Curlyleaf Pondweed Sampled in Comfort Lake, April 8, 2025

# Curlyleaf Pondweed Delineation for Comfort Lake, Chisago County, Minnesota

**Curlyleaf Pondweed Delineation: April 8, 2025**

**Prepared for:**
Comfort Lake-Forest Lake Watershed District

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# Curlyleaf Pondweed Delineation for Comfort Lake, Washington County, Minnesota

ID: 13005300
Size: 217.82 acres (MnDNR)
Littoral Area: 90 acres (MnDNR)
Mean depth: 21 feet (MnDNR)
Maximum depth: 47 feet (MnDNR)

## Overview

Comfort Lake is located within Chisago County. A meander curlyleaf pondweed (CLP) survey was conducted on April 8, 2025 to characterize the status of CLP. A total of 198 sites were sampled and CLP was observed in 4 sites out to 6 feet of water depth (Figure 1). No treatment is recommended for 2025.

## Methods

**Curlyleaf Pondweed Management Approaches Using Herbicides:** The MnDNR policy is to treat CLP before lake water temperatures reach 60F. The objective is to treat CLP before the native plants begin growing which is around 60F. Because a contact herbicide is generally used for curlyleaf control, the contact herbicide should kill growing plants (including native plants) on contact. In water temperatures less than 60F, CLP is typically the only active growing plant. Therefore the broad spectrum contact herbicide is somewhat selective for CLP at cooler lake temperatures.

However at the time of the spring curlyleaf delineation in April, only a fraction of the peak curlyleaf biomass is present compared to what could be present in June, at its peak. Therefore, CLP growth surveyed in April is delineated prior to curlyleaf developing peak biomass.

Predicting curlyleaf growth at it's peak abundance in June is based on curlyleaf stem counts on a rake sampled in April. After a short sweep of about 1-foot (which samples about 0.1 $m^2$), CLP stems on a rake sample are counted. Growth potential is shown in the table below. This early season survey method used for determining curlyleaf pondweed spot herbicide treatments is similar to the methodology published in a peer reviewed journal (McComas et al, 2015)*.

| Rake Sample | Early Season Density (stems/$m^2$) | Potential Future Growth | Map Color Code |
|---|---|---|---|
| 1-2 stems | 10-20 stems/$m^2$ | Light | Green |
| 3 stems | 30 stems/$m^2$ | Moderate | Yellow |
| 4+ stems | 40+ stems/$m^2$ | Heavy | Red |

**Methods for Aquatic Plant Nearshore Meandering Survey:** A meandering survey was conducted using a meandering path around the entire lake. At each sample point, plants were sampled with a rake sampler.

*McComas, S.R., Y.E. Christianson, and U. Singh. 2015. Effects of curlyleaf pondweed control on water quality and coontail abundance in Gleason Lake, Minnesota. Lake and Reservoir Management, 31:109–114.

# Results

**Curlyleaf Pondweed Delineation Results:** On April 8, 2025 the curlyleaf pondweed delineation survey sampled a total of 198 sites (Figure 1). Curlyleaf pondweed was found at 4 sites with light projected growth to occur in June. No treatment is recommended for 2025 based on the light density of curlyleaf (Figure 1).

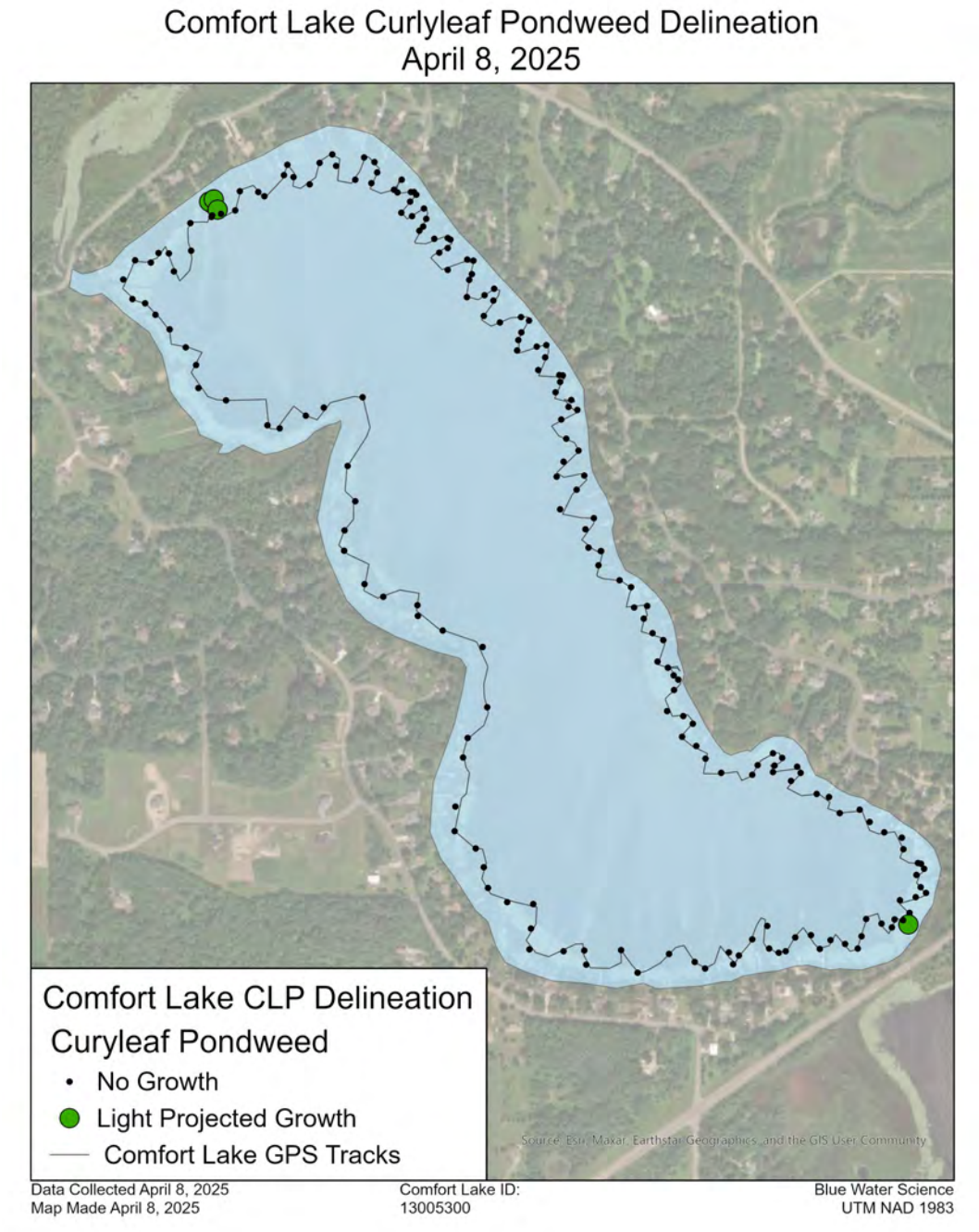


**Figure 1. Comfort Lake potential growth of curlyleaf pondweed on April 8, 2025.**

# APPENDIX

**2025 MEANDER DELINEATION: Comfort Lake individual site data collected by Blue Water Science on April 8, 2025.**

| Site | Depth (ft) | CLP - stems |
|---|---|---|
| 182 | 4 | 2 |
| 183 | 4 | 1 |
| 184 | 6 | 1 |
| 185 | 5 | |
| 186 | 6 | |
| 188 | 5 | |
| 307 | 4 | 1 |
| 379 | | |
| Average | | 1 |
| Occurrence (198) | | 4 |