

The logo for AquaTechnex features the company name in a bold, sans-serif font. 'Aqua' is in blue and 'Technex' is in black. A yellow swoosh underline is positioned above the text, starting from the left and curving under the 'x' on the right.

**AquaTechnex**

# 2025 Year End Report for the Loon Lake LMD



Prepared for  
Loon Lake Management  
District

**AquaTechnex,**  
LLC

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## Summary of Management for 2025

AquaTechnex continues to provide aquatic plant management services for the residents and landowners at Loon Lake. The invasive Eurasian Watermilfoil (EWM) and Curly Leaf Pondweed (CLP) remains a threat to the health and recreational uses of the lake. Both of these plants are state listed noxious weeds. During 2025, AquaTechnex conducted two different surveys to assess the ongoing infestation. The first pre-treatment survey occurred on May 27<sup>th</sup>, 2025. Using the results of this pre-treatment survey and in coordination with the Lake Management District, Aquatechnex conducted two different treatments. Aquatechnex applied the herbicide Florpyrauxifen-benzyl (ProcellaCOR), to control EWM plant populations on June 3<sup>rd</sup>, 2025. Aquathol K (Endothall) was applied on June 10<sup>th</sup>, 2025, to control CLP populations. A follow up post-treatment survey was conducted on September 3<sup>rd</sup>, 2025, to inspect treatment results and identify any new or missed EWM growth to report back to the board so we can develop a plan and give us guidance for treatments in 2026.

## Survey Results and 2025 Treatment Review

Aquatechnex conducted a pre-treatment survey early in the summer which helped us get a quick and early start to treatments in 2025. CLP and EWM were identified and can be viewed in maps 1 and 2 below. After taking the survey data back to our office and mapping out the treatment zones, we identified 18 acres of CLP treatment zone and 25.4 acres of EWM treatment zone. We decided to conduct the EWM treatment one week before the CLP treatment so that for the areas where there was a mix of EWM and CLP, the ProcellaCOR would have a chance to be up taken by the plants before the Aquathol K was also treated in a few of the same locations. Treating with ProcellaCOR and Aquathol K in the same treatment zones need to have a buffer of one week or the mode of actions will interact with each other and decrease the efficacy of treatment. This treatment occurred on June 3<sup>rd</sup>, 2025, refer to map #2 for survey results and treatment zones. For treatment of the EWM, ProcellaCOR herbicide was selected, and 25.4 acres were treated. ProcellaCOR herbicide has a very short contact exposure time so using it in areas of high-water mixing is not a problem. For the CLP treatment program, we selected all 18 acres to be treated with Aquathol K herbicide, that occurred on June 10<sup>th</sup>, 2025. Aquathol K was selected due to high water mixing potential of all the zones selected for treatment. In this case the Aquathol K will perform better as it has a lower contact exposure time requirement.

Aquatechnex then returned to the lake later in the summer to conduct a follow up/post-treatment survey to inspect results from the treatment earlier in the summer and to identify any new or missed EWM growth. This survey occurred on September 3<sup>rd</sup>, 2025. Survey results were mostly positive other than a few of the usual hotspots due to the combination of shallow water and sediment deposition of these locations. In most areas, we identified that there was control or a reduction of density in the EWM growth. The EWM that was still observed in some of the treatment zones contained highly damaged EWM plants that looked very unhealthy and when a rake was thrown, the plant disintegrated by touch. Overall, the lake looks to be in great shape, the EWM distribution is low throughout the lake. As is the case with EWM, the redistribution and recolonization is a constant activity. Through wind, waves, and boat motors, the EWM naturally redistributes throughout the basin via fragmentation, which is the mode of action for propagation. Even after treatment it is common to see new areas of growth outside of that year's treatment areas due to this fragment movement. In regards to this, there will likely always be minor regrowth that occurs throughout the lake even after treatment.

Additionally, we observed very minimal growth of CLP during the post treatment survey. All the Aquathol K treatment zones did not contain any signs of CLP. We did observe one small patch near the bullrush island on the northeast end of the lake that will be added to the treatment plan in 2026.

## Recommendations for 2026

For 2026, continued surveying for EWM, CLP and other invasive plants is recommended. This allows for continued assessment of the issue and helps us design treatment plans to be both effective and economical. We recommend conducting two surveys again in 2026. The first survey would occur in May or June depending on the weather and observed growth of plants. We will record EWM/CLP plants using a Trimble GPS Logger unit and will develop a map of the survey results using our mapping program similar to what has occurred in the past. We want to closely monitor the lake to see if any new EWM growth has occurred as well as looking at previous areas treated in 2025. We will develop a plan to tackle treating EWM and CLP plants using the pre-treatment survey data and maps. Treatment zones will be created using our mapping software and will be presented to the board for approval. We anticipate scheduling the treatments at the beginning of June after the opening of the priority species window allotted from the permit. This window generally starts after June 1<sup>st</sup>. We have seen good success with starting treatments at the beginning of June during the past few summers.

We can consider an analysis called BioBase to better understand the plant composition, density, and total aquatic plant acreage in the lake. We have been integrating the use of this BioBase mapping equipment and software to map the plant biovolume and other lake characteristics while surveying lakes. This data produces very useful maps. It can uncover plants which may be missed and sometimes uncover the true extent of the plant beds unseen by other survey methods. With this system we can scan the lake quickly, upload the data, and have maps produced indicating where plants are growing on a total lake basis. Using this analysis, we can uncover the total extent of plant beds throughout the lake including the density and compare this to our EWM and CLP surveys to compare the total acreage vs the total acreage of EWM and CLP. In conjunction with this Biobase software, it also allows us access to its EcoFish tool. This tool allows us to map fish density in pounds per acre, and also gives us length bins which can be used to make assumptions about species, fish distributions and population dynamics throughout the lake and over time.

The recommended herbicide technology to control EWM will be ProcellaCOR and the process will be similar to what has occurred in previous years. A thought to consider, we are worried that we could start to see a minor tolerance to ProcellaCOR due to its usage over consecutive years. It could be smart to take a year off from ProcellaCOR, and to use a combination of Diquat and Aquathol K in EWM zones. This would knock back the EWM very rapidly and prevent fragmentation for the rest of the year. To combat CLP our best herbicide tool continues to be Aquathol K and Diquat in open water areas and Galleon in closed bays with very low water mixing. If you use Aquathol K in successive years it has systemic long-term properties that result in multi-year control.

AquaTechnex would like to thank the board for the continued opportunity to work with the Lake Management District in the management of Loon Lake. We look forward to building upon our relationship and continuing to mitigate the threats of invasive species in Loon Lake. If there are any additional questions, feel free to contact your regional aquatic specialist Bradley Roth using the information below.

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## Guide to Maps:

- *Loon Lake Milfoil Treatment Zones 2025 (Map #1)* – This map shows EWM survey results and the corresponding treatment zones that were treated on June 3<sup>rd</sup>, 2025. We treated 25.4 acres with ProcellaCOR herbicide.
- *Loon Lake Curly Leaf Pondweed Treatment Zones 2025 (Map #2)* - This map shows CLP survey results and the corresponding treatment zones that were treated on June 10<sup>th</sup>, 2025. The treatment had 18 acres treated with Aquathol K herbicide.
- *Loon Lake Milfoil Post-Treatment Survey 2024 (Map #3)* – This map shows post-treatment EWM survey results from our follow up survey completed on September 3<sup>rd</sup>, 2025.
- *Loon Lake Milfoil Treatment Zones 2019 (Map #4)* - This map shows the area treated the first time ProcellaCOR was used on Loon Lake to treat EWM in 2019. 75 acres of total treatment area was targeted for treatment.
- *Loon Lake Milfoil Treatment Zones 2020 (Map #5)* – This map shows the area treated in 2020 with ProcellaCOR to manage EWM. 44.75 acres of total treatment area was targeted for treatment.

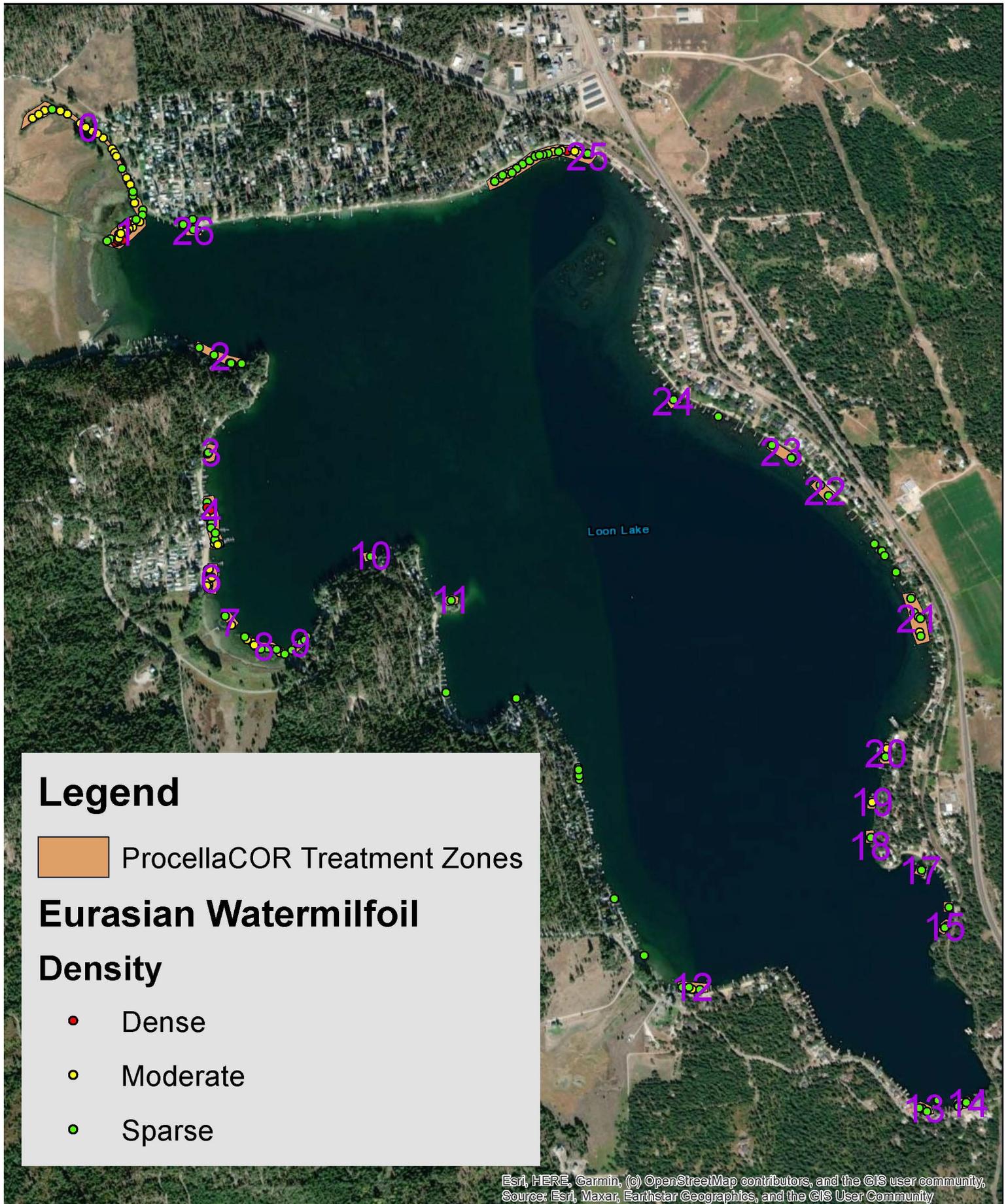
## Appendix A: Previous Eurasian Watermilfoil Treatment History

- 2018 and Earlier: many previous treatments, Hybrid Milfoil DNA and CET Study Conducted in 2018 with North Carolina State University.
- In 2019 the first year that ProcellaCOR was registered for use we treated: 75 acres.
  - High density monoculture
- 2020: 44.75 acres treated
  - Moderate Density
- 2021: 22.25 acres
  - Moderate – Low Density
- 2022: 24 acres
  - 2 phases of treatment during summer, middle of summer survey
  - Moderate – Low Density
- 2023: 46 acres
  - Spike in milfoil distribution but still mostly sparse – moderate
  - Early spring caused earlier fragmentation and spread thus causing a spike in acreage.
- 2024: 21 acres
  - Back to lower distribution level
  - Mostly sparse – moderate
- 2025: 25.4 acres

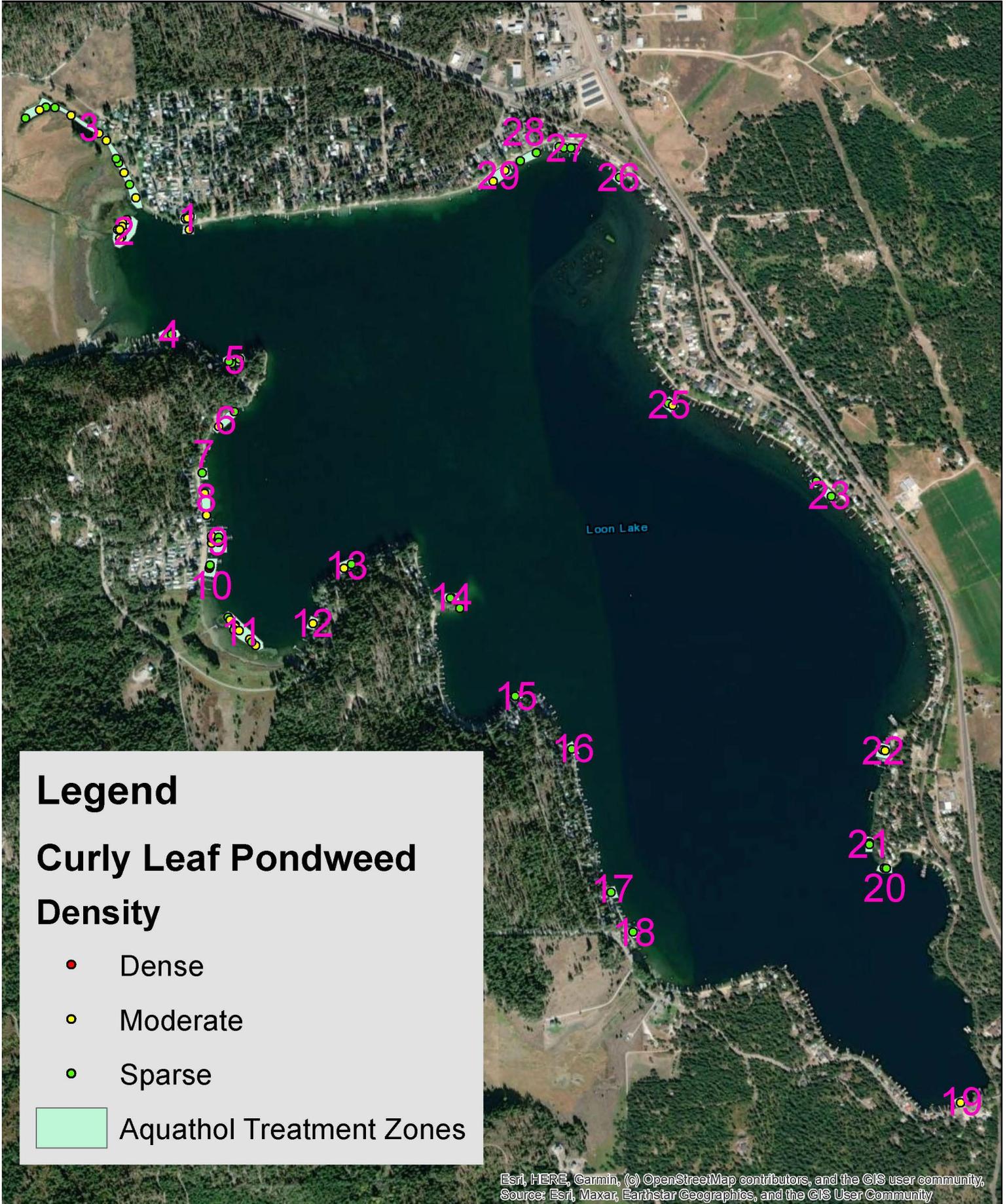
## Appendix B: Previous Curly Leaf Pondweed Treatment History

- 2020: CLP found for the first time, first survey occurs
- 2021: 13.53 acres
  - Moderate - High Density
- 2022: 19 acres
  - Moderate – Low Density
- 2023: 29.5 acres
  - Galleon: 18.82 acres, Aquathol: 10.84 acres
  - Still mostly Moderate density
  - Just like milfoil, a spike in plant distribution, due to abnormally warm and early spring
- 2024: 17 acres
  - Starting to see lower density
- 2025: 18 acres

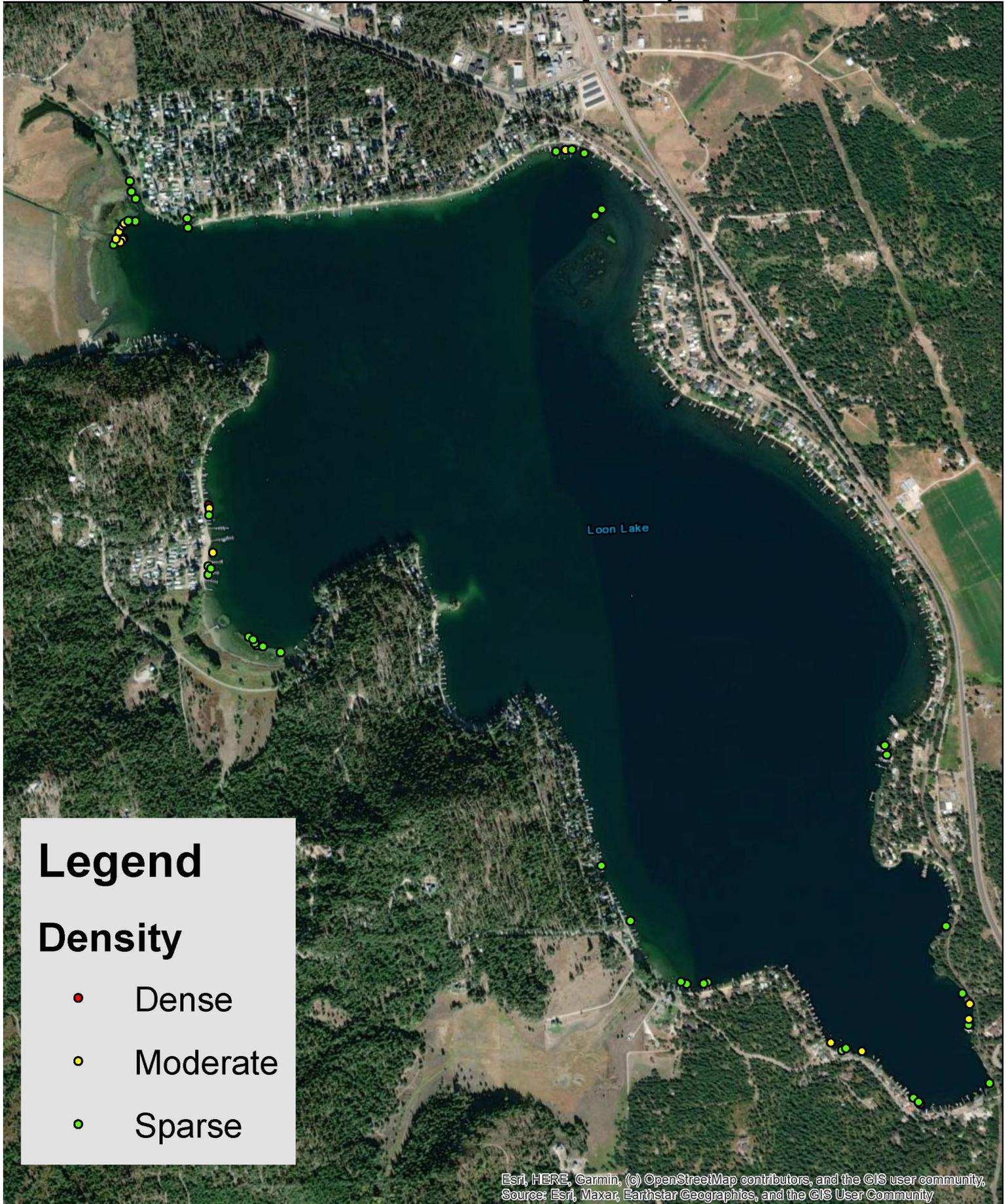
# Loon Lake Milfoil Treatment Plan 2025



# Loon Lake Curly Leaf Pondweed Treatment Plan Map 2025



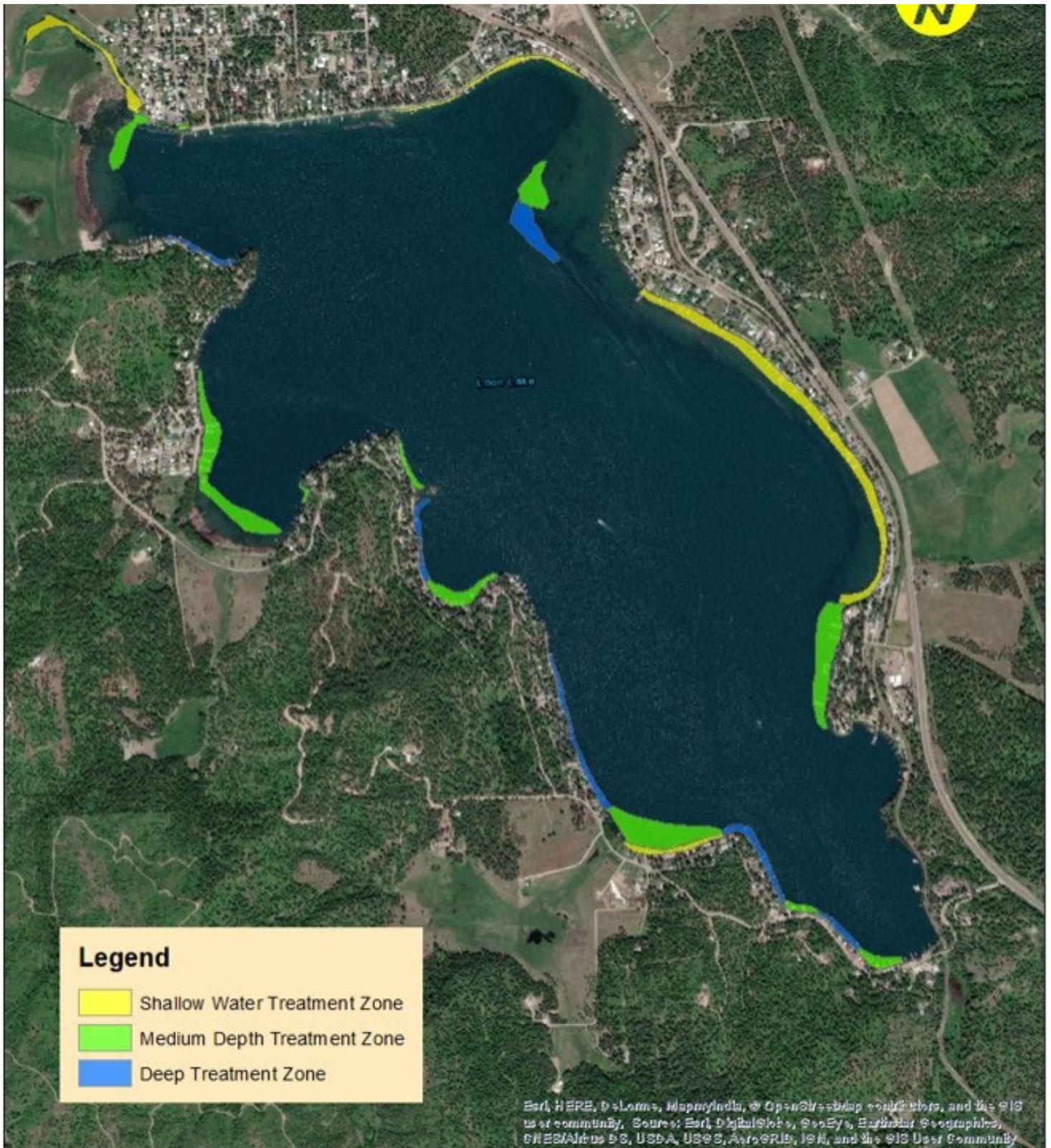
# Loon Lake Milfoil Post Treatment Survey Map 2025



## Legend

### Density

- Dense
- Moderate
- Sparse



2019 EWM Treatment Map

# 2020 Loon Lake ProcellaCOR Treatments

