

LAKE LAWRENCE LAKE MANAGEMENT DISTRICT BUDGET & WORK PLAN FOR 2024/25

BUDGET CODE: 1740W420 Lake Lawrence

General Comments.

On 10 May 2023 the Lake Lawrence LMD Steering Committee voted unanimously to approve this 2024/25 Budget & Work Plan and forward to the County. This followed numerous Budget Committee meetings and three previous meetings with PW staff. While some budget numbers (Beginning Fund Balances, Revenue, Interfund & FTE) are still approximate others are not (Weed Program Costs, Testing Program, Education & General Supplies, Tools, Mailers, Trng, etc.)

The Steering Committee sent out ballot sheets in January 2023 for members to vote on rate increases for 2024/25. The vote was tallied on 8 March 2023 at our first quarterly LMD meeting. The residents voted to increase rates by 3% each year.

The anticipated financial assets for the planning period of 2024/25 are:

1. REVENUE FOR	2024	2025
Beginning Fund Balance	~\$360,000	dependent on expenditures in 2024
<u>Revenue (from all sources)</u>	<u>from ~\$114,000 to \$117,000 (includes 3% increase ea. yr.)</u>	

2. Budgeted programs and expenses follow:

a. Weed Program: The goal in weed management is 1) reduce/eradicate non-native noxious and invasive weeds, 2) reduce/prevent future introduction of non-native noxious and invasive weeds, 3) maintain native weeds at a level that allows safe recreational activity and access to the lake for our members and all visiting citizens. Eradication of all weeds is not a goal. The steering committee weed committee tour the lake on a at least a monthly basis from March through late September with the purpose of determining what weeds are growing where and at what density. A staff representative will be contacted to accompany the weed committee when weed growth reaches a density of 1 in order to provide eyes on and determine areas where treatment may be necessary and to coordinate treatment with the designated contractor. We have a formalized procedure for documenting this information so that corrective action can be taken in only those areas the committee and staff agree are at action level. The tours in the fall provide significant data to help in the prediction of weed densities and potential action areas for the next year and to evaluate the effectiveness of any treatment performed early in the season. Many of the weeds we are addressing are annual. Therefore, our goal is to disrupt the seed production in the spring to reduce the plant growth in following years. To do this using Sonar early treatment action is necessary before weed growth reaches a level 3 density. If successful, we can reduce the amount and frequency of herbicide use, which has been demonstrated since first use of chemicals in 2008.

1) Non-Native Invasive & Noxious Weeds: We have identified seven in Lake Lawrence. White Fragrant Water Lily, Curly Pond Weed, Yellow Flag Iris, Knotweed, Narrow-Leaf Cattail, Parrot Feather and Purple Loosestrife.

- a) **White Fragrant Water Lily:** This plant with its white or purple flowers spreads from the roots/tubers as well as through seeding from the flowers. The Steering Committee has been working on eradication of this non-native invasive weed since 1988 when it covered over 88 acres of our 330 acres lake. This has been a long process due to the nature of this plant. There are currently only a few small patches of this weed in our lake. Information flyers are sent to shoreline residents each year requesting they hand pull any plants in front of their properties. Weed committee volunteers hand pull individual plants when they are found during weed surveys. When large patches are identified treatment is scheduled for the following year. Because of this we routinely budget for this even though we do not always use it.

2024 budget: \$2,500

2025 budget: \$2,500

- b) **Curly Pond Weed:** First identified in 2016 at the public boat launch. This plant is a perennial and as such grows from seed/turion (defined as a wintering bud that becomes detached and remains dormant at the bottom of the water) release in late spring and germinating in the fall. Curly also spreads from fragmentation so mowing these weeds is not an option as it could spread the weed to areas of the lake where it is currently not found. We use an approved herbicide (Aquathol) to address this weed in early spring when it is starting to grow and prior to turion production. In this way we can significantly reduce future growth and spread. We treated for this plant in 2018, 19, 20 and thought we had eradicated it, however found it in three treatment zones in 2022 and had to change our treatment plan to focus on this invasive species. In 2024/25 we are budgeting for treating nuisance weeds, but will divert those funds and change treatment regimen should we find Curly Pond Weed. That decision cannot be made until early spring of each year.

2024 budget: \$0

2025 budget: \$0

- c) **Yellow Flag Iris:** First identified in 2004. This plant spreads by seed and tuber growth. No action taken until 2013 when county Noxious Weed Staff conducted an assessment and mapped the locations of the plant. 2014 residents and volunteers were asked to clip and remove seed pods. It was quickly obvious that mechanical removal of this Noxious Non-Native plant was not feasible and was actually dangerous. 2015 this plant was added to the County Noxious Weed list as a Class C Noxious Weed and identified for eradication. It was on the State Noxious Weed list since 2002. In 2015 the first chemical treatment was done on this plant. Annual treatment has continued since using state grants and some LMD funding. As of 2022 Yellow Flag Iris has been reduced by ~75%. Efforts will continue annually until this plant is eradicated. County Noxious Weed Group will continue to apply for state grants and LMD Committee will allocate \$1,500 a year toward this effort. In 2023 County requested additional funding from LMD because of a shortfall in available Grant funds. Steering Committee voted to approve an additional \$1,000 bringing total contribution to \$2,500 for 2023. At 25 April 2023 meeting WR Manager assured LMD Budget Committee that all ARS work time toward YFI is charged to Noxious Weed Fund and all equipment used for YFI will not be charged to LMD funds. Grants will continue to be sought to pay for the majority of YFI work and

volunteer support to collect permission letters, assist with posting of notices along shoreline and picking up notices after treatment was helpful in controlling costs for this program.

2024 budget: \$1,500

2025 budget: \$1,500

- d) **Knotweed:** First identified in 2019 and is classified as a Class B Non-Native Invasive Species by both the state and county. County Noxious Weed Group has treated for this weed each year beginning in 2019 as part of their ongoing program to eradicate Knotweed on our county lakes and rivers. Treatment normally takes place in July-September depending on department personnel schedule. LMD Volunteers have assisted in identifying locations where this plant is growing and assisting in coordinating access of Noxious Weed Group personnel to these locations when requested.
- e) **Narrow Leaf Cattail:** First identified in 2020 during a lake survey and is a non-Native Invasive species not yet classified by either the county or state because it is considered a rare plant for our area. Department of Ecology Aquatic Biologist Jennifer Parsons confirmed the identification and recommended immediate eradication. Our Aquatic Resource Specialist was notified and requested our contractor treating the Fragrant Water Lily also treat this plant. No additional plants have been identified since, but survey committee personnel keep vigilance in looking for it.
- f) **Parrot Feather:** First identified in 2013 by our Aquatic Resource Specialist on the canal behind "Goat Island". It is a Class "B" Non-Native invasive species designated for control by both the county and state. It was treated by County Noxious Weed Group that year and has not been seen since. Survey committee personnel keep vigilance in looking for it.
- g) **Purple Loosestrife:** First identified in 2012 by County Noxious Weed Group in several locations on the shoreline. This is a Class "B" Non-Native Invasive species designated for control by both county and state Noxious Weed Groups. County Noxious Weed Group has treated the various locations each year since and in 2022 could not find any. It appears this weed may have been controlled; however, Lake Survey Committee volunteers will monitor for any reappearance of this weed and then report it to County Noxious Weed Group so control measures can be taken.
- 2) **Native Weeds:** These are weeds are normally not aggressive and are beneficial to the lake. We take action on these weeds when they get out of control and cause safety concerns or impair access to the lake. Typically, these are large and small leaf pondweed and Elodea. Elodea, typically grows on the bottom one foot of the lake and is usually not an issue on most lakes. However, on Lake Lawrence, with its extremely high nutrient level it can quickly and frequently grow out of control extending to the surface and laying over on top of the water in huge mats of vegetation that prevent any type of boat recreation, swimming, fishing, etc. Our last treatment of these plants was in 2021 when they grew out of control. By the time a contract was in place to treat their density was worse than anything we have ever experienced. The survey committee's recommendation was to not spend the \$44,000 for the treatment, however county staff recommended to do it anyway. The treatment failed. The LMD committee purchased weed rakes for residents to rake the weeds out of the water from around their docks and community boat launch and swim areas. The biomass from this can be measured in tons by referencing a similar incident in 2016 at Long Lake where they had to harvest 240,000 lbs. or 120 tons of these weeds. Harvesting is like a mower that cuts off only the top 2 feet of the plant. Having contracts in place on time along with early detection and immediate action is key to preventing similar incidents in the future and key to ensuring chemical use is

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worthwhile. Large and small leaf pondweed are usually controlled when we treat for Curly Pondweed. Elodea is not. We are therefore allocating funds in 2024/25 if we once again need to treat for Elodea, but not for Curly Pondweed. If we treat for these weeds Sonar would be used vs. Aquathol if we needed to treat for Curly Pondweed.

2024 Budget: \$70,000

2025 Budget: \$70,000

b. Algae Management: Nutrients accumulating in the lake from the watershed and the sediment in the lake are the primary drivers of increasing algae problems in the lake. One key nutrient influencing growth is Phosphorus. This nutrient comes from various sources. In a study completed in December 1991 by Kramer, Chin & Mayo (KCM) Inc., Seattle, WA in association with Hart Crowser, Herrera Environmental Consultants Water Environmental Services, Inc. Aquatic Research, Inc. pages ES-2- ES-3 determined that phosphorus in Lake Lawrence came from the following sources:

In-Lake sediments 83%

Overland flow & Precipitation 7% (lawn fertilizers, herbicides, roof downspouts, road runoff, pet/waterfowl waste, etc.) – this is the part we can influence by education and LMD projects.

Ground Water Inputs 10% (aquafer/springs in the lake bottom)

The Steering Committee continues to research and obtain information from Black Lake, Long Lake, and others on methods they are using to reduce or eliminate toxic algae blooms by stabilizing phosphorus in lake sediment and the water column. There are several lakes in our area utilizing different techniques and some exploring new ones. Like most lakes in Western Washington Lake Lawrence has experienced serious toxic algae blooms with the most serious one occurring in 2020. In 2022 we had one bloom that lasted three weeks where citizens were warned not to use the lake. Besides toxic algae there are two other types of algae in our lake. The first is filamentous algae. While it will be impacted by reduced phosphorus availability, it is more impacted by nitrogen which can come from your septic tanks, decaying plants (aquatic weeds that grow, die and grow again the next year), lawn fertilizers, pet and waterfowl waste. The second type is actually two macroalgae species. One is Chara or stonewort and the other is Nutella. These macro-algae species are often confused with aquatic plants as they can grow quite large and will often grow alongside plants in the near shore sediment. At this time, we will not be taking action on these two types of algae except to monitor their locations and growth patterns in the lake.

Algae will be an ongoing issue as we continue having warmer weather, and significant phosphorus additions from our groundwater springs and near shore water runoff from yards and upland properties during stormwater introduction. Lake Lawrence has no stormwater outfalls that we are aware of, but several culverts that run under Lindsay Road, Topaz Drive, 153rd Ave and Lawrence Lake Road. These culverts allow water to run under ground in some locations surfacing short of the lake and then water runs above the ground and into the lake. There is currently no stormwater catch basins to collect pollutants except at the new public boat launch which has a drain system across the bottom of the boat launch that drains into a catch basin before it overflows into the lake. Volunteers monitor this catch basin and have reported clogging/overflow to Department of Fish & Wildlife. They have been quick to

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correct the situation. Volunteers have also removed/blown debris off the grating to help prevent clogging.

In 2024/25 we will continue to monitor and report algae blooms for testing and surveillance to Thurston County Department of Health while continuing to study what other lakes are doing that is having success. We will continue to save as much of our precious revenue as possible for the inevitable situation where we must act. Costs for toxic algae/phosphorus mitigation run from \$150,000 to \$200,000 per application and requires repeat (annual/bi-annual) applications and continuous monitoring. Without funds to continue monitoring protocols and the ability to apply repeat applications initial mitigation costs would be wasteful. We will continue to pursue methods and funds.

2024 Budget: \$0.000

2025 Budget: \$0.000

c. Testing Program: Learning more about the nutrients and toxins entering the lake is important in developing most of our work plan.

- 1) **Thurston County Department of Health:** The Department of Health performs testing each year on ten of the larger lakes in Thurston County. They perform testing in two locations on Lake Lawrence. They test the two deepest locations – one in the main lake and one in the little lake, both at the surface and just off the bottom once a month from May – October. They test for phosphorus, nitrogen, temperature and depth visibility. This is at no cost to the LMD as this is a county wide initiative conducted on at least 10 lakes.
- 2) **LMD Nutrient Testing:** Long Lake purchased their own testing equipment in 2021 to do monthly testing year-round. This equipment allows them to take water samples and send the samples to a lab for testing and analysis. Lake Lawrence will work with Long Lake representatives in 2023 to determine the type of testing equipment needed, their testing protocols and costs then identify if it would be beneficial to purchase our own equipment for testing to begin in 2024/25.

2024 Budget: ~\$10,000 (Initial equipment & Testing 1st year) Amount is for testing equipment/mailling costs – Actual sampling/mailling will be done by volunteers with receipts for mailing submitted to PW for payment. We cannot afford to have the ARS do this. If this work cannot be done by volunteers this equipment will not be purchased.

2025 Budget: ~\$5,000 (testing costs) Amount is for testing equipment/mailling costs – Actual sampling/mailling will be done by volunteers with receipts for mailing submitted to PW for payment. We cannot afford to have the ARS do this. If this work cannot be done by volunteers this testing equipment will not be purchased and samples will not be taken.

d. Integrated Aquatic Vegetation Management Plan (IAVMP): The last update to the Lake Lawrence IAVMP was done in 2004. It is now a requirement by the county that the IAVMP be updated prior to treating any weeds with herbicides in a new LMD. Therefore, we will need to fund the research and study to complete this prior to our renewal in December 2026. Due to timing, we intend to submit for a grant in Nov/Dec 2026 to start this process in 2027. It is normally a one-year process and Department of Ecology Grants are available to fund 75% of the cost if submitted in time. In the past the grant request process has been done by county staff. Expected costs are ~\$75,000. LMD share of that would be ~\$18,750 in 2027. The Steering Committee has voted to not move forward with a

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IAVMP until 2027 – once the LMD is renewed. The feeling is it is not responsible to spend the money on this study until the members decide whether they want to renew the LMD. If this becomes an issue with possible treatments in 2027, we will review the issue with the LMD Program Manager and/or our County Commissioners.

2024 Budget: \$0.000

2025 Budget: \$0.000

e. Lake Water Level Monitoring: In September 2018 LMD volunteers coordinated with the University of Washington (UW) and University of North Carolina (UNC) to have two water measuring gauges installed on our lake. This program, Lake Observations by Citizen Scientists & Satellites (LOCSS) Project is funded by NASA and managed by Tennessee Tech, UW and UNC. We assisted in locating and installation of two gauges, one in the main lake and one in little lake. They are monitored by volunteers by reporting gauge readings every two weeks by logging onto the LOCSS website and noting the gauge readings. In 2019, after noting the success of this project we notified county staff and recommended they work with LOCSS to install similar gauges on other Thurston County lakes. In 2021 LOCSS sent the equipment to Kevin Hansen, Water Planning, CPED, Thurston County for installation of gauges in nine Thurston County lakes in locations where any citizen can take a reading and text the information to LOCSS. At this time one additional gauge was installed at the Lake Lawrence Public boat launch. Anyone can log onto this site and obtain the information <https://www.locss.org/gauge/lake-lawrence-south> . It has been invaluable in determining the variations in lake levels throughout the year and also provides a quick reference to over 100 other lakes throughout the United States, France and Bangladesh. There is no cost for this program except volunteer time.

2024 Budget: \$0.000

2025 Budget: \$0.000

f. Education: One of the goals of the Steering Committee is to educate our members on our programs including some of the science of lake management. The Steering Committee is an advocate for its members, and as such will inform its members of issues that arise during the year. In addition, we provide information on shoreline and septic system management, yard and pest management and other topics as appropriate that affect safety and water quality.

1) **Annual Member Meeting:** The Steering Committee plans, organizes and executes an annual member meeting traditionally held in September. The purpose of this meeting is to give an update on the years' work plans and what is planned for the next year. In addition, there is an education segment from one or more local experts on a variety of subjects from septic system care and maintenance to rain gardens, roof gutters, lawn care and maintenance and proper disposal of pet waste. Staff supports the committee with coordinating any county and or state guest speakers. In 2022 we added a BBQ/pot luck in conjunction with the annual meeting to encourage more members to attend. We had over 100 participants. By far the largest participation ever. We intend to continue this effort.

2024 Budget: \$1,500

2025 Budget: \$1,500

- 2) **Newsletter:** In 2022 the Steering Committee, at the prompting of staff decided to write a newsletter to our members to be sent out by the first of the year. This would take the place of a letter/notification card/ mailing that we normally mailed in mid-January notifying our members of the year's lake survey and meeting schedule. County will assist in coordinating the printing and distribution. The newsletter is prepared and approved by the Steering Committee at its last meeting of the year for distribution in December/January of each year. Based on meeting 16 Mar 23 with ARS/WR Mgr./PW Communications Outreach and WR Mgr. subsequent communications with the LMD Steering Committee County policies (not further defined by WR Mgr.) will not allow LMDs to publish a newsletter with LMD funds without county review/approval of newsletter content. It is therefore the position of the Steering Committee to not publish a newsletter and utilize LMD email and social media to distribute the information.

2024 Budget: \$0

2025 Budget: \$0

- 3) **Website:** The Steering Committee has proposed to build and manage a website managed by the Steering Committee for our members. The purpose is to provide educational material, historical data, meeting notes, budgets, newsletters (to prevent the costs of printing and mailing in the future), lake survey data, lake treatment notifications/data, etc. Our goal is to include as many studies, data and links to helpful websites and information as possible to better inform our members. The county managed website is never updated, costly to manage with expenses charged to the LMDs and does not include the information pertinent and important to our members. Based on meeting 16 Mar 23 with ARS/WR Mgr./PW Communications Outreach and WR Mgr. subsequent communications with the LMD Steering Committee County policies (not further defined by WR Mgr.) will not allow LMD funds to pay for a website that is not managed by the County. It is therefore the position of the Steering Committee to not utilize LMD funds to pay for a website. Efforts are ongoing to find alternative funding to operate a website.

2024 Budget: \$0

2025get: \$0

3. **Administration:** County will provide the staff required to accomplish the work plan of the LMD. Our current FTE for our Aquatic Resource Specialist is 15% (0.15) and .5% (0.05) for other staff. Our actual FTE for the past five years: 2018 – 0.1725; 2019 – 0.159; 2020 – 0.1463; 2021 – 0.1718; and 2022 – 0.1703. Our work plan for staff has not increased for 2024/25 and has actually decreased so we do not support any FTE increase. The Steering Committee will continue to support .15 FTE for ARS and .05 FTE for other staff. At the 25 April meeting PW provided a detailed Task/Effort work sheet with estimated hours for each. The estimated hours were not broken out by supervisory and ARS FTE. That breakout has been requested. The overall work hours appear to be inflated, others questionable, most look okay, but the Steering Committee cannot make that assessment until additional information that has been requested is provided. There will continue to be discussion about the FTE. Based on the FTE PW presented to the Budget Committee on 25 April (.031), overall FTE costs for 2024/25 (shown in RED) would be \$10,000 to \$12,000 more than the FTE (0.20) the LMD has budgeted for the past three years. Our actual FTE has been lower than the budgeted FTE.

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The over one third increase in FTE proposed by PW is not reasonable and cannot be supported with analysis.

2024 Budget: ~\$23,000 (.20 FTE) (actual number dependent on cost-of-living increases not yet determined) **\$34,000 (.31 FTE)**

2025 Budget: ~\$24,000 (.20 FTE) (actual number dependent on cost-of-living increases not yet determined) **\$35,000 (.31 FTE)**

4. Recap of 2024/25 Budget Expenses by Object Code (Line Item):

<u>Object Code</u>	<u>Item Description</u>	<u>2024</u>	<u>2025</u>	<u>Comments</u>
591000 – 598001	Interfund Costs	~\$9,000	~\$9,000	Computed by County Financial Service and PW Budget. County Commissioners can impact these costs.
510000 – 527000	Salaries & Benefits (FTE)	~\$34,000	~\$35,000	Based on PW FTE 0.31
			OR	
		~\$23,000	~\$24,000	Based on FTE at 0.20 as approved by LMD SC. The proposed PW FTE of 0.31 cannot be supported by the LMD SC.
541000	Prof Svcs			
	Invasive/Nuisance Weed	\$70,000	\$70,000	
	Yellow Flag Iris Control	\$1,500	\$1,500	
	Invasive Lily Control	\$2,500	\$2,500	
	TOTAL:	\$74,000	\$74,000	
531000	Supplies	\$1,500	\$1,500	Annual Picnic
		\$5,000	\$5,000	Nutrient Testing Supplies
535000	Small Tools & Minor Equip	\$5,000		Nutrient Testing Equipment
545000	Op Leases/Rentals (LLCC)	\$150	\$150	LLCC Lower Lodge Rental
549007	Misc. Trng/Conf Reg	\$100	\$100	ARS Trng/Conf Fees
549000	Miscellaneous	\$2,500	\$2,500	APAM Permit/Notification Cards x2
	TOTAL:	\$14,250	\$9,250	

5. NOTES:

- a. County Interfund Costs are expected to increase 3-4% or more for some budget lines over 2023 rates if not reduced or eliminated by County Commissioners during budget discussions this summer.
- b. 2023 Interfund Costs (Administrative Costs) \$7,841
 + FTE (County employee wages & benefits) \$22,015
 = \$29,856 = **27%** of annual LMD revenue.
- c. 2024/25 Interfund Costs ~ \$9,000 conservative estimate.
 + FTE (.31 PW Est.) ~ \$34,000 - \$35,000 conservative estimate.
 = \$43,500 or roughly **38%** of annual LMD revenue.

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- d. Professional Services Costs (541000), cost could be less than budgeted.
- e. Object Codes 531000, 535000, 545000, 549007, and 549000 are best guess at this time based on historical costs. Costs could be less in some areas and more in others, but overall costs for these areas combined should not exceed the total amount budgeted for all these areas.
- f. **This is putting LMDs back to where they were in 2015 erasing all reductions in FTE & Administrative costs and putting us in a deficit spending situation in following years.**