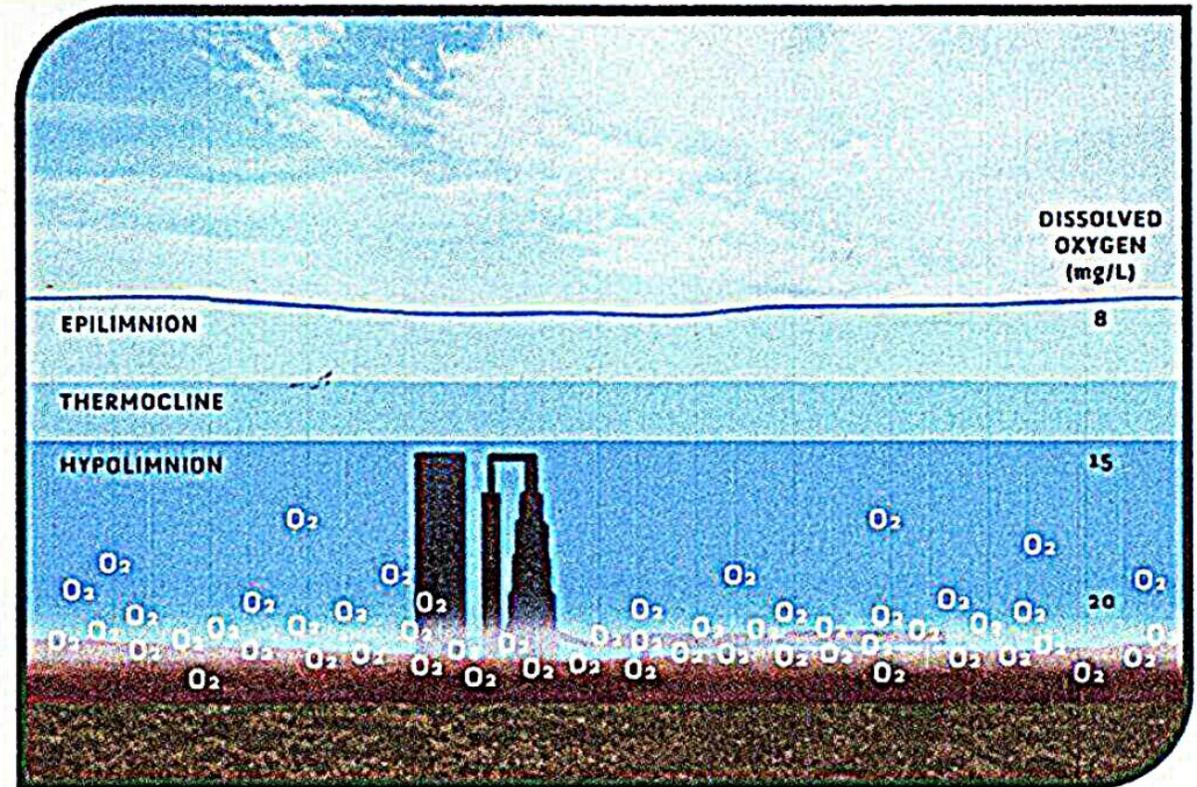
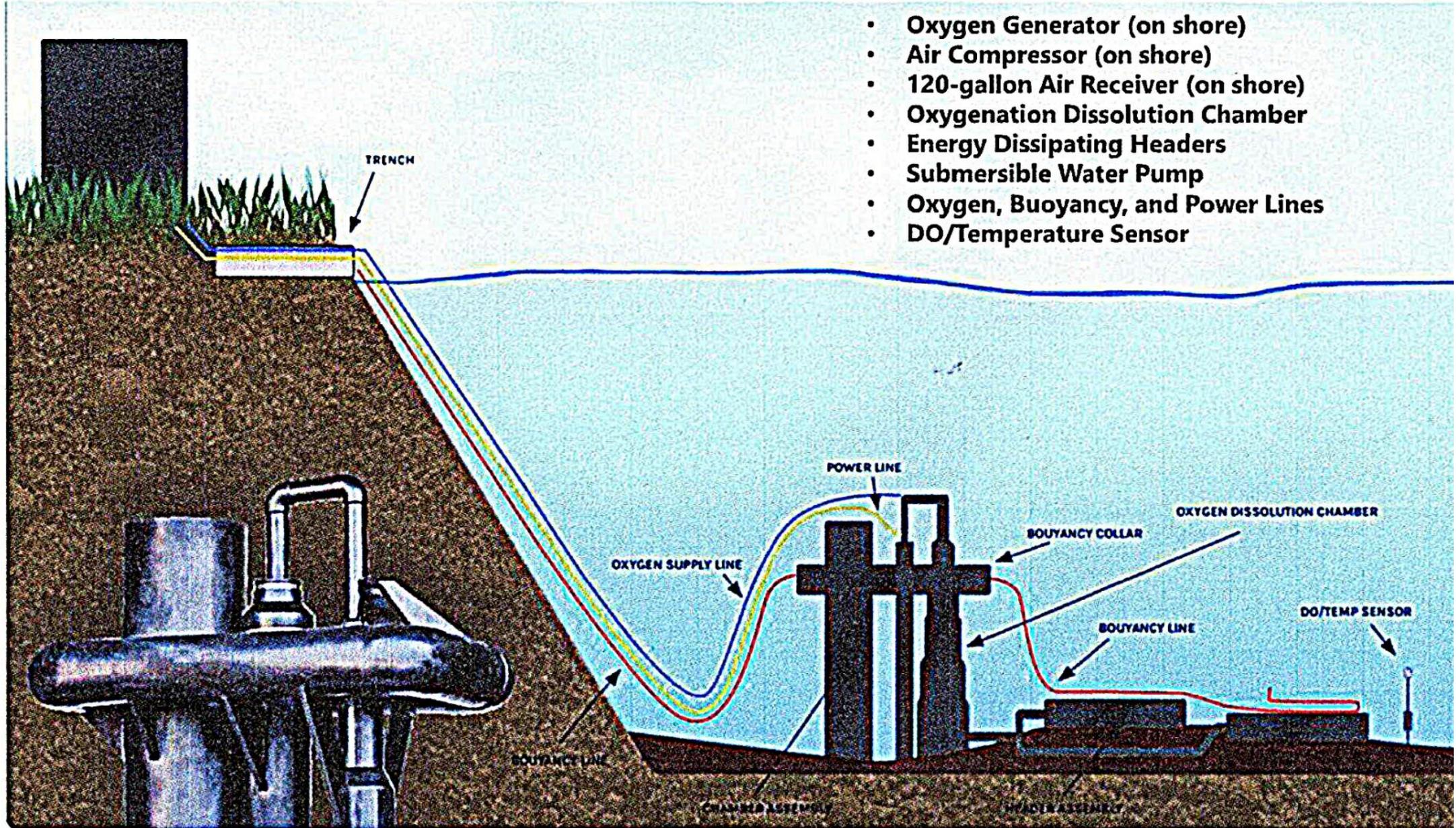


Diagram shows Naturalake OST distributing oxygen rich water throughout the hypolimnetic layer, blanketing and penetrating the sediment.

OST System Components



Onshore Oxygen Supply (PSA)



Compressed Air Supply



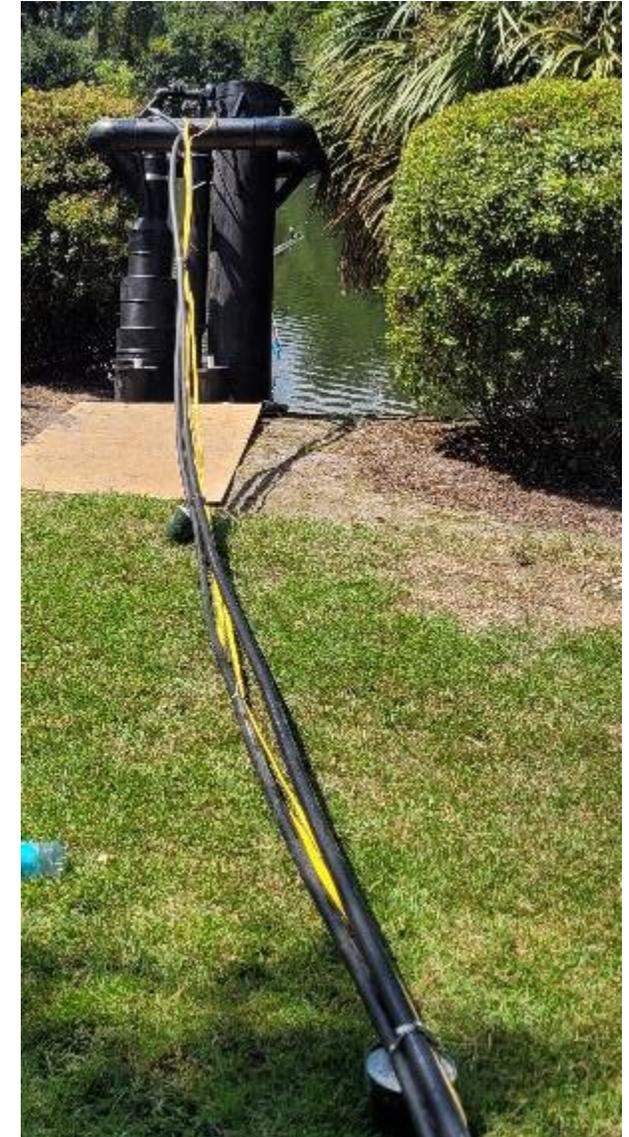
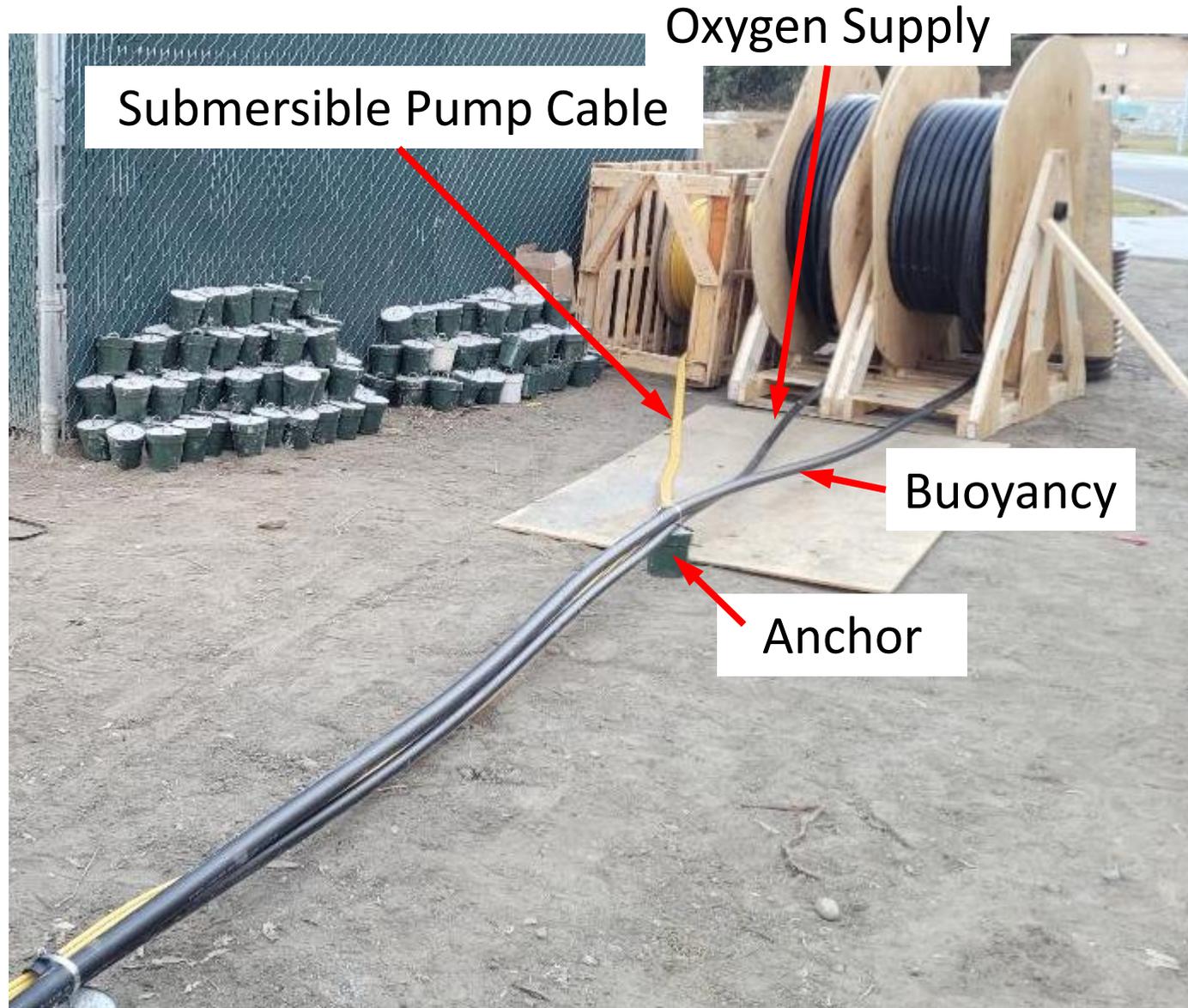
Oxygen Generator
(Nitrogen Stripper)

Oxygen Receiving Tank

Concerns

- **Risk of shock** – GFCI breakers on all 3-Phase pumps. A 3-phase Ground Fault Circuit Interrupter (GFCI) prevents electric shock in water by constantly monitoring the current balance among all three phases. If a leakage current occurs (e.g., electricity traveling through water to ground), it detects a tiny imbalance – typically 20 mA or less – and cuts power within 1/40th of a second.
- **Noise** –
 - The Compressor has a noise rating of 67 dba.
 - The Generator has a noise rating of 72 dba.
 - For comparison, a 3 Hp exhaust fan has a noise rating of 80-90 dba.
 - Further noise dampening by insulating the exhaust hood and creating a 90-degree turn.

Umbilical – O₂ Supply & Pump Power Supply

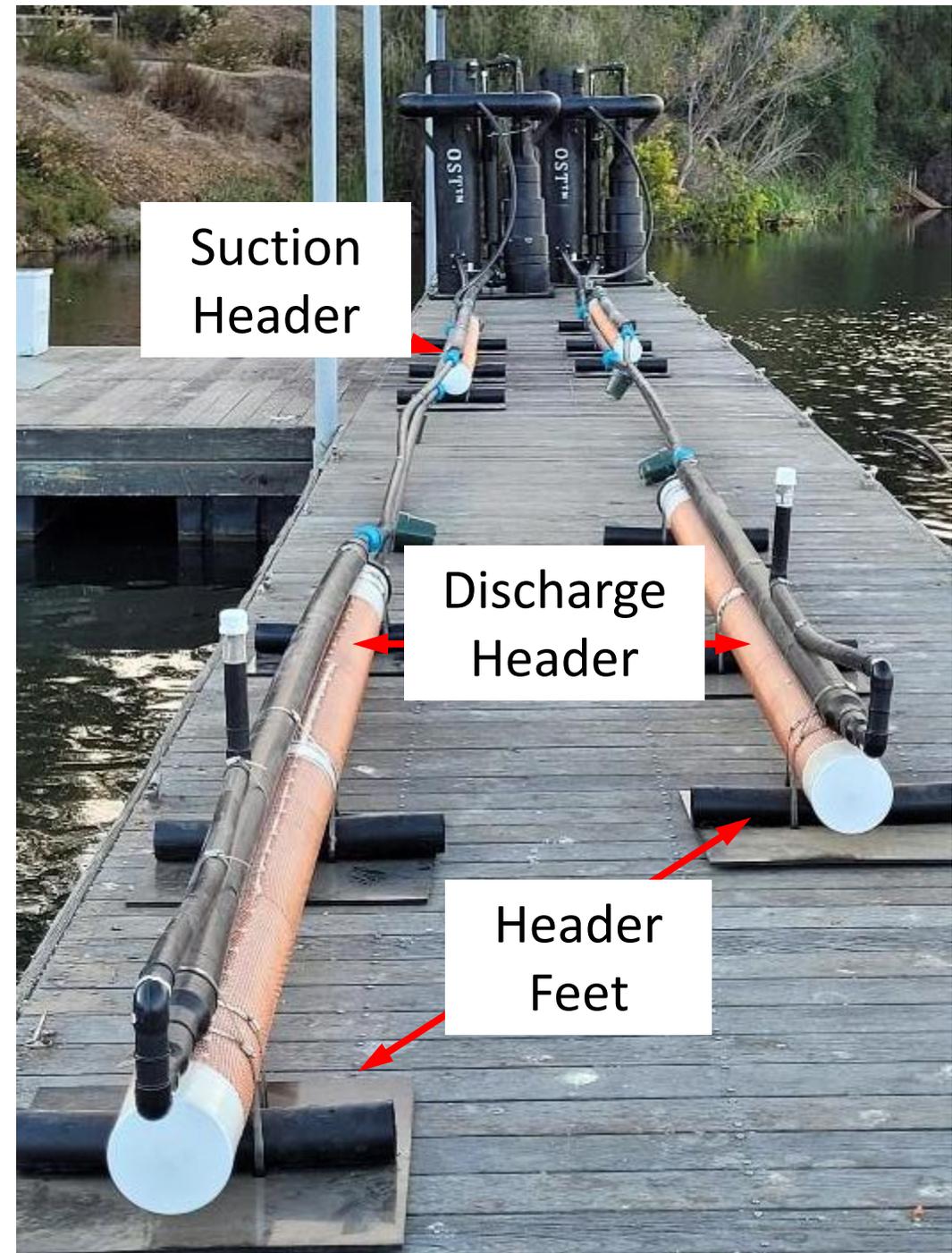


Suction & Discharge Headers



Buoyancy Pipe

100s of slotted openings covered with copper mesh.



Suction Header

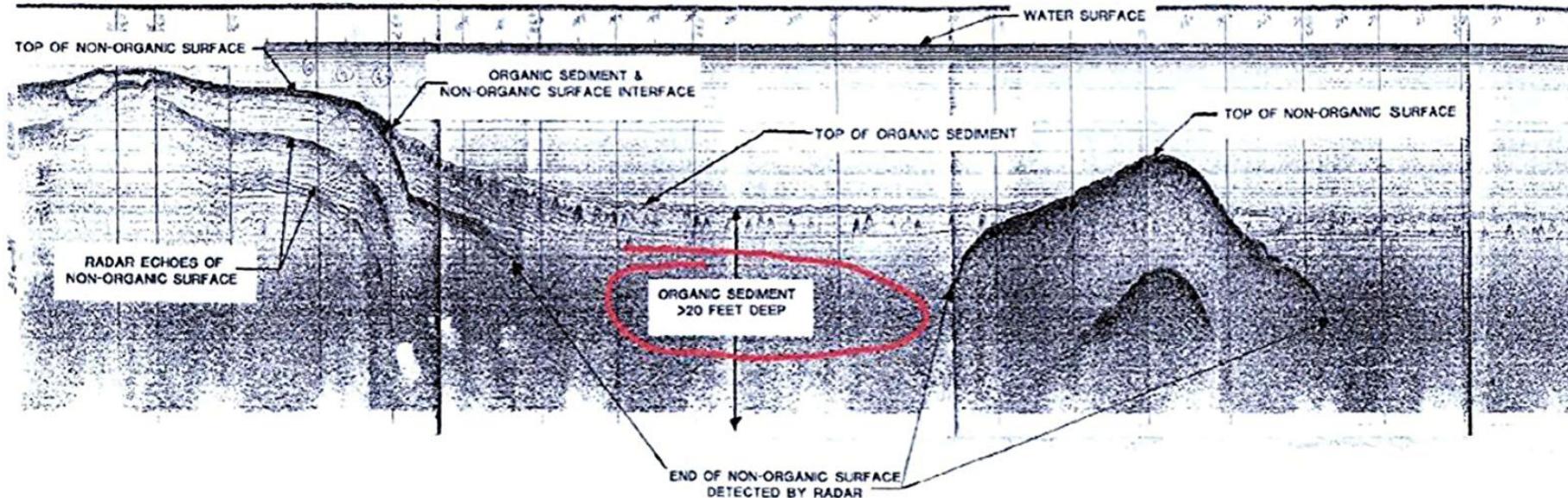
Discharge Header

Header Feet

Dredging - continued

- **Permitting**
Estimated at \$200K before work starts
- **Dredging**
\$55 to \$75 per yard + mobilization/trucking
(Sea & Shore Construction Inc.)

Dredging Extent	Cubic Yards	Cost if Material Left on Site	Cost if Material Trucked Away
Nearshore – (Would not improve WQ)	120,000	\$7M	\$9M
Big Basin – Hypolimnetic Area Only	4,574,000	\$252M	\$343M
Whole Lake	10,533,000	\$579M	\$790M



1995 Nearshore Only Estimate:
\$1.85M (1995) = \$3.9M
(included haul away)

Dredging

- **Mechanical** - Collect bottom sediment using a boat, crane, and barge.
 - **Hydraulic** - Underwater cutter and pumps to create slurry, which is piped via floating pipeline.
- Dewater sediments on shoreline.
- Haul away or dispose nearby.
- Estimated 4 to 10 million cubic yards would need to be removed
 - (enough area to cover 100 acres with 25 to 60 feet of sediment)
- Require extensive permitting
 - USACE 401/404, SEPA, HPA, Shoreline Development, Aquatic Use
- Dredging may take >10 years to complete



FULL RESET COST COMPARISON

RECOMMENDED FULL RESET OF ALL 7,250 LBS. OF "P"																	
PRODUCT	DISTRIBUTOR	CONTRACTOR	Cost per lb. of "P" Unbuffered & Buffered	Amt of "P" In lake 7,250 lbs. X lb. Buffered & Unbuffered = Total Reset	Cost Per Lb./Gal Buffered & Unbuffered	Total Product Cost for total reset	Time to Apply Product	App Cost per lb. / Gal	Total App Cost	Shipping / Handling Costs	Total Treatment Costs	Analytes Required to be tested w/new APAM Mar 26	Testing Costs - figured by Herrera	Can Product be applied over yrs?	Total Cost Product + App + Shipping + Testing		APAM Approved
ALUM	None-Commodity	AquaTechnex			\$1.80 / Gal		?	Included in Product Cost		\$0.60 /Gal shipping		DO/pH/Temp/ Conductivity/% Saturation/Hardness (as CaCO3)/Total Alkalinity (mg/L)/ Dissolved Oxygen Cargon (mg/L)/ Total Aluminum (ug/L) / Sulfate (mg/L)	\$18,000 below	Yes - See			Yes
ALUM	None-Commodity	Solitude Lake Mgmt	\$195 per lb. Buffered : 1 lb. "P"	\$195 per lb of "P" x 7,250 = \$1.41 million		\$1.41 million	96 hrs	Included in Product Cost				DO/pH/Temp/ Conductivity/% Saturation/Hardness (as CaCO3)/Total Alkalinity (mg/L)/ Dissolved Oxygen Cargon (mg/L)/ Total Aluminum (ug/L) / Sulfate (mg/L)	\$18,000 below	Yes - See	\$1.42 million		Yes
EutroSORB G	EutroPHIX / SePro		50 lbs. : 1 lb. "P"	362,500 lbs.	\$3.60	\$1.31 million	4-6 Work Days	\$1.16 lb.	\$420,500	None	\$1,721 million	pH/DO/Conductivity/% DO Saturation.		Yes - See below			Yes
EutroSORB SI Wet	EutroPHIX / SePro		2.5 Gal : 1 lb. "P"	18,125 Gals	\$72 /Gal	\$1,31 million	2-4 Work Days	\$18 / Gal	\$326,250	None	\$1,627 million			Yes - See below			Yes
EutroSORB SI Dry			10 lbs. : 1 lb. "P"	72,500 lbs.	\$18 / lb.	\$1,31 million	2-4 Work Days	\$3 / lb.	\$217,500	None	\$1,518 million			Yes - See below			Yes
Sedox MAX	OASE		33.3 lbs. : 1 lb "P"	241,425 lbs.Product	\$4 lb. Bulk or \$6.57 lb. MSRP	\$966 k assume bulk	Contractor Dependent - assume high end of 3 per	lb.= \$724,275			\$1,692 million	Experimental Use Plan - Will require extensive testing. OASE will assume most testing costs through experimental phase		Yes - See below			No
ZVI	hepure		30 lb. : 1 lb "P"	217,500 lbs	\$2.75 lb.	\$598,125	64-80 hrs.	\$1,993.75 per acre	\$164,000	\$48k shipping / 12 k handling	\$822,125			Yes - See below			Yes



Average Cost: \$1,594 million



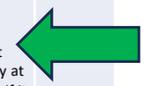
Lowest Cost at \$823 k

PARTIAL RESET (20%) COST COMPARISON

PRODUCT	DISTRIBUTOR	CONTRACTOR	Lbs. : Lbs. "P" or per acre of lake	Amt of "P" In lake 7,250 lbs. = Total Reset	Cost Per Lb./Gal	Total Product Cost for total reset	Time to Apply Product	App Cost per lb. / Gal	Total App Cost	Shipping / Handling Costs	Total Treatment Costs	Analytes Required to be tested w/new APAM Mar 26	Testing Costs - figured by Herrera	Can Product be applied over yrs?	Total Cost Product + App + Shipping + Testing	APAM Approved	
RECOMMENDED PARTIAL TREATMENT - Cost depends on how much "P" you want to sequester. Let's assume we want to sequester 20% of the "P". 20% of 7,250 lbs = 1450 lbs																	
ALUM	None-Commodity	AquaTechnex		50-80 Gals per acre	\$1.80 / Gal	\$36 k low end to \$57.6 k high end	20 hrs	Included in Product Cost		\$0.60 /Gal shipping		See Above - Same requirement regardless of dose applied	\$18,000			Yes	
ALUM	None-Commodity	Solitude Lake Mgmt	\$195 per lb. Buffered : 1 lb. "P"		\$195 lb. Buffered	\$282,750	20 hrs	Included in Product Cost				See Above - Same requirement regardless of dose applied	\$18,000		\$300,750		
EutroSORB G	SePro		50 lbs. : 1 lb. "P"	72,500 lbs.	\$3.60	\$261,000	1-2 Days	\$1.16 lb.	\$84,100	None	\$345,100	pH/DO/Conductivity/% DO Saturation.				Yes	
EutroSORB SI	Wet SePro		2.5 Gal : 1 lb. "P"	3,625 Gals	\$72 /Gal	\$261,000	1-2 Days	\$18 / Gal	\$26,100	None	\$287,100					Yes	
EutroSORB SI	Dry		10 lbs. : 1 lb. "P"	14,500 lbs	\$18 / lb.	\$261,000	1-2 Days	\$3 / lb.	\$43,500	None	\$304,500						
Sedox MAX	OASE		33.3 lbs. : 1 lb "P"	48,285 lbs.	\$4 lb. Bulk Using or \$6.57 lb. MSRP	\$193,140		Contractor Dependent - assume high end of \$3 per lb.= \$144,855			\$337,995	Experimental Use Plan - Will require extensive testing. OASE will assume most testing costs through experimental phase				No	
ZVI	hepure - 20% of "P"		30 lbs. : 1 lb. "P"	43,500 lbs.	\$2.75	\$119,625	1-2 days	\$136.45 per acre x 300 acres	\$40,935	\$15k Ship & Handling	\$160,560	DO/pH	One Time \$12,000 for test set				
ZVI	hepure - contractor recommended initial dose		166 lbs per Acre	50,000 lbs.	\$2.75 lb.	\$137,500	16-20 hrs.	"	\$40,935	\$15 k Ship & Handling	\$193,435	DO/pH	One Time \$12,000 for test set		\$205,435	Yes	
MECHANICAL SOLUTION																	
			How many OST Systems are required?	How many pumps at each station?	Cost for all stations & Equip Pumps	Cost for Install?	Time to Install System	Cost for two equipment bldgs w/power?	Annual Electrical & Maint Cost	Shipping / Handling Costs	Initial Install Costs	Analytes Required to be tested w/new APAM Mar 26	Testing Costs - figured by Herrera	Can Product be applied over yrs?	Total Cost Product + App + Shipping + Testing	How can it be applied over yrs?	APAM Approved
OST	Clarity Resources Group	Clarity Resources Group	Two Generator/Compressor Stations. One in each basin.	4 for East Basin & 2 for West Basin	\$1.5 to \$2 million	Included	2 wks by Clarity Staff	Power: \$85K from Scenic Shores does not include trenching (1000 ft); \$100k from Wildaire- Trenching not req. Bldg Const ?	\$60k	\$10 k	\$1.7 million to 2.2 million	\$0 app to uplink test equip to phone ~\$30 per month	\$0 app to uplink test equip to phone	No - Can install 1 system vs. 2	\$1.7 to 2.2 million	Do only East Basin initially at \$1.2 million; if it works do West Basin	Yes

Average Cost: \$315 k

Lowest Cost at \$160 - 190 k



**Total Cost \$2.2 m
1 Sys \$1.5 m**

LMD RENEWAL 2027

HOW DO WE GET THERE?

12 STEPS TO LMD FORMATION (IAW RCW 36.61 & Thurston County Lake Management District SOP)

STEP 1 – Draft Petition (RCW 36.61.030 sub para 1)

-  • 20 Mar 2025 – SC decisions on renewal of LMD.
-  • 4 Mar 2025 – DRAFT petition/resolution of renewal completed.
-  • 4 Mar 2025 – DRAFT petition sent to County for approval - Approved by EH 5 Mar 25.

STEP 2 – Petition Complete & Sent to Property Owners (RCW 36.61.030 sub para 1)

-  • 1 May 2025 – Sent petition to all property owners for signature (**RCW requires 20%** by acreage of assessed properties). We have 592 acres of assessed parcels. Require signatures of parcel (assessed) owners owning at least 119 acres of property within LMD to move forward.

STEP 3 – Gather Petition Signatures (RCW 36.61.030 sub para 1)

-  • 17 June 2025, received petitions for **225.60 acres (38.1% of the 592 acres of the LMD)**.
-  • 17 July 2025 SC approves petition list and DRAFT Resolution of intent.

STEP 4 – Petition Sent to and Received by County (RCW 36.61.030 sub para 1)

-  • 24 July 2025 Petition and DRAFT Resolution of Intent delivered to EH.



G = Green = Completed On Time



Y = Yellow = Late – Program Jeopardized



R = Red = Mission Fail

THE FIRST LMD IN WA STATE

- Lake Lawrence – How do we know this?
 - Superior Court of Washington for the County of Thurston, Case No. 90-2-00327-0 September 28, 1990.
 - This case was filed by the State of Washington Department of Wildlife against Thurston County Resolution of Intent to form the Summit Lake Management District.
 - Evidence presented during this case :
 - Minutes – House Local Government Committee, February 12, 1987, Public Hearing on HB 63.
 - Minutes from that meeting showed that Karen Fraser, Thurston County Commissioner, stated the following: “ she had been involved in the 1985 legislation and the implementation on 3 lakes. Of those 3, one has been completed (Lawrence); Patterson lake voted it down; and Long Lake has just held a hearing. The biggest issue is the need for clarification in flexibility. Each lake is different and has its own special problems.”

How many LMDs have formed in Thurston County?

- Five. We are currently forming LMD No. 26 (Lake Lawrence)
- Lawrence, Long, Pattison, St Clair, Summit, & recently Pattison & Offut
- Lawrence – 9 Consecutive times (7 – 3 Yr LMDs; 2 – 5 Yr LMDs; and 1 10 Yr LMD) Currently forming LMD No. 26. Thurston County Park includes 14.9 acres or 1439 linear feet. DFW includes 1 acre or 185 linear feet.
- Long – 10 Consecutive times (8 – 3 Yr LMDs; 1 – 5 Yr LMD; 1 10 Yr LMD; 20 Yr LMD #25 Dec 25) – Lacey City Parks included 36,000 votes. They pay \$16k in assessment fees for 11.8 acres of waterfront or 689 linear feet . DFW pays \$28,675 for 1.9 Acres or 116 linear feet.
- Summit (1 – 3 Yr LMD) – never renewed
- Pattison (1 – 3 Yr LMD 1991-1994; and 1 – 10 Yr LMD 2024 to present)
- St Clair (1 – 3 Yr LMD) – never renewed
- Offut (1 – 10 Yr LMD 2025 to present)

What outreach have we done to renew the LMD?

- January 2020 to Present – Welcome letters to all new LMD members with a copy of petition, information on LMD Renewal, website link and email contact information.
- January 2024 to Present - discussed LMD Renewal process and progress at all LMD SC meetings (10 in all), included in meeting minutes & presentation slides and posted to website.
- January 2024 - Mailer sent to all LMD members providing LMD Website/Contact Information.
- May-Sep 2024 - LMD SC leaders attended all HOA annual mtgs and provided an overview of renewal process and answered questions.
- January 2025 - Mailer to all LMD members providing LMD Website/Contact Information.
- May-Sep 2025 - LMD SC Leaders attended all HOA annual mtgs and provided an overview of renewal progress, handed out petitions, and answered questions.
- May & June 2025 - Email to all LMD members on contact list (357) & County/WDFW partners with a copy of petition requesting their attention to this matter and signature on the petition.

What outreach have we done to renew the LMD? (cont.)

- 16 Oct 25 – Article in Nisqually Valley News on LMD Renewal, progress and announcing public hearing to come in November 2025 & providing a URL link directly to the LMD website.
- Nov 2025 - LMD member visits all new LMD members at their homes two-three weeks after mailing welcome letter to answer any questions they may have about the LMD renewal or anything else.
- Dec 25 – Article in Nisqually Valley News & Daily JOLT announcing PUBLIC HEARING for January 20th, 2026 & providing a URL link directly to the LMD website.
- 2 Dec 2025- Certified letters to OFM/DNR/WDFW/Ecology announcing PUBLIC HEARING with copy of Resolution of Intent to form Lake Lawrence LMD#26.
- 3 Dec 2025 - Mailer to all LMD members announcing PUBLIC HEARING & providing LMD Renewal Update and link to LMD Website for additional information.
- 1 and 8 Jan 26 – Notice of Public Hearing published in Nisqually Valley News.
- 12 Jan 26 – Email to all LMD members and partners on contact list reminding them of the PUBLIC HEARING on Jan 20th, 2026.

HOW DO WE GET THERE?

12 STEPS TO LMD FORMATION (IAW RCW 36.61 & Thurston County Lake Management District SOP) (cont.)

STEP 5 – BoCC approves Resolution of Intent to Establish LMD #26 & Sets public hearing. (RCW 36.61.030 sub para 4)

- 25 Sep 2025 EH emailed BoCC requesting approval of timeline for LMD Renewal.
- **4 Nov 2025** – BoCC Issues **Resolution** of Intention to form Lake Lawrence LMD No. 26 & calls for public hearing.
- **2 Dec 2025** – Notice of public hearing sent via Certified Letter to State Partners (DNR, OFM, WDFW/Ecology)
- **3 Dec 2025** – Notice of public hearing sent via USPA First Class mail to all LMD Members
- **1 and 8 Jan 2026** – Notice of public hearing published in Nisqually Valley News.
- **12 Jan 2026** – Notice of public hearing emailed to LMD members and state partners.

STEP 6 – **Public Hearing** to determine Public Interest & Financial Feasibility (RCW 36.61.040 and 050)

- **20 Jan 2026** – BoCC holds public hearing.

STEP 7 – **3 Feb 2026** BoCC approves/disapproves of LMD Renewal. If approved adopts **Resolution** of Findings & Determinations for vote of property owners. (RCW 36.61.070)

STEP 8 – **17 Feb 2026** Ballots mailed to property owners for vote. (RCW 36.61.080 - 100)

- **11 March 2026** – All ballots must arrive NLT 5:00 p.m. Ballots arriving after that will not be counted.
- **12 March 2026** – Ballots counted – residents invited – Atrium Rochester Room #255 at **10:30 am**.
 - Majority of votes NO – LMD will dissolve 31 December 2026
 - Majority of votes YES – LMD will renew 1 January 2027

 G = Green = Completed On Time

 Y = Yellow = Late – Program Jeopardized

 R = Red = Mission Fail

Articles in Nisqually Valley News

Tornadoes football back in the win column B1

TCSO to follow state immigration enforcement laws A2

Division of CT Publishing www.yelmonline.com Thursday, October 16, 2025

\$1.50

NISQUALLY VALLEY NEWS

ews, P.O. Box 597, Yelm, WA 98597
ne.com

rural areas.
The Port of Olympia has become a symbol of what happens when elected leaders forget who they work for. It's time for someone honest, local and independent who will speak up for Yelm and every corner of Thurston County.

**Vote Jerry Toompas for Port
Brian Robinson**

Lake Lawrence committee petitions members to renew district

The Lake Lawrence Lake Management District Steering Committee petitioned its members to renew its 40-year-old Lake Management District (LMD) for another 35 years. The response to the petition was overwhelmingly in favor given the increasing toxic algae blooms the lake has experienced in the past five years.

The Steering Committee contracted with Herrera Inc. to conduct a cyanobacteria management plan study of the lake that began last year and will conclude in June 2026. The purpose of this study was to determine the cause of the toxic algae blooms and a course

of action to mitigate and/or eliminate them. The mitigation is expensive and requires years of consistent effort. Initial results in two other local lakes, Black and Long Lakes, have shown superior results with both lakes experiencing no toxic algae blooms above state guidelines for the past four years.

The Steering Committee wants to replicate those results here at Lake Lawrence while continuing to control noxious, invasive and nuisance aquatic vegetation.

The petition to renew the LMD was forwarded to the Thurston Board of County Commissioners on July 19 and the initial public hearing on the resolution of intent to form the LMD is expected in November 2025 followed by a vote of the LMD members early next year.

For more information on Lake Lawrence, the LMD, to see a copy of the petition and the progress of the effort to renew the LMD, you can visit the Lake Lawrence LMD website at <https://tinyurl.com/3kxw3xtw>.

**Barry Halverson
Co-chair, Lake Lawrence
Lake Management District
Steering Committee**

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16 October 2025

If you are a subscriber and do not receive your paper in the mail, please call so we can make arrangements for delivery.

Update on Lake Lawrence Lake Management District renewal

Articles in the Daily JOLT 9 Dec 25

Letter to the editor

Posted Tuesday, December 9, 2025 3:35 pm

By Barry Halverson

I'd like to share an update with Thurston County residents about the progress of the Lake Lawrence Lake Management District (LMD) renewal.

On Nov. 4, 2025, the Thurston County Board of County Commissioners approved a Resolution of Intent to form Lake Management District No. 26 for Lake Lawrence.

On Dec. 2, 2025, they scheduled a public hearing for Jan. 20, 2026, at 3:30 p.m. to gather testimony from residents, state agencies, and current LMD members on whether the district should be renewed.

Earlier this year, during May and June, Lake Lawrence LMD members overwhelmingly demonstrated their support by signing a petition requesting the renewal. That strong show of community backing led directly to the board's recent action.

The need for this renewal is critical. In 2024, Lake Lawrence experienced the most severe Harmful Algae Bloom (HAB) in its recorded history, lasting more than three months. In 2025, we have had three documented HABs, with the most recent occurring on Oct. 21.

These blooms negatively impact water quality, recreation, and overall lake health. Renewing the LMD will allow us to continue and expand efforts to reduce and prevent algae blooms, and to control invasive and nuisance aquatic vegetation that interferes with boating, swimming, and fishing.

For people interested in learning more, including reviewing the petition, the Resolution of Intent and updates on the renewal process, please visit the Lake Lawrence LMD [website](#).

Thank you for helping us keep the community informed about an issue that affects so many local residents.

Barry Halverson, Yelm

Barry Halverson serves as the Washington State Lake Management District Coordinator and on the Thurston County Lake Management District leadership team. He is the co-chair of the Lake Lawrence Lake Management District Steering Committee.

[Washington State Lake Protection Association](https://www.walpa.org/)



WATERLINE - December, 2025

How to best care for your lake: a community guide

by Barry Halverson, Co-Chair, Lake Lawrence Lake Management District

Your lake is a valuable resource and protecting it requires a proactive approach. The single most important step many communities have already taken is establishing an organized body dedicated to lake health. If your community already has a Lake Improvement District, a Lake Management District, a Special Use District or even a dedicated Lake Association, you are off to a great start!



Organizations that make a difference

If your lake is under the jurisdiction of one of these formal organizations, you have powerful tools at your disposal:

- **Existing Lake Improvement Districts (LIDs) (formed before July 1985):** If you have an LID formed before July 1985, do everything you can to sustain it and keep it from lapsing – it can be a powerful mechanism for protecting your lake.
- **HOAs owning the entire lake:** While rare, if this applies to you, your Board of Directors has the authority to manage the lake directly, obtain permits through the Washington State Department of Ecology, and use authorized procedures codified in the Washington State Aquatic Plant and Algae Management General Permit.
- **Lake associations:** These groups, powered by dedicated volunteers, are excellent at raising interest, awareness, gathering contacts, raising funds, and educating residents about reducing pollutants (e.g., by building rain gardens). However, their ability to control noxious and invasive aquatic vegetation or harmful algae blooms (HABs) is limited, often only to manual removal.



What if you don't have an organization?

If your lake currently lacks one of the organized groups listed above, do not despair!

- **Identify and address weeds:** If you notice noxious or invasive aquatic vegetation, immediately contact your city or county Noxious Weed Board or Department. Even without a quasi-governmental organization, these departments can often work with the Department of Ecology to secure funding and assistance to eliminate harmful vegetation.

<https://www.walpa.org/waterline/december-2025/how-to-best-care-for-your-lake-a-community-guide/>

18 Dec 25 .

Nisqually Valley News Ltr to the Editor

LETTERS TO THE EDITOR

LETTERS POLICY: Submit letters to the editor typed or legibly handwritten. Generally, letters should be 350 words or fewer. Deadline is noon Tuesday. Include name, address and a daytime telephone number for verification purposes. No unsigned letters will be published. The editor reserves the right to edit letters for clarity, grammar and length. Mail letters to the Nisqually Valley News, P.O. Box 597, Yelm, WA 98597 or e-mail to yelmnews@yelmonline.com

Update on Lake Lawrence LMD Renewal

Dear editor,

I'd like to share an update with Thurston County residents about the progress of the Lake Lawrence Lake Management District (LMD) renewal. On Nov. 4, 2025, the Thurston County Board of County Commissioners (BoCC) approved

a resolution of intent to form Lake Management District No. 26 for Lake Lawrence. On Dec. 2, 2025, they scheduled a public hearing for Jan. 20, 2026, at 3:30 p.m. to gather testimony from residents, state agencies and current LMD members on whether the district should be renewed.

Earlier this year, during May and June, Lake Lawrence LMD members overwhelmingly demonstrated their support

by signing a petition requesting the renewal. That strong show of community backing led directly to the commissioners' recent action.

The need for this renewal is critical. In 2024, Lake Lawrence experienced the most severe Harmful Algae Bloom (HAB) in its recorded history, lasting more than three months.

In 2025, we have already had three documented HABs, with the most recent occurring

on Oct. 21. These blooms negatively impact water quality, recreation, and overall lake health.

Renewing the LMD will allow us to continue and expand efforts to reduce and prevent algae blooms and to control invasive and nuisance aquatic vegetation that interferes with boating, swimming, and fishing.

For those interested in learning more — including reviewing the petition, the Reso-

lution of Intent, and updates on the renewal process — please visit the Lake Lawrence LMD website at: www.lakelawrencelakemanagementdistrict.com.

Thank you for helping us keep the community informed about an issue that affects so many local residents.

Sincerely,

Barry Halverson, Yelm
Halverson serves as the co-chair of Lake Lawrence Lake Management District Steering Committee

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CEO — Coralee Taylor

Vice President — Franklin Taylor

Chief Marketing Officer — Kyle McKerricher

Editor —

Jacob Dimond 360-736-3311
jake@yelmonline.com

The Office

Main Phone: 360-736-3311 **Fax:** 360-458-5741

Street Address: 401 Creek St. SE, Ste. B

Mailing Address: P.O. Box 597 • Yelm, WA 98597

Email Addresses:

News: yelmnews@yelmonline.com

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Pub: Nisqually Valley News
 January 8 & 29, 2026

THURSTON COUNTY LEGALS

136069 Lake Lawrence

NOTICE OF PUBLIC HEARING Before the BOARD OF THURSTON COUNTY COMMISSIONERS

PURPOSE: Public Hearing to receive public comment to 1) Determine Public Interest & 2) Financial Feasibility for Thurston County Lake Lawrence Lake Management District (LLLMD) No. 26

DATE: January 20th, 2026

TIME: 3:30 p.m. (or as soon thereafter as the matter may be heard)

PLACE: The Atrium Commissioners Meeting Room, Room 110 3000 Pacific Ave Olympia, Washington 98501

CONTACT PERSON: Season Long
TELEPHONE: 360-463-8323

The public is invited to attend the hearing and anyone wishing to testify may appear and be heard. You may also connect remotely and be heard; information will be posted on the Board of County Commissioners public meetings and hearings web page: <https://www.thurstoncountywa.gov/departments/board-county-commissioners/meetings-public-hearings-and-work-session-agendas>.

Written comments may be submitted by mail or email no later than 5:00 p.m., January 19th, 2026. Send by mail to Season Long, Environmental Health Division Director, Public Health and Social Services, Environmental Health Division 3000 Pacific Ave, SE, Olympia, Washington, 98501, or via email to season.long@co.thurston.wa.us.

Disability Accommodations: Persons with disabilities requiring reasonable accommodations at the hearing should call the Reasonable Accommodation Coordinator at 360-786-5440. Persons with speech or hearing disabilities may call via Washington Relay: 711 or 800-833-6388.

NOTICE OF PUBLIC HEARING FOR LAKE LAWRENCE LMD IN NISQUALLY VALLEY NEWS 8 AND 15 JANUARY 2026

Update on Lake Lawrence Lake Management District Renewal

Letter to the Editor – By Barry Halverson

Lake Lawrence residents recently reached an important milestone in protecting the health of our lake.

At a public hearing on January 20, community members voiced strong support for renewing the Lake Lawrence Lake Management District (LMD). No one spoke in opposition. Following that show of support, the Thurston County Board of County Commissioners voted on February 3 to move the renewal forward and send ballots to district members.

Ballots will be mailed February 13 and must be returned by March 11. If a majority approves, the County will take the final steps to establish the renewed district and hold a public hearing on assessment rates.

This renewal comes at a critical time. From late summer 2024 through January 2025, Lake Lawrence experienced the longest harmful algae bloom in its recorded history — more than 147 days. Three additional blooms followed in 2025. These events affect water quality, restrict recreation, pose risks to people and pets, and signal growing stress on the lake's ecosystem.

For decades, the LMD's authority focused on managing invasive and nuisance aquatic plants that interfere with boating, swimming, and fishing. The renewed district expands that work to address harmful algae blooms as well. Over the past three years, the LMD has funded a comprehensive study to identify the causes of these blooms and develop long-term solutions. That study will be completed this summer, allowing the district to begin implementing science-based strategies.

Renewing the LMD ensures we can continue protecting water quality, reducing algae blooms, and keeping Lake Lawrence safe and usable for everyone.

Community involvement has guided this process and remains essential. To learn more or follow updates, visit: www.lakelawrencelakemanagementdistrict.com

Thank you for supporting the care of one of our area's most valued natural resources.

— Barry Halverson, Yelm
Co-Chair, Lake Lawrence Lake Management District

Article published In:
JOLT – 18 Feb 26
Nisqually Valley News – 19 Feb 26

LMD Renewal Letters to OFM/DNR/Ecology/WDFW

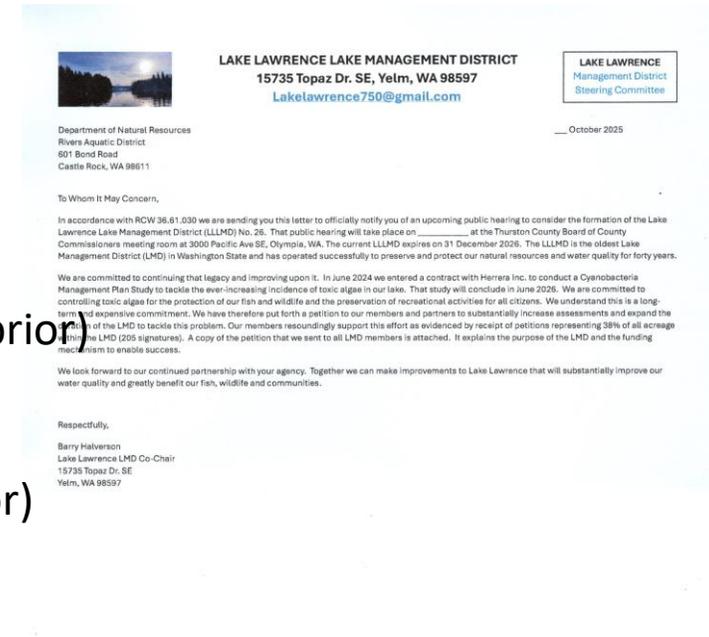
IAW RCW 36.61.030 requires we send a letter to these agencies at least 15 – 30 days prior to first public hearing on our LMD Renewal with a copy of the Resolution of Intent signed by the commissioners:

WA State Office of Financial Management (Registered Mail – 30 Days prior)
Department of Natural Resources (Registered Mail – 30 Days prior)
WA State Department of Ecology (First Class Mail – 15 Days prior)
WA State Department of Fish & Wildlife (First Class Mail – 15 Days prior)

Date letters sent: **2 December 2025**

We have already sent emails to these agencies as far back as May 2025.

Purchased a book of first class stamps & paid for certified mail.



HOW DO WE GET THERE?

12 STEPS TO LMD FORMATION (IAW RCW 36.61 & Thurston County Lake Management District SOP) (cont.)

STEP 9 – 7 April 2026 BoCC adopts **ordinance** creating LMD if majority votes YES. (RCW 36.61.100)

STEP 10 – 17 April 2026 Notice of LMD Establishment published in Local Paper within 10 days of adoption (RCW 36.61.100).

9 & 16 April 2026 **Notice** of Public Hearing for Rolls & Rates published in NVN.

9 April 2026 Notice of Objection Public hearing sent to property owners at least 20 days in advance of public hearing (RCW 36.61.140).

STEP 11 – 28 Apr 2026 Public Hearing on Roll of Rates & Charges. (RCW 36.61.140)

STEP 12 – 28 Apr 2026 or May 2026 BoCC Approves/Disapproves/Amends the Resolution Confirming the Roll of assessment for Lake Lawrence No. 26. (RCW 36.61.130)

- Within 30 days of approving the Resolution Confirming the Roll of Assessment the county legislative authority will file the resolution and pertaining documents with the County Treasurer (RCW 36.61.220)
- January 2027 – Lake Lawrence LMD No. 26 operational.



G = Green = Completed On Time



Y = Yellow = Late – Program Jeopardized



R = Red = Mission Fail



Danger Shallow Water Diamond Sign No Diving Caution Warning Aluminum Metal Sign
 Sign Fever (30838)
 99.5% positive Seller's other items Contact seller
 US \$14.99

Recommendation:

April 2025 install 3 signs on steel stakes 100-150' apart across the southern end of Lake Lawrence to warn boaters of extreme shallow water dangers.

Cost:

Signs – 3 x \$20 = \$60

10' Square Sign Post – 3 x \$84ea. +tax & Shipping = \$100 ea.

Tamper Proof Bolts – 10 x \$14+tax (Home Depot)

Tamper Proof Nuts – 10 x \$12+tax (Home Depot)

80 lb Concrete – 3 x \$6 + tax (Home Depot)

TOTAL: \$404+tax +/- 10% APPROVE AT 17 OCT 24 LMD MTG

8/27/24, 1:45 PM
 Danger Shallow Water Diamond Sign No Diving Caution Warning Aluminum Metal Sign | eBay

Features:

- High quality detailed professionally printed directly on the Aluminum Metal
- Size: 12"x12" Diamond Shape Sign
- Made in the USA, at our own production facility in Dallas, TX.
- High Gloss Aluminum with UV Protective Coating. Suitable for outdoor use.
- Rounded Corners
- Two Drilled Holes for Easy Mounting
- Easy to Install, can be used on most platforms.
- No Screws or stake included
- High gloss UV coating resists fading

Square Sign Post - 10 ft

Eliminate the need for multiple posts.

- Signs attach to all four sides.
- Rust-resistant galvanized steel.
- Use with Postings and Traffic Signs, Post Anchor and Post Discs, sold separately.

MODEL NO.	SIZE	DESCRIPTION	PRICE EACH	IN STOCK	SHIPS TODAY
H5516	10 ft	Square Post	\$88 \$84 \$80	1	2024

DNR/WDFW – No issues

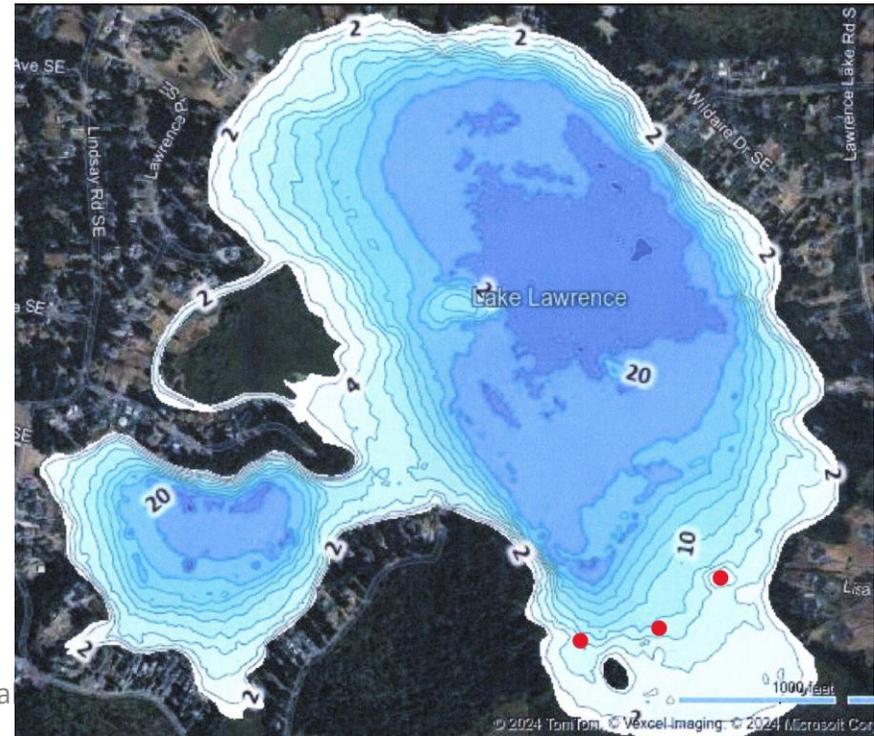
County EH – ?

County Sheriff – Deputy Cady, Boating Enforcement Officer

– No legal issues as long as lake organization board approves.

We have three 10'x3" Galvanized Posts – Will try to drive into lake bottom May 2026 – need help!

If we can get these posts in place we will purchase the signs.

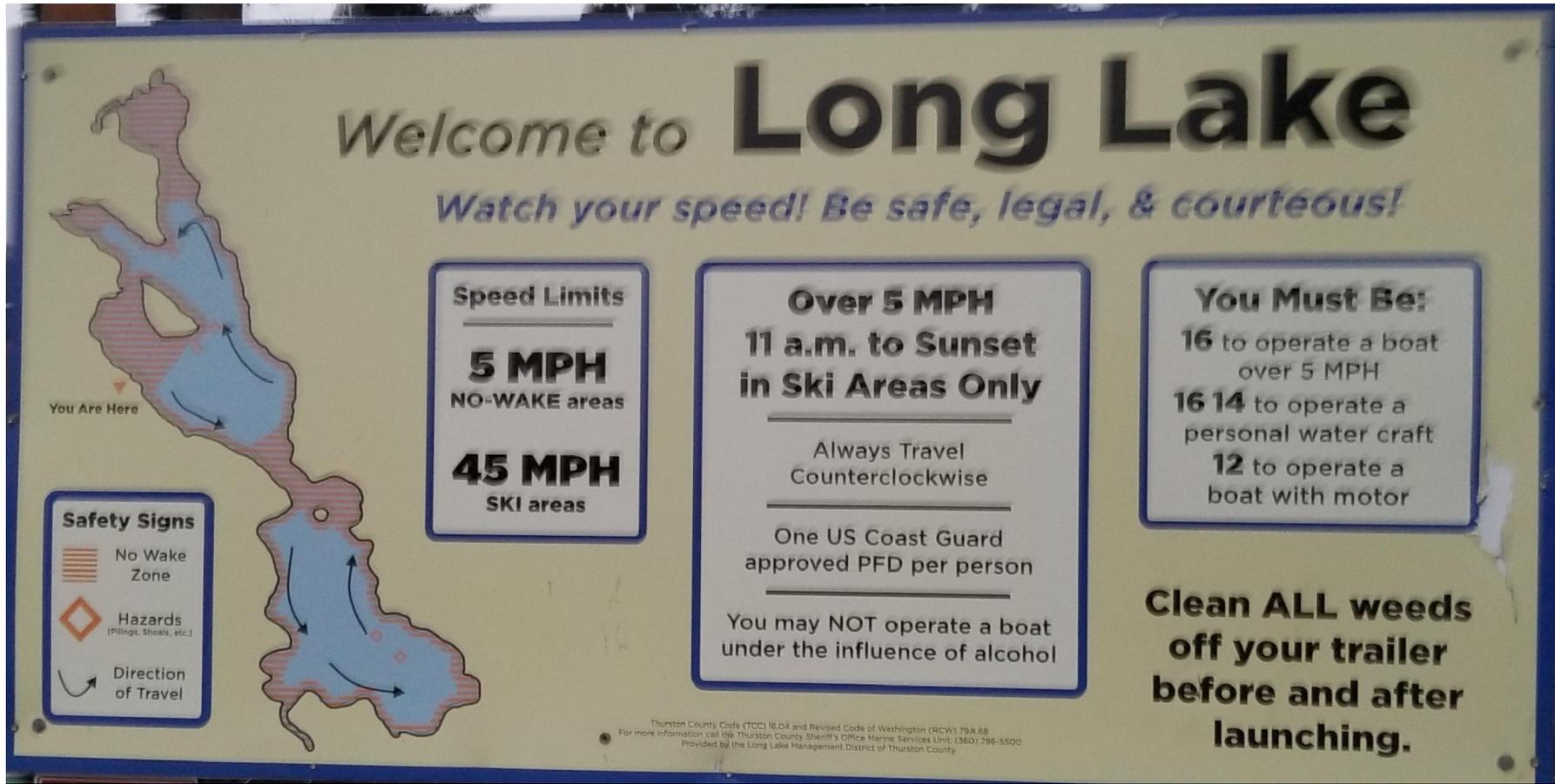


POSSIBLE ALTERNATIVE OR ADDITIONAL SIGNAGE

Long Lake paid and installed this sign at their public boat launch. They don't recall the cost. It was done by Signarama, Hawks Prairie

Approval is required from DFW: Chad Buck, Land Agent, Costal Region, WDF Chad.buck@dfw.wa.gov will require a Cultural Resource Review. May require a permit which we would have to pay for. Cost ?

Who wants to take this on?



2026 LMD Invasive/Nuisance Aquatic Weed Treatment Plan

-  • July 2025 – LMD budget \$80,000 for 2026 for Invasive/Nuisance Aquatic Weed Control.
-  • 19 August 2025 – Survey Committee & ARS conduct end of year survey to assess type of weeds and density.
-  • October 2025 – Virtual meeting with contractor to discuss 2026 treatment plan – Met with contractor 2 Oct 25. Contractor working on est. for 2026 treatment for weeds and Algae Treatment.
-  • Prior to Feb 2026 - Contractor to provide cost/application recommendations for Spring 2026 treatment of Curly Pondweed. Total area to be treated = ~34 acres. Cost est. = \$71,308 includes additional 3 acres.
 - March 2026 - APAM Notice mailed to lake front residents 10 days prior to any treatment. APAM Notice Cost est. \$_____. Mailed _____ March 2026/
 - April – August 2026 - Survey Committee – monthly lake surveys.
 - **April/May/June** (a few weeks earlier than last year) – Treatment of invasive/nuisance aquatic weeds using Sonar One. Recommended by contractor.



G = Green = Completed On Time

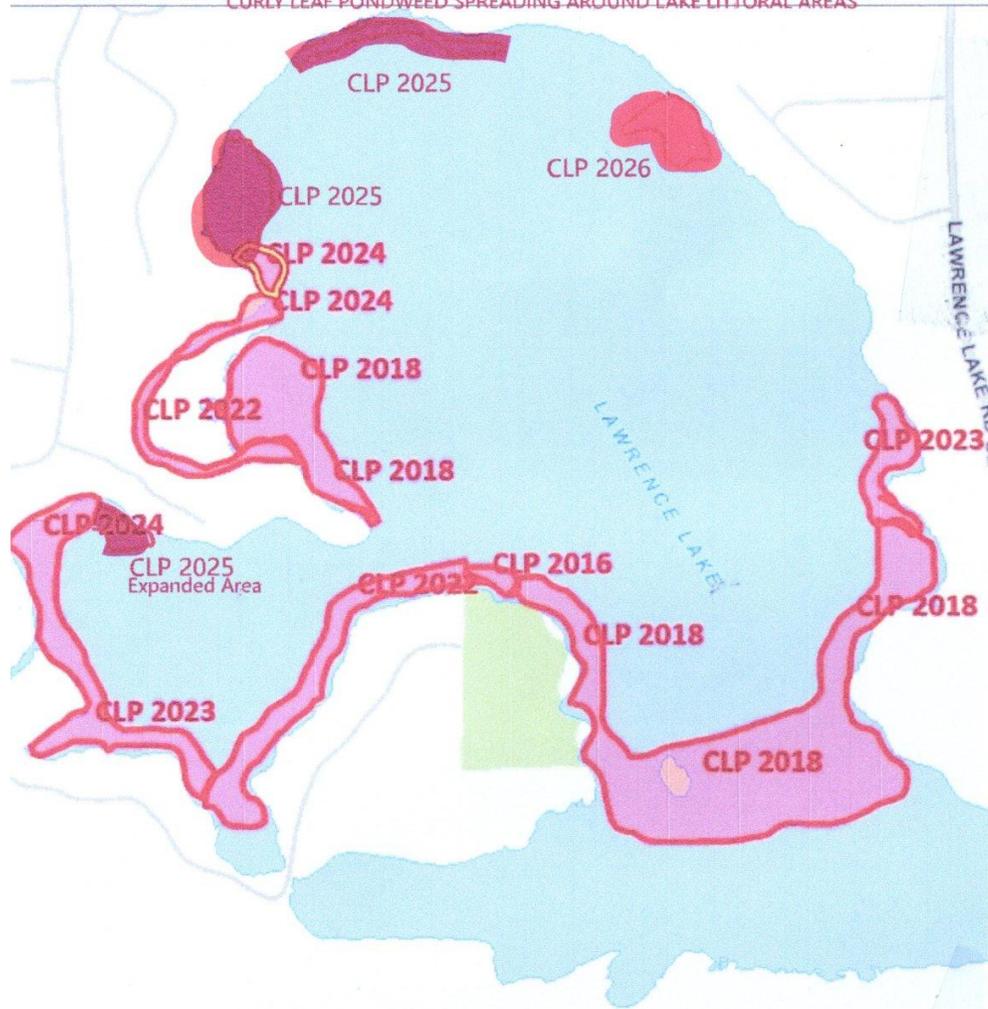


Y = Yellow = Late – Program Jeopardized



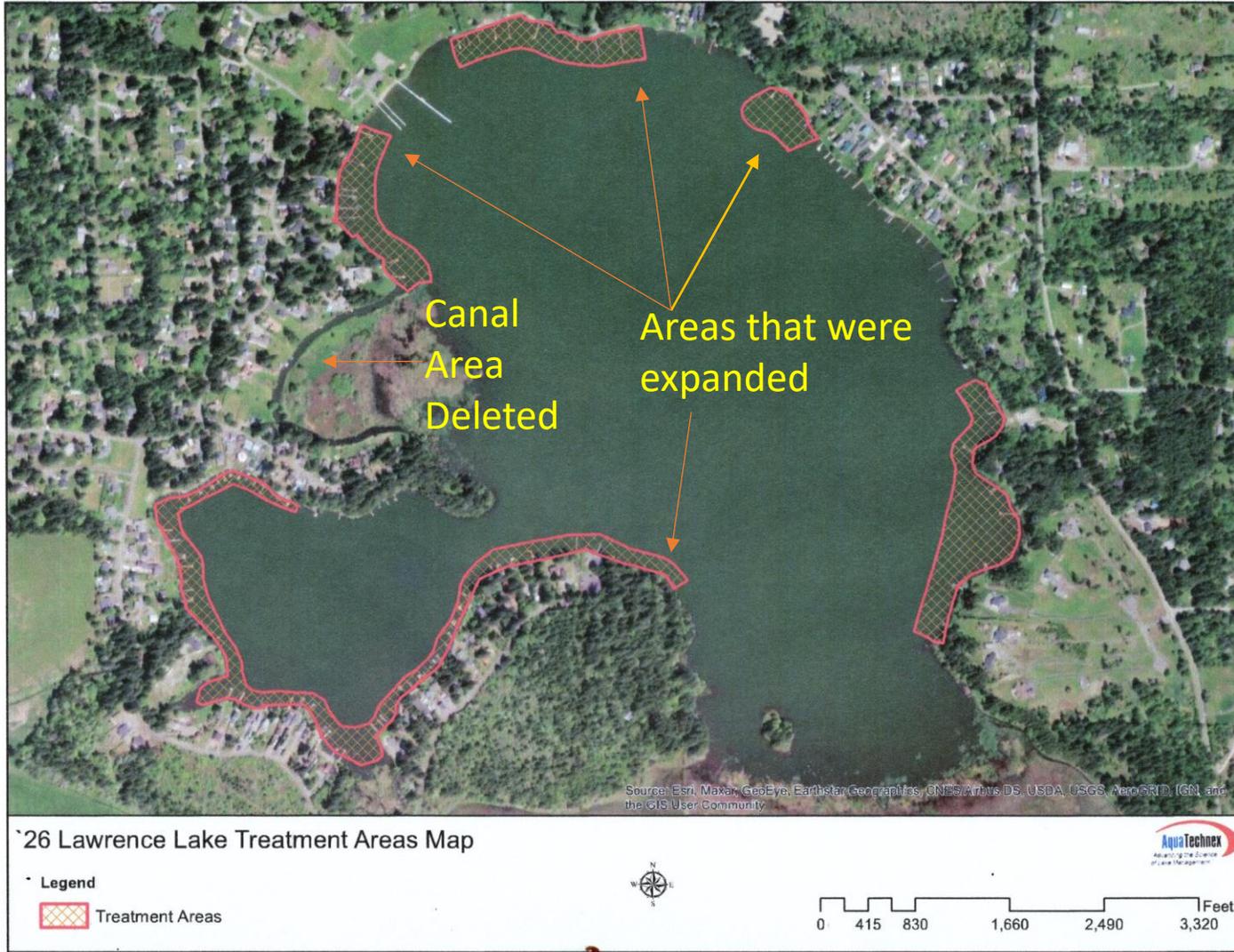
R = Red = Mission Fail

CURLY LEAF PONDWEED SPREADING AROUND LAKE LITTORAL AREAS



YEAR	COMMENTS
2016	<ul style="list-style-type: none"> CLP first identified by Thurston County ARS at Public Boat Launch in East Basin Apr-Jun Treated with Sonar Q and Sonar PR
2017	<ul style="list-style-type: none"> Apr-Jun Treated with Sonar Q and PR County ARS started working on a new prescription for Aquathol K that LMDs (Long and Lawrence) were told would be more effective against CLP
2018	<ul style="list-style-type: none"> Aquathol K approved by County early Spring 2018 Surveys showed CLP had spread south from Boat Launch in the East Basin and around to the southeast side of the East Basin and across the channel north to the southeast end of Goat Island in the East Basin Jul treated with Aquathol K (Killed CLP) NOTE: Didn't know until end of 2022 that Aquathol K Killed the CLP plant but not the Turion Seed and Tubers (roots)
2019	<ul style="list-style-type: none"> Aquathol K used (Killed CLP plant but not seeds/roots))
2020	<ul style="list-style-type: none"> Aquathol K used (Killed CLP plant but not seeds/roots)
2021	<ul style="list-style-type: none"> May-Jun Treated with Sonar PR to kill Narrow Leaf and Elodea CLP seen throughout Southern End of East Basin – No reduction and appears to have spread
2022	<ul style="list-style-type: none"> Surveys showed CLP had spread west of the Boat Launch into the West Basin and from the southeast end of Goat Island north up the canal LMD leadership started working with County ARS and contractors to identify an acceptable product to kill CLP Jul 2022 Aquathol K used to at least kill CLP plant in attempt to stop spread
2023	<ul style="list-style-type: none"> Surveys showed CLP had spread further north in the West Basin and further north from the southeast side of the East Basin No treatment in 2023 (contracting issue) November 2023 secured approval from County to treat CLP with Galleon SC
2024	<ul style="list-style-type: none"> Surveys showed CLP has spread even further north and east in the West Basin and from the mouth of the canal north in the East Basin June & July 2024 treated CLP with Galleon SC
2025	<ul style="list-style-type: none"> Surveys showed CLP has remained consistent, however seed bed production persists and will require several years to control Contractor Recommended use of Sonar One earlier to prevent Turion (Seed production). This is a more expensive product than Galleon SC but does more to control other invasive plants as well. Three applications made April through May 2025
2026	<ul style="list-style-type: none"> Survey showed CLP had spread to areas on the north and east side of the main lake Contractor recommended treatment of all existing areas plus new area with Sonar One Three applications scheduled for April through June 2026

2026 CURLY PONDWEED TREATMENT MAP



Sonar One 2026

34 Acres

3 applications – three-four weeks apart

First Treatment: Mid April 2026

Second Treatment: Mid of May 2026

Third Treatment: Mid June 2026

Cost: ~\$71,308 or \$2097.29 per acre (\$65 per acre more than 2025)

Previous Treatments:

2021 – Sonar One – 25 Acres

2022 – Aquathol K – 33.5 Acres

2023 – No treatment

2024 – Galleon SC – 26 Acres

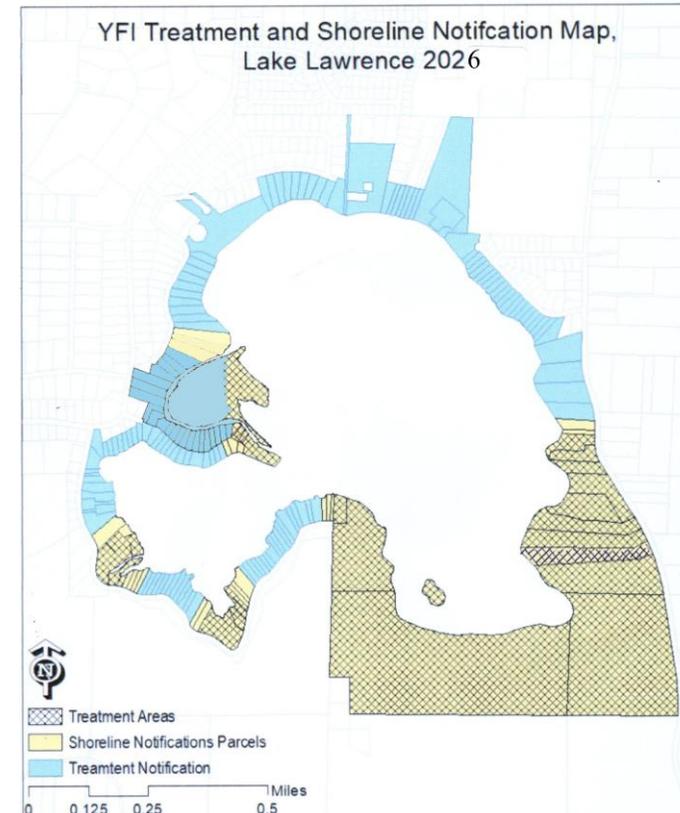
2025 – Sonar One – 31 Acres red outlined areas

2026 – Sonar One – 34 Acres (Blue = add areas)

YELLOW FLAG IRIS TREATMENT MAP

NOTES:

1. The canal area will not be treated.
2. Only the East Side of Goat Island will be treated.
3. In July/Aug 2026 a new YFI survey will be done to determine future YFI treatments.
4. YFI Permission letters are for a 5-year period.



2026 LMD Yellow Flag Iris Treatment Plan

- ★ **G** • Oct 2025 – County Noxious Weed confirms treatment (\$1,500 cost to LMD & \$2,000 cost to County via Grant Funds)
- Jan/Mar – Send out and Receive permission letters for treatment:
 - ★ **G** • Jan 2, 2026 – Sent out first email to capture permission letters from 24 private parcels
 - ★ **G** • Jan 26, 2026 – Sent out second email.
 - ★ **G** • Feb 16, 2026 – Sent out third email.
 - April 1, 2026 – Send permission letters to PW Noxious Weed
- Apr/May – Send out treatment notification cards. Sent out __ April 2026
- May – PW Noxious Weed treats YFI. Email from Mike Murphy, Noxious Weed Mgr – Expect to treat between 5 and 15 May 2025.
- Cost to LMD \$1,500 Approved at 19 Feb 2026 Mtg

STILL MISSING ONE

Recommended SC approval of \$1,500 for YFI Treatment

★ **G** G = Green = Completed On Time

★ **Y** Y = Yellow = Late – Program Jeopardized

★ **R** R = Red = Mission Fail

2026 LMD Fragrant Water Lily Treatment Plan

- 15 Jul – 15 Aug – Treatment of Fragrant Water Lily, if required (to be determined in June or July 2026 following lake survey).

2024 Treatment –
2.5 Acres

2025 Treated
Approx 3 Acres

Treatment Costs:

Jul 19 - \$1,540

Jul 20 - \$1,517

Jul 22 - \$2,373

Sep 24 - \$2,500

Aug 25 - \$1,875



G = Green = Completed On Time



Y = Yellow = Late – Program Jeopardized



R = Red = Mission Fail

2026 TREATMENT NOTIFICATION CARD FOR CURLY PONDWEED & YFI

Business and Residential Notice

In Treatment Area and in ¼ Mile Notification Shoreline Area.

Distribution Date: 27 March 2026

Selected sites on Lake Lawrence will be treated with aquatic herbicides on or between 15 April 2026 and 15 October 2026

Product(s) planned for use: Sonar Q, Sonar AS, Sonar One, Polaris, Aquathol K, Clearcast or Galleon SC

Active Ingredient(s): Fluridone (Sonar), Dipotassium salt of Endothall (Aquathol K), Penoxsulan (Galleon), Imazapyr (Polaris) or Imazamox (Clearcast)

Plants/Algae targeted: Common Elodea, Curly, Narrow & Big Leaf Pondweed, Yellow Flag Iris, Fragrant Water Lily or other species to control invasive, noxious and/or nuisance weeds.

Location of treatment(s): The attached map shows possible treatment areas. Only those areas that physically contain target plants will be treated. The applicator will post signs in the treated and potentially affected areas no more than 48 hours prior to treatment. The signs will describe any water use restrictions or advisories. If you are withdrawing water for potable or domestic water use, livestock watering, or irrigation, and have no alternate water source, please contact Kyle Langan, Aqua Technex, LLC at 360-330-0152 or kyle@aquatechnex.com to arrange an alternate water supply. If you want additional notification prior to treatment, or have further questions, please contact Kyle using the Information above or Barry Halverson, Lake Lawrence LMD at 253-341-6059 or email lakelawrence750@gmail.com

Map of Potential
Treatment sites in Lake Lawrence



Scan QR
Code to go
to permit
web page

This herbicide treatment is regulated under a
permit issued by the Washington State Dept.
of Ecology. Permit No. WAG994131

2026

January						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February						
S	M	T	W	T	F	S
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15	16	17	18		20	21
22	23	24	25	26	27	28

March						
S	M	T	W	T	F	S
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15	16	17	18		20	21
22	23	24	25	26	27	28
29	30	31				

April						
S	M	T	W	T	F	S
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5	6	7	8	9	10	11
12	13		15		17	18
19	20	21	22	23	24	25
26	27	28	29	30		

- LEGEND**
-  LMD MTGS
 -  CMP MTGS
 -  SURVEYS
 -  ANNUAL MTG
 - V VIRTUAL

May						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11		13		15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June						
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7	8		10		12	13
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21	22	23	24	25	26	27
28	29	30				

July						
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19	20	21	22	23	24	25
26	27	28	29	30	31	

August						
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16	17		19	20	21	22
23	24	25	26	27	28	29
30	31					

September						
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13	14	15	16	17	18	19
20	21	22	23		25	26
27	28	29	30			

October						
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11	12	13	14		16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November						
S	M	T	W	T	F	S
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15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

2026 SC Meeting Schedule (6:30-8:30 p.m.):

- Thursday 19 February (Virtual)
- Thursday 19 Mar (Virtual)
- Thursday 14 May (In Person)
- Thursday 16 July (Virtual)
- Thursday 15 Oct (In Person)

2026 CMP Meeting Schedule:

- Mtg#4 – Thursday 16 Apr 2026 2 hours In-Person w/All LMD 6:30-8:30 p.m.
- Mtg#5 – Thursday 11 Jun 2026 2 hours virtual w/SC 6:30-8:30 p.m.

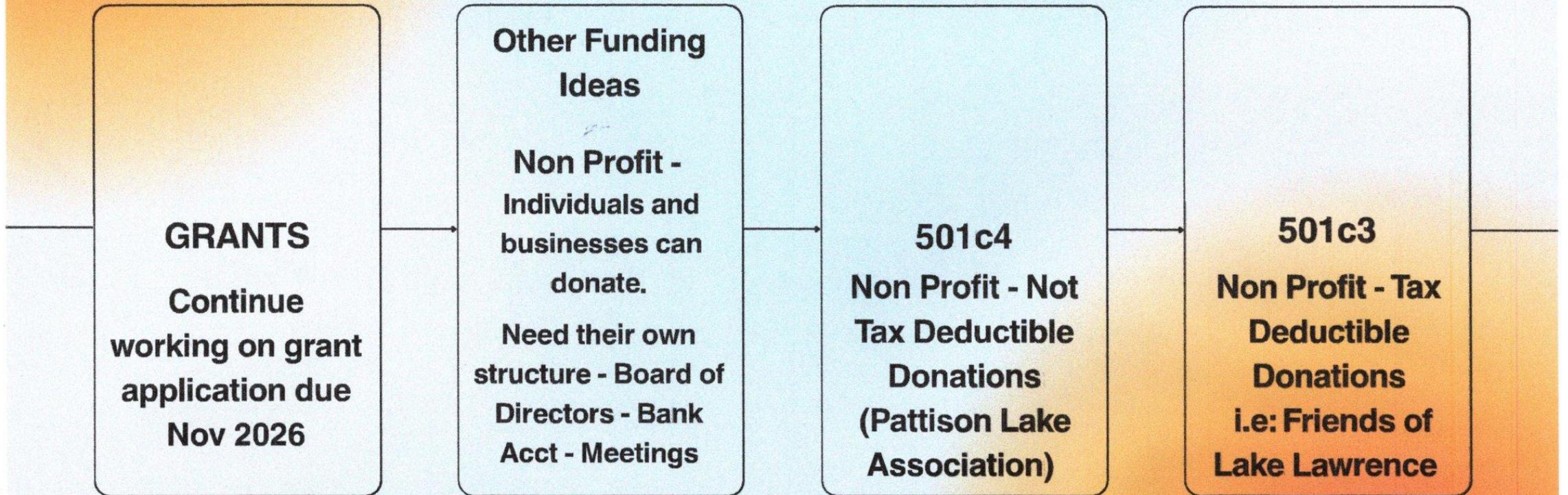
2026 Survey Schedule – 9 a.m. (3 hours):

- Tuesday 14 Apr
- Tuesday 12 May
- Tuesday 9 June
- Tuesday 7 July
- Tuesday 18 August

Annual Meeting – 6:30-8:30 p.m.

- Thursday 24 September

FUNDING FOR LAKE LAWRENCE



GRANT FUNDING UPDATE

- Kim Farnes
- Objective – to obtain one grant a year beginning in 2027.
- Grant Opportunities:
 - 1 Oct 2026 - \$50,000 Grant for Freshwater Algae Control Grant Program for Fiscal Year 2028. Fund Manager: Joseph Teresi, Aquatic Invasive & Algae Control Grants Manager, Dept of Ecology, joseph.teresi@ecy.wa.gov
 - Cyanobacteria control and management
 - Storm Water Drainage & Erosion Control (LLCC HOA Park/Wildaire HOA Park & Drainage)
 - Habitat Restoration Goat Island/County Park/HOA Parks
 - Water quality monitoring equipment (Secchi Disk/Kemmerer Gauge/Water Quality Sonde w/4 Probes & 50FT Cable – same one as used by Thurston County Environmental Health) – John Haberman john.haberman@co.Thurston.wa.us
 - Water quality testing equipment
 - Locating and capturing phosphorus output at lake vents (springs) to determine actual amount of “P” coming into lake through these springs.
 - Federal Grants EPA Grants under Clean Water Act – to fund OST Costs

NEW BUSINESS

September 24, 2026, Annual Meeting

- Guest Speaker: Kevin Hansen, Thurston County Hydrologist
- Talking Points:
 - Hydrology of Lake Lawrence and surrounding area
 - Aquifers in and around area
 - Any aquifers that impact/contribute to lake water volume (Springs/Seeps) for Lake Lawrence
 - ANYTHING ELSE?

Other Business

- Good of the Order
 - County Park Cleanup – new schedule released December.
 - Downed Tree Removal (see next slide)
 - HOA ANNUAL MEETINGS:
 - Scenic Shores - April 11 11a.m.-1 p.m. Moose Lodge, Yelm, WA
 - Wildaire
 - LLCC – June 2026

Downed Tree Removal

County Parks notified 8 Dec 25
Tree removed from trail 11 Dec 25



County Parks notified 23 Dec 25
Tree removed from trail 6-9 Jan 26



Animals of Lake Lawrence

Nutria are classified as a “Prohibited Level 3” species in Washington state under [RCW 77.135.040\(1\)](#) and [WAC 220-640-050\(1\)\(d\)\(i\)](#). Live Nutria may not be possessed, introduced on or into a water body or property, or trafficked, without department authorization, a permit, or as otherwise provided by rule.

If Nutria are on your property and you would like them to be removed there are a couple of options. First, there are private state permitted [Wildlife Control Operators \(WCO\)](#). WCO’s can be hired to come out with the landowner’s permission and assist in the removal of the Nutria.

The second option is to contact [the United States Department of Agriculture \(USDA\) Wildlife Services](#) to trap them. The final option is to try to trap the Nutria yourself. Nutria are easily captured in single door, three or four foot long, live traps baited with carrots or sweet potatoes. No special trapping permit is necessary for the use of live traps. However, a special trapping permit is required for the use of all traps other than live traps ([RCW 77.15.192](#), [RCW 77.15.194](#), [WAC 220-417-040](#)). All captured Nutria must be euthanized prior to leaving the riparian zone of the waterbody under [WAC 220-640-120](#).

Nutria can be hunted with a small game license, and the use of a dog is ok. Nutria may not be hunted during October to November during Deer or Elk seasons.



Picture & Info from Kathy Boyajian – LLCC Canal

This is HOA or Private Property Owner responsibility.

WDFW maintains an AIS Sightings Database and reports like yours get added to help track the occurrence and distribution of Nutria and other invasive species across Washington. We greatly appreciate your due diligence and report.

Please visit the link below to learn more about Nutria in Washington state.

- <https://wdfw.wa.gov/species-habitats/invasive/myocastor-coypus>

Nutria Facts:

Size – 16-24” long, 12-18” tall, Weight 9-20 lbs. or more

Teeth – Large, protruding, bright orange/yellow

Whiskers – Long white, up to 4” long

Eyes/Ears – Small, set high on the head, almost hidden in fur

Tail – Long, round, scaly, and sparsely haired, unlike the flat beaver

tail or laterally compressed muskrat

tail

Feet – Webbed hind feet for swimming, front feet unwebbed

Mating Season – Spring through fall

Gestation Period – 130 days

Litter – 4-5 young

Litters per year – 2-3

Life Span – 3-6 years

Why are Nutria problematic for a lake?

Nutria are considered harmful to lakes and wetlands because they are **invasive rodents** that cause widespread ecological damage. Native to South America, they were introduced to the U.S. in the 1930s for fur farming, but many escaped or were released, allowing them to spread unchecked [iere.org +1](#) .

Habitat destruction is one of their biggest problems. Nutria are voracious herbivores that eat almost all aquatic vegetation, leaving behind barren mudflats where once there were thriving wetlands [iere.org +1](#) . They also dig extensive burrow systems into lake and riverbanks, levees, and dikes, which can lead to erosion, structural instability, and even breaches in flood protection systems [iere.org +1](#) .

Loss of native species is another major issue. By removing vegetation, nutria destroy the food and shelter that native fish, amphibians, waterfowl, and other wildlife depend on. They also compete with native animals like muskrats and beavers for resources [iere.org](#) .

In coastal areas, nutria weaken the root systems of marsh plants, accelerating erosion and making shorelines more vulnerable to storms and sea-level rise [iere.org](#) .

Because of these impacts, nutria are classified as an **invasive species** in many states, including Washington, and are actively managed to prevent further damage to aquatic ecosystems [Washington Department of Fish and Wildlife +1](#) .

How to tell a Nutria from Beaver/Muskrat

Identifying Nutria (*Myocastor coypus*)

	Nutria <i>Invasive</i>	Beaver <i>Native</i>	Muskrat <i>Native</i>
Whiskers/head	 <i>Photos courtesy of Tony Northrup and Joyce Grass</i>	 <i>Photos courtesy of Alaska DFG and Cheryl Reynolds</i>	 <i>Photos courtesy of N. Carolina State Parks and Merle Ann Loman</i>
Tail	 <ul style="list-style-type: none"> • Conspicuous white whiskers • Muzzle often white • Tail rounded, rat-like, and sparsely covered in coarse hair • Tail still while swimming; body propelled by feet 	 <ul style="list-style-type: none"> • Black whiskers • Tail broad and flat. • Tail flattened top-to-bottom • Slap water with tail when disturbed 	 <ul style="list-style-type: none"> • Fine, black whiskers • Muzzle may be white • Tail flattened side-to-side • Tail used for swimming with rapid side-to-side serpentine motion
Body	 <ul style="list-style-type: none"> • Adult size: 10-20 pounds; body length to 2 feet, with 1 foot tail • Juveniles similar in size to muskrats • Hunched appearance on land 	 <ul style="list-style-type: none"> • Adult size averages 40 pounds • Length to over 3 feet, including tail 	 <ul style="list-style-type: none"> • Adult size: 2-5 pounds; body length up to 1 foot
Hind feet	 <i>Photo courtesy of M. Enos</i> <ul style="list-style-type: none"> • Partially webbed; one free toe 	 <i>Photo courtesy of Anh Vinh Nguyen</i> <ul style="list-style-type: none"> • Fully webbed 	 <i>Photo courtesy of USFWS</i> <ul style="list-style-type: none"> • No webbing
Tracks	 <i>Photo courtesy of Peggy A. Duhon</i> <ul style="list-style-type: none"> • 5 front toes; 4 visible in tracks • Rear track to 6 inches in length • Narrow tail drag may accompany tracks 	 <i>Photo courtesy of Ohio DNR Division of Wildlife</i> <ul style="list-style-type: none"> • 5 visible toes on front track • Rear track to 6 inches in length • Tracks may be accompanied by a broad tail drag 	 <i>Photo courtesy of WDFW</i> <ul style="list-style-type: none"> • Rear track is 2-3 inches in length

If nutria are found in CA, immediately contact the CDFW Invasive Species Program to report your sighting at Invasives@wildlife.ca.gov or by calling (866) 440-9530

Distinguishing Characteristics from Similar Animals:

Tail –

Nutria has a round, long, rat like tail

Muskrat – long, flattened tail

Beaver – larger, flat, broad tail

Teeth -

Nutria has large orange front teeth

Whiskers -

Nutria has long white whiskers

Muskrat has long black whiskers, but a white muzzle

Beaver – Black whiskers

Size -

Nutria 10-20 lbs. – almost as large as a beaver and about 2 feet long

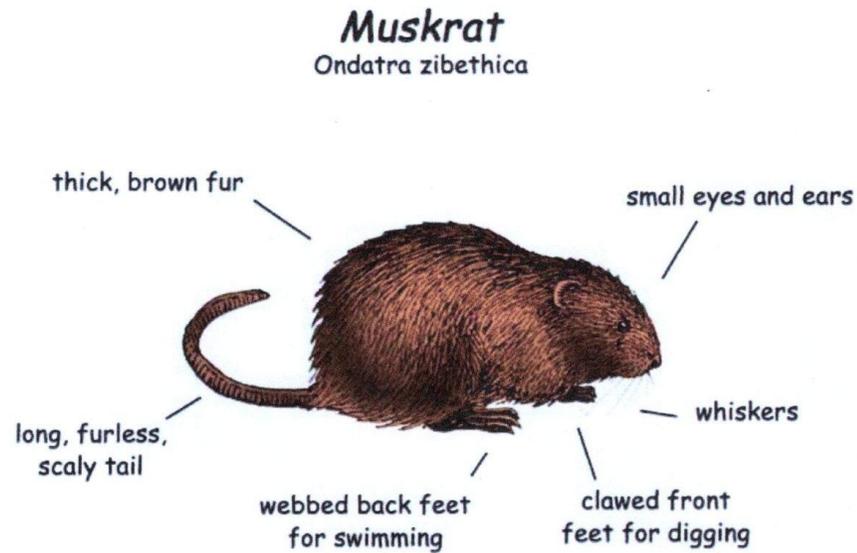
Muskrat 2-5 lbs. – almost like a large rat and about 1 foot long

Beaver – 40 lbs. and over 3 feet long

Muskrat Identification

2/15/26, 9:48 AM

mail.google.com/mail/u/0/#inbox/FMfcgZQfBsIDSSGkJJHMGWFRHpqlvQrN?projector=1



Facts:

Mating Season – March to August

Gestation Period – Less than a month

Litter – 5-10 young

Litters per year – Up to 3 litters per season

Life Span – 1-3 years

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www.exploringnature.org