

State of Lake Lawrence

Report for the period 1 October 2023 through 30 September 2024

The constituents of the Lake Lawrence Lake Management District (LLLMD) prepared this report. It reflects the status of past and current lake stewardship initiatives from the stakeholder's perspective.

This report also serves as required input to the Noxious Weed Integrated Pest Management (IPM) Program report and to meet requirements for Storm Water fee reduction.

Vegetation Surveillance

Lake Lawrence is divided into 33 Aquatic Vegetation Assessment Sites (AVAS) along the shoreline. Weeds are assessed visually at the surface of the water, and by using a rake to sample submerged vegetation. The survey team uses a numerical scale to record the density of vegetation growth in Accordance with Washington State Department of Ecology standards and guidelines. Data are collected in each AVAS to assess herbicide treatment needs, and to track species shifts. Documented results of each survey are sent to lake residents, provided to our contractors, posted to our website, and briefed at regularly scheduled LLLMD meetings.

Vegetation monitoring surveys were conducted monthly from April through August 2024 on Lake Lawrence.

Vegetation Control

Yellow Flag Iris (YFI). We are making great strides eliminating YFI from our shorelines. During 2015 YFI was treated with 8.58 gallons of Imazapyr; 4.47 gallons in 2017; 3.5 gallons in 2020; 2.6 gallons in 2021; 2.47 gallons in 2022; and 1.28 gallons in 2023 and 1.2 gallons in 2024. The 86% reduction of quantity of gallons used is reflective of effective YFI control. Treatment is conducted by boat and backpack using a directional applicator to minimize overspray.

Treatment in 2024 was completed on 31 May 2024. Post-treatment surveys revealed favorable results in the treated areas.

Due to the success of this program since it was started in 2015 future chemical treatment of Yellow Flag Iris utilizing State Grant and Lake Management District (LMD) Funds will be reduced. The YFI program will be limited to specific high Yellow Flag Iris density areas and will be budgeted at a cost to the LLLMD not to exceed \$1,500 a year.

Individual residents and community maintenance/volunteer personnel will mechanically remove yellow Flag Iris along residential shorelines and Community HOA parks as outlined in Revised Code of Washington (RCW 17.10) which requires public and private landowners to control designated noxious weeds on their property. Additional information can be found at: [Noxious Weeds | Thurston County \(thurstoncountywa.gov\)](https://www.thurstoncountywa.gov/NoxiousWeeds). To assist with this effort the LLLMD produced a YouTube Video to show residents how to safely and effectively remove Yellow Flag Iris <https://youtu.be/wk5AVYtrWhA>. Information on control and removal of other noxious and invasive weed species can also be found on the Lake Lawrence YouTube Channel at: <https://www.youtube.com/@lakelawrence>.

Nuisance and Invasive Aquatic Weeds.

Chemical Treatment. Lake Surveys for 2024 began 20 April and very few weeds were found. Aquatic vegetation growth through the early spring was slow possibly because of cooler, wetter conditions. Only trace quantities of weeds were identified through 11 June. A survey conducted on 25 June showed a density level 3. By 9 July weed density in many areas had grown to level 4. In November 2023, the LLLMD secured authorization from the County Pest and Vegetation Management Advisory Committee (PVMAC) to use Galleon SC (Penoxsulam) to treat Curly Leaf Pondweed (CLP) a WA State designated Class C Noxious Weed. This invasive/noxious species was first identified in Lake Lawrence in 2016 at the Public Boat Launch by the Thurston County Aquatic Resource Specialist (ARS). The progression/history of CLP treatment can be seen on the map/chart at Enclosure 1. On 12 and 29 July 2024 our contractor made two treatment applications of Galleon SC to 26 acres (all areas known to contain CLP except the southernmost portion of Lake Lawrence due to expense). All public and community shorelines were treated as shown at Enclosure 1. The treatment killed the CLP and slightly degraded some other aquatic vegetation reducing their density in the areas treated. The contractor estimates it will take 3-4 years of treatment with Galleon SC to eradicate the CLP from Lake Lawrence. It is the intention of the LMD to apply Galleon SC earlier in 2025 to provide the most impact on the plant and to continue these treatments until CLP is eradicated and expand the treatment to the 30 acres in the southern part of the East Basin to ensure it is stopped.

Weed Harvesting. As shown in our lake surveys heavy densities of aquatic vegetation seriously impacted recreational uses in areas not treated with Galleon SC. A harvesting contract was secured to harvest approximately 15 acres of those areas from 12-16 August as shown at Enclosure 2. The Lake Lawrence Community Club (LLCC), Scenic Shores HOA (SSHOA) and Wildaire HOA boards authorized use of their boat launches to assist with this. The LLCC further authorized use of their northeastern shoreline to offload the cut vegetation and an area directly north of the offload location to compost the vegetation. Because of the proximity of the LLCC offload and composting area the contractor selected this area for all operations. 14.83 tons (29,668 lbs.) /9.57 Cubic Yards of aquatic vegetation were cut and removed from 15.5 acres the water by the harvesters and placed in large piles to compost. Residents of the LLLMD were invited to pick up and haul away as much of the composted (highly nutritious) vegetation as they desire.

Fragrant Water Lily (FWL). 2.5 acres of FWL was treated in 2024. Funding has been set aside in future years to address treatment of FWL in areas where large masses of FWL are identified. A YouTube Video was produced to show shoreline residents and Community HOA maintenance personnel/volunteers how to successfully remove FWL mechanically <https://youtu.be/ms-MfnAhCl8>

Toxic Algae. The LLLMD has had several alerts/testings on sightings of toxic algae in 2024 and on 14 August had its first Toxic Algae bloom that exceeded state guidelines. That warning was lifted on 16 September 2024. A one month shut down of the lake. Lake Lawrence normally experiences most of our toxic algae blooms from August through November. For more information about toxic algae, water testing, reporting toxic algae sightings, etc. please visit the

LLLMD website at <https://www.lakelawrencelakemanagementdistrict.com> and then click on the appropriate button in the header at the top of the HOME page to find what you are looking for.

Water Quality. Thurston Regional Planning Council Water Quality Report shows that since 2020 Lake Lawrence water quality as “Poor”. Prior to 2019 it was rated as “Fair”. [Freshwater Quality | Thurston Regional Planning Council, WA \(trpc.org\)](#). The Cyanobacteria Management Plan (CMP) study will help identify the problems that are causing the poor water quality and provide science-based recommendations on how to improve it. See CMP Grant/Study on page 5.

Volunteer Activities

Assistance to Thurston County Undeveloped 15 Acre Park. Activities included weekly trash cleanup, reporting of vandalism and illegal campfires, installation, and suggested improvements to signage along the park. It is estimated that volunteers contributed approximately 200 volunteer hours to these activities and picked up over 2600 pounds of trash during 2024. See pictures at Enclosure 3.

Assistance to Thurston County Health & Social Services. LLLMD volunteers coordinated with County officials to report algae outbreaks and perform sign placement and removal tasks. Informational and warning signs were posted at the Public Boat Launch, LLCC, Wildaire, and SSHOA parks. Volunteers contributed approximately 5 hours to these tasks.

Assistance to Thurston County Noxious Weeds Department: LLLMD volunteers coordinated the dissemination and collection of YFI Permission Letters, and retrieval of treatment signage. Assistance for these efforts is estimated to be ~50 hours.

YFI Floating Island Relocation. LLLMD volunteers researched, organized, and distributed procedures for reporting and relocation of YFI floating islands. These break-away floating masses can be a hazard to boats, including the sanctioned annual high-speed Boat Race event. On 21 July 2022, the Lawrence Lake LMD Steering Committee sent a letter to the Thurston County Water Resources Manager formally reporting the floating island issue and requesting coordination with Washington State Departments of Natural Resources and Fish and Wildlife (DNR and DFW). During 2023 both agencies participated in a boat survey of the lake, focused on the “birthing areas” of these large floating masses. After this survey, an additional break-away island event occurred during April 2024, requiring LMD residents to take remedial action before damage occurred to nearby docks. The floating island issue remains a safety concern for residents of the lake as well as recreational and race-boat users of the lake. Accordingly, during 2024 the LLLMD formally presented this issue to elected County and State Representatives as well as stakeholder agencies (DNR, F&W, Ecology). Assistance has been requested to address acute safety concerns as well as development of a coordinated, long-term strategy to preclude future safety concerns. The LLLMD does not have the resources or charter necessary to fully address this ongoing safety concern. Approximately 80 volunteer hours were expended in 2024 on this effort.

Restoration of “Goat Island”. Numerous LLLMD members participated in work parties to restore Goat Island to its natural state. Activities included removal of nuisance and invasive terrestrial plants. Approximately 100 volunteer hours were expended in 2024 with much work remaining to complete the restoration.

Education and Outreach. The LLLMD conducted four general membership meetings, two special meetings, a public meeting to obtain comment on the Cyanobacteria Management Plan (CMP) and an Annual Meeting/BBQ on 28 September from 3-5 p.m. with educational speaker. The presentation by the guest speaker was recorded and posted to the LLLMD YouTube Channel at: https://youtu.be/j7kyE_PVZKo . The Guest speaker was:

- Jennifer Johnson, Thurston County Public Health Education and Outreach Specialist Kelsey Crane from Community Planning and Economic Development. They partnered to give a one-hour presentation on how to reduce impacts on water quality by better management of yard, home chemicals, fertilizers and cleanup of pet waste around the yard and home.

In addition to the various meetings and guest speaker engagements, the following educational material was distributed to all LLLMD members over the course of the year:

- A Postcard mailing to all LLLMD members directing them to the LLLMD website and YouTube Channel for comprehensive information about Lake Lawrence and the Management district history and plans.

A Lake Lawrence YouTube Channel was expanded. It currently provides over 60 educational and informational videos to reduce the use of chemicals and fertilizers around the lake and to encourage the safe and effective removal of invasive and noxious weed species from in and around the lake <https://www.youtube.com/@lakelawrence> . Since June 2023 when it was placed online it has received over 21,000 views. Over 500 hours of volunteer effort has been expended toward this effort so far in 2024.

- Emails to LLLMD members advising them on the treatments, harvesting, algae tests and other current information affecting their lake.
- **Water Measurement.** In support of a NASA-sponsored global lake monitoring program, lake levels are measured and reported from two sites located on our lake. Enclosure 4 is historical data reported since our involvement began. Approximately six volunteer hours are spent on this effort annually.

LMD Administration

LMDs are administered by Environmental Health (EH) under Thurston County Department of Health and Social Services (DHSS). A county program manager is assigned to coordinate budget, vendor contracts and operations for the LMDs. Citizen-volunteers comprise the lake Steering Committee (SC). The SC coordinates, directs and creates stewardship plans, budgets, periodic meetings, and volunteer activities with contractors, County staff and LLLMD citizen members. Our current LMD expires 31 December 2026.

Administrative Procedures. On 1 January 2024, the LMDs in Thurston County were officially moved from the County Public Works agency to the county Department of Health and Social Services. On 2 April 2024, the Board of County Commissioners approved the Thurston County Lake Management District Standard Operating Procedures (SOP) that provides guidance to both county staff and LMD organizations on how each will work together to achieve lake management goals. A copy of this SOP is available on the LLLMD website at <https://www.lakelawrencelakemanagementdistrict.com> . This SOP ushered in an entirely new

role for the LMDs as quasi-governmental entities with budget and work plan authority. Greater responsibility, less county overhead costs and more flexibility. We will not know until the end of 2024 what county overhead costs will be, but through the 3rd quarter of 2024 costs savings amounted to approximately \$20,000 providing more funds for lake stewardship. As a result of these savings, the grant and financial participation of LLLMD members the LLLMD was able to increase the lake stewardship activities and begin longer term projects to create a healthier lake.

Budget. Each year the Annual Budget and Work Plans are developed by the LMD Steering Committee and County staff as required by County process. The 2024 annual revenue for Lake Lawrence LMD was approximately \$116K. The primary source of these funds is voter-approved fees collected from each parcel owner. The intended use of these funds is lake stewardship, as commissioned by RCW 36.61. During 2023 LLLMD members passed a motion to increase Assessment fees by 3% in 2024 and 2025. Your LLLMD SC also wrote, submitted, and was granted a \$50,000 grant from the Washington Department of Ecology to help fund a Cyanobacteria Management Plan (CMP) study (**TOXIC ALGAE STUDY**) (details below).

CMP Grant/Study. Your Steering Committee (SC) was listening. We heard your concerns about the lake water quality (the green/brown looking water and blue/green toxic algae blooms). We have never had the funds to act because of county overhead costs coupled with existing lake stewardship requirements. With the realignment of the LMDs with Environmental Health, the approval of the new Standard Operating Procedure and the added responsibilities assumed by your SC funding was available to move forward with more aggressive action to tackle long standing lake water quality issues. Your SC saw an opportunity to apply for a grant that would investigate these problems and took it. As noted above the grant application was approved. The SC moved forward with a Request for Proposal (RFP) to identify a contractor to conduct the study necessary to take action to resolve these long-standing water quality (**TOXIC ALGAE**) issues. In May 2024 Herrera Inc., a Seattle based company was awarded the \$93k contract that began with a public meeting on 25 July (see YouTube Video of meeting at <https://youtu.be/uKbn0Ji6DFI> and presentation material on the LLLMD website). The Goal of the study is to develop a comprehensive, science-based plan to guide public and private investment for the benefit of human recreation and environmental health in Lake Lawrence – the causes of the green/brown looking water and blue/green toxic algae blooms – and develop a plan to deal with them. The Objectives are to:

- Develop management goals.
- Evaluate current conditions and causes impairing human and ecological uses.
- Identify actions (e.g., projects, policies) to support achieving management goals.

Preceding the public meeting on 25 July 2024 a lake and land survey was conducted with the Herrera project manager. Lake sediment sampling occurred 25 September 2024 and lake water monitoring/testing will be conducted 1 October 2024 through October 2025. The final plan will be briefed to LLLMD members at a public meeting tentatively scheduled for April 2026.

Legislative Initiative. Your SC has been working for the past two years on a bill S3518.1 to RCW 36.61 Lake and Beach Management Districts that would make substantial changes to the RCW that would benefit all LMDs in WA State (see the LLLMD website for a DRAFT of the bill). We

have secured sponsors for the bill in both the state senate and house of representatives. Thurston County Commissioners have been briefed on the bill and support the changes. All LMDs in the state have been involved in this process and provided their recommended changes. We have also reached out to other stakeholders to include the Department of Fish and Wildlife and Washington State Lakes Protective Association (WALPA). We are looking forward to getting this bill submitted in December 2024 for consideration in the next legislative session starting in January 2025. This legislation has been discussed at our regular LMD meetings for the past two years and updates are provided at each meeting and included in our meeting notes and slide presentations.

YOUR LLLMD LEADERSHIP TEAM

Barry Halverson 18 Oct 24
Barry Halverson

Co-Chair

Lake Lawrence Lake Management District

Copy to:

State Senator John Bruan; State Representatives Peter Abbarno, Ed Orcutt Andrew Barkis and J.T. Wilcox; BoCC; Thurston County Pest and Vegetation Management Advisory Committee; Thurston County Public Works Staff, LMD Leadership for Long, Pattison, and Offut Lakes.

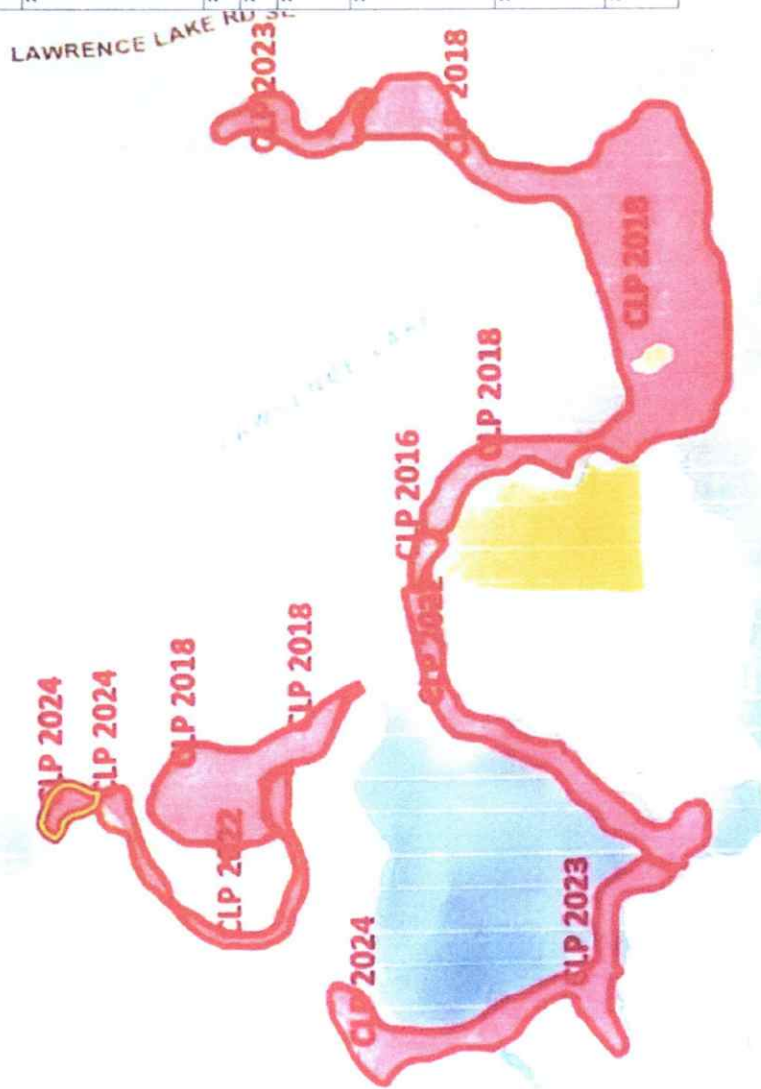
Enclosures:

1. CLP Treatment Map
2. Weed Harvest Map
3. Cleanup Pictures of County Park 2024
4. Lake Level Statistics

Enclosure 1 CLP Treatment Map

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 (not effective against Curly, but killed Narrowleaf and Elodea)
2017	<ul style="list-style-type: none"> Apr-Jun Treated with Sonar Q and PR (not effective against Curly, but killed Narrowleaf and Elodea) County ARS started working on a new prescription for Aquathol K that LMDs (Long and Lawrence) were told would be 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 last 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 Gallison 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 Gallison SC

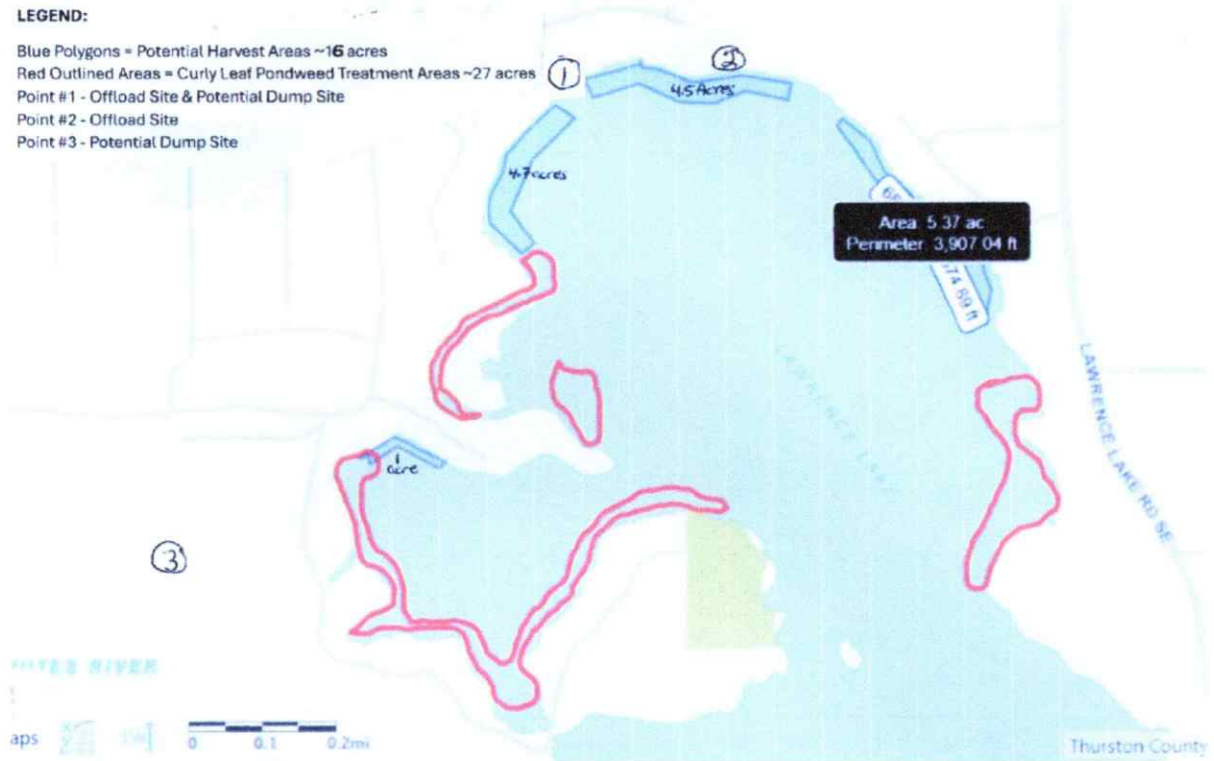
CURLY LEAF PONDWEED SPREADING AROUND LAKE LITTORAL AREAS



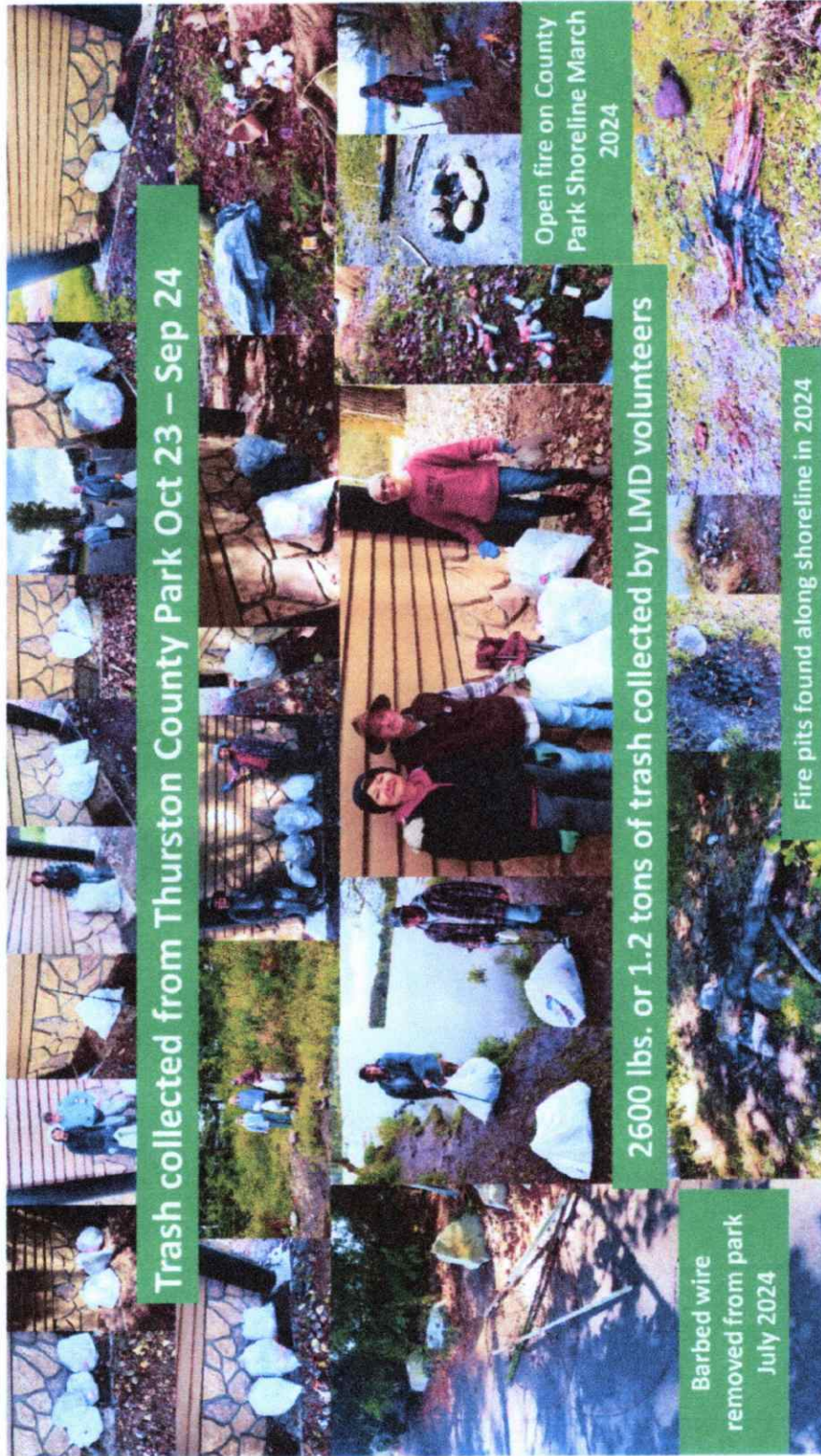
Enclosure 2 Weed Harvest Map

LEGEND:

- Blue Polygons = Potential Harvest Areas ~16 acres
- Red Outlined Areas = Curly Leaf Pondweed Treatment Areas ~27 acres
- Point #1 - Offload Site & Potential Dump Site
- Point #2 - Offload Site
- Point #3 - Potential Dump Site

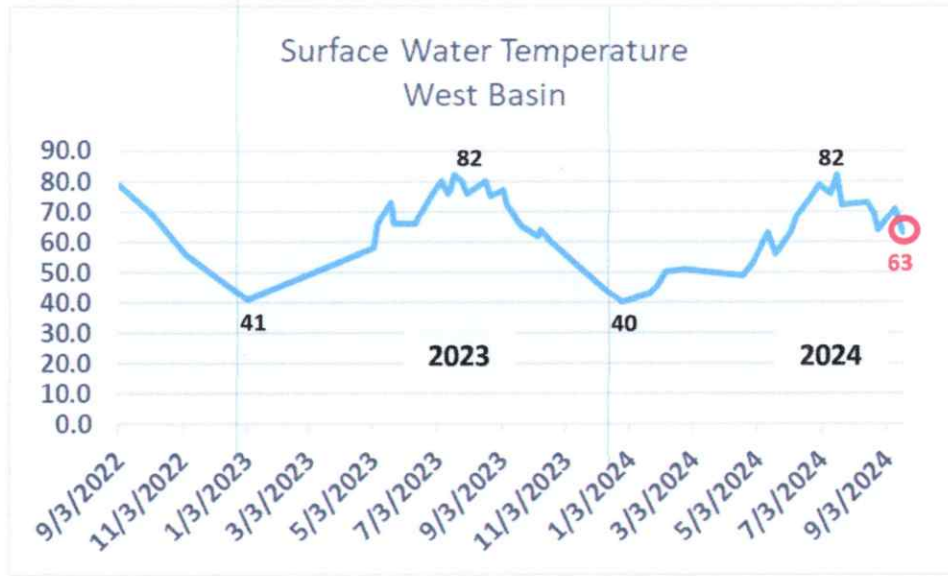


Enclosure 3
Cleanup Photos of County Park 2024



Enclosure 4
Lake Level Statistics

Lawrence Lake Surface Water Temperatures (F) (West Basin Shoreline)



Lawrence Lake Water Surface Level

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

