

Aquatic Plant Identification & Mapping

What plants are in your lake?

Why are aquatic plants important?

Rooted aquatic plants are a natural and essential part of lakes, just as grasses, shrubs and trees are a natural part of the land. Their roots are a fabric for holding sediments in place, reducing erosion and maintaining bottom stability. They provide habitat for fish and invertebrates by providing structure within which to forage, raise young, and hide from predators. Waterfowl, shore birds and aquatic mammals forage on plants, and use them as nesting materials and cover.

Though plants are important to the lake, over-abundant plants can negatively affect fish populations and human recreation. In this situation, it is advantageous to manage the lake and its aquatic plants for the maximum benefit of all users.

To be able to do this effectively, it is necessary to know the plant species present in the lake and their relative abundance and location. A map of a lake showing the plant population locations and densities will greatly aid management projects.



Stacey Daniels samples aquatic plants on Crystal Lake (credit: MiCorps Staff)

What help does the CLMP offer to volunteers interested in aquatic plants?

The Cooperative Lakes Monitoring Program (CLMP) uses qualitative techniques that allow volunteer monitors to generally assess the aquatic plants in their lake. This assessment may be viewed as a “snapshot” of the species of plants in the lake, their general location, and relative abundance. The CLMP assessment provides valuable information about a lake’s aquatic plants that is often missing in lake and aquatic plant management programs.

The CLMP provides training and technical assistance to the volunteer monitors enrolled in the aquatic plant survey program. Training in plant identification and mapping is given on an annual basis. Technical assistance in survey design, plant identification, and field technique, including limited on-site consultation, is provided to the volunteer monitors.

What is the procedure for conducting a CLMP aquatic plant survey?

The CLMP uses the procedure written in *A Citizen’s Guide for the Identification, Mapping and Management of the Common Rooted Aquatic Plants of Michigan Lakes*. An electronic version of this book can be obtained from www.micorps.net, under *Lake Monitoring* and *CLMP documents*.

In a nutshell, the procedure involves:

- 1) Using a lake depth map to establish sampling transects.
- 2) Using a sampling rake to take plant samples at particular depths on each transect.
- 3) At each sampling point, four samples are taken from the boat at the twelve, three, six, and nine o’clock positions.
- 4) Identifying the sampled plants and assigning a relative abundance.

Upon completion of the survey, volunteers have a detailed listing of the plant species growing in their lake, including any invasive species that may be problematic. They also will have created a map that shows the overall distribution and density of the lakes’ plant population. These products will be valuable in lake management activities and as a reference in the future.