

Do you remember when?

The landmark Clear Lake Diagnostic & Feasibility Study completed in 2001 by Dr. John Downing found that historically, Clear Lake was home to as many as 35 native plant species. By the early 1980s, that number was down to 21 different species and by 2000, massive nutrient loading and other human activity had reduced that to **just 12 species**, with a very detrimental impact on water quality. Folks who were using the lake during that timeframe may recall lake conditions unusable and appalling:

- The water had the appearance of pea soup, with a strong, unpleasant algae odor.
- Occasional blooms of toxic algae or *E. coli* bacteria would render the lake unsafe for swimming or other in-lake activities, making the lake a target of bad press across the state.



- Even in the absence of toxic algae, those who dared to swim in the lake would find their bathing suits full of matted algae, causing skin irritations and other health concerns.
- The fishery was dominated by rough fish with only occasional year classes of desirable game fish species surviving to be caught.

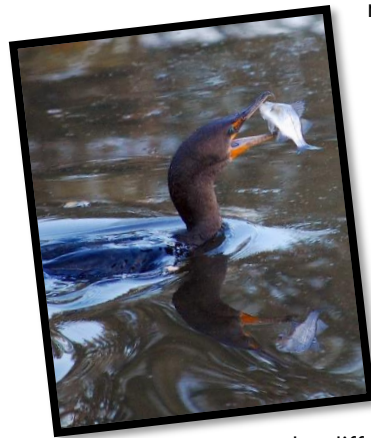
An important part of a healthy ecosystem

Over the last 30 years, many projects and practices completed in and around the watershed have helped reduce the nutrients entering the lake, allowing native vegetation to once again gain a toehold. The early returning plants helped take up many of the remaining nutrients, decreasing their availability for algae. As the water began to clear, additional plants that require more sunlight, long missing from Clear Lake, have begun to return.

As the vegetation has returned, so too have the small aquatic invertebrates that live around and on



vegetation stands. Those invertebrates in turn provide a food source for many popular sport fish species. They also provide a stable food source for larval and fingerling fish in their first weeks of life, a critical stage that can



mean the difference between a decade of great fishing and not a bent fishing pole to be found.

Accommodating all types of recreation

It's important to understand that most of these plants grow in less than six feet of water, meaning *that the vast majority of the lake is still open for recreation as usual*. If you are having trouble accessing the lake from your home dock, please be aware that the Iowa Department of Natural Resources *wants* you to get out there, and has put rules in place to allow for better access.

You may mechanically remove vegetation in a 20' radius around your dock and clear a 15' wide path out to open water. This can be achieved by pulling vegetation by hand, dragging a rake to remove the plants, or by hiring a commercial aquatic vegetation cutter to work around your dock area.



As of the 2021 season, two vendors provide this service on Clear Lake: JBS Rentals in Ventura (641-425-8733), and Underwater Solutions from Okoboji (712-260-7818).

IMPORTANT: If you pull vegetation yourself, please note plants removed from the lake *cannot* be moved from the property except by being bagged and put in the garbage (transport to a yard waste site is prohibited due to aquatic invasive species rules). Drying the vegetation for a few days will greatly decrease the bulk and weight of the plants to be bagged. Alternatively, the plants can be composted on-site.

Adjusting the lens

When it comes to water quality, our choices really are between an unhealthy "pea soup" water full of algae, or clear water with a healthy diversity of aquatic plants. We should all learn to love—or at least *appreciate*—our hard-working aquatic plants, because they are what's keeping our water clear and the excess algae at bay. If you learn to identify these plants, you may even find them interesting. Also, by learning what is native and normal, you will be better prepared to look out for invasive species. Finally, keep in mind that when it comes to aquatic plants and water quality, our "new normal" is truly the "old normal," and should be celebrated!



This brochure is a joint project of the Association for the Preservation of Clear Lake (APCL) and the Clear Lake Enhancement and Restoration (CLEAR) Project. To learn more about the APCL, please see apcliowa.org. If you are already a member, we thank you for your support, and hope you'll tell a friend about us and renew your own membership if you've not done so yet this year. If you're not yet a member, we hope you'll join us in our ongoing mission to restore and protect the waters in beautiful Clear Lake for all to enjoy now and in the future. For more information about the CLEAR Project, see clearproject.net.

Identify what you are seeing under the water!

Common Name: Chara (Muskgrass or Stonewort)

Scientific Name: *Chara sp.*

Identifying Features: Will grow 2-4' tall; very rough, gritty texture; strong musky odor; stem-like branches with forked leaves; grows entirely below the waters surface; can form dense mat along the bottom; Iowa native.



Common Name: Wild Celery (Eelgrass)

Scientific Name: *Vallisneria americana*

Identifying Features: Leaves grow from the bottom and are stalkless; resembling a blade of grass; color is green with the center being slightly lighter color giving the leaf a 3-stripped appearance; grows 6" to 3' tall from the bottom; Iowa native.



Common Name: Filamentous Algae

Scientific Name: *Spirogyra sp.*; *Cladophora sp.*; others.

Identifying Features: Mass of long, stringy, hair-like strands; usually green but may be yellow grayish or brown; begins growth along the lake edge or bottom and rises to surface as a bubble-filled mass when mature; Iowa native but nuisance.



Common Name: Longleaf Pondweed

Scientific Name: *Potamogeton nodosus*

Identifying Features: Will grow up to 6' tall; both submersed and floating leaves will be present; floating leaves will be firm, green, 1-8" long; submersed leaves will be thin, bright green to reddish brown, 3-8" long; Iowa native.



Common Name: Canada Waterweed

Scientific Name: *Eloдея canadensis*

Identifying Features: Grows entirely underwater except a small white flower that will appear mid-summer; 1-3' tall; leaves are oval shaped and arranged in clusters; look for leaf clusters compacted near the tip and spaced farther apart down stem; Iowa native.



Common Name: Curly-leaf Pondweed

Scientific Name: *Potamogeton crispus*

Identifying Features: Olive-green to reddish-brown in color; wavy, lasagna-like leaves that are 1/2 to 3" long; alternate leaves attached to the stem, denser towards the top; begins growing under the ice to take off early in the spring; grows well in disturbed areas; non-native.



Clear Lake's Aquatic Plants

The last few years have seen a resurgence in the growth of native plant species within Clear Lake, to the joy of some and the consternation of others. This brochure is intended to provide background on the **importance** of these plants, help you **identify** what you are seeing under the water, and provide details on how you can work with these plants to **enjoy** the lake in the manner of your choosing. Hopefully, this will help you to appreciate them for the important role they play in keeping our lake's water clean and clear.



Protecting Clear Lake since 1940

A 501(c)(3) organization

April 2024