Dixie Lake
Aquatic Plant Control Program
2022 Activity Summary

A publication of the Dixie Lake Improvement Board

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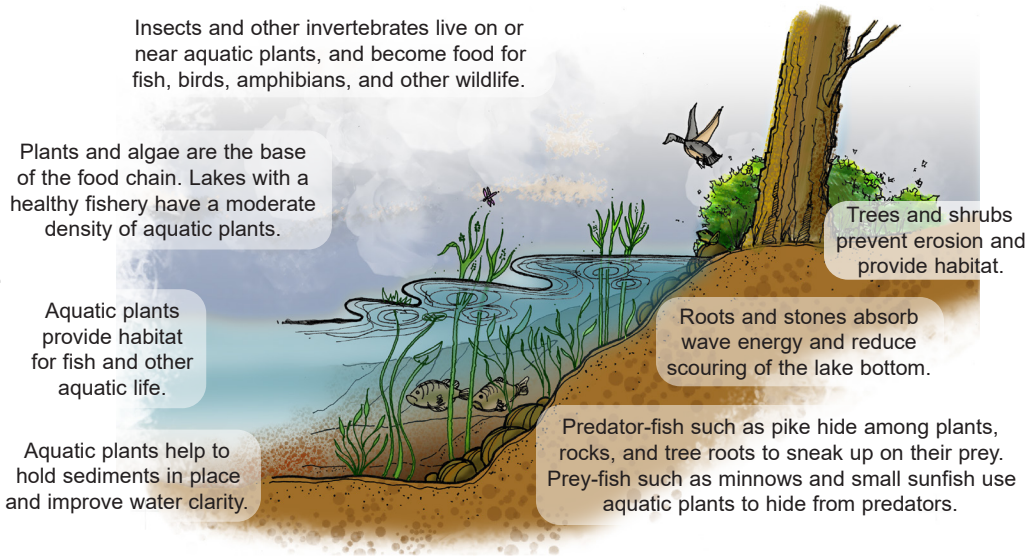
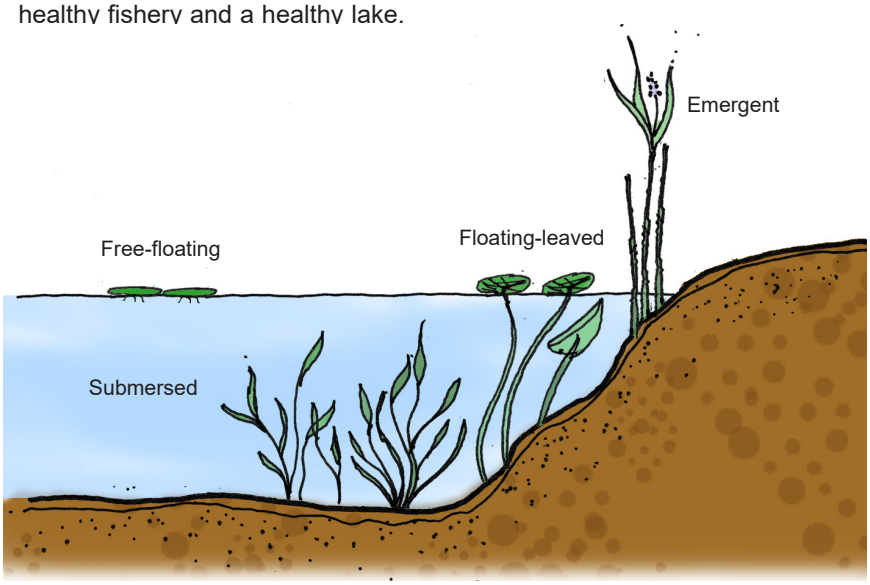
For many years, a nuisance plant control program has been ongoing on Dixie Lake. The primary objective of the program is to prevent the spread of invasive aquatic plants while preserving beneficial plant species. This report contains an overview of plant control activities conducted on Dixie Lake in 2022.

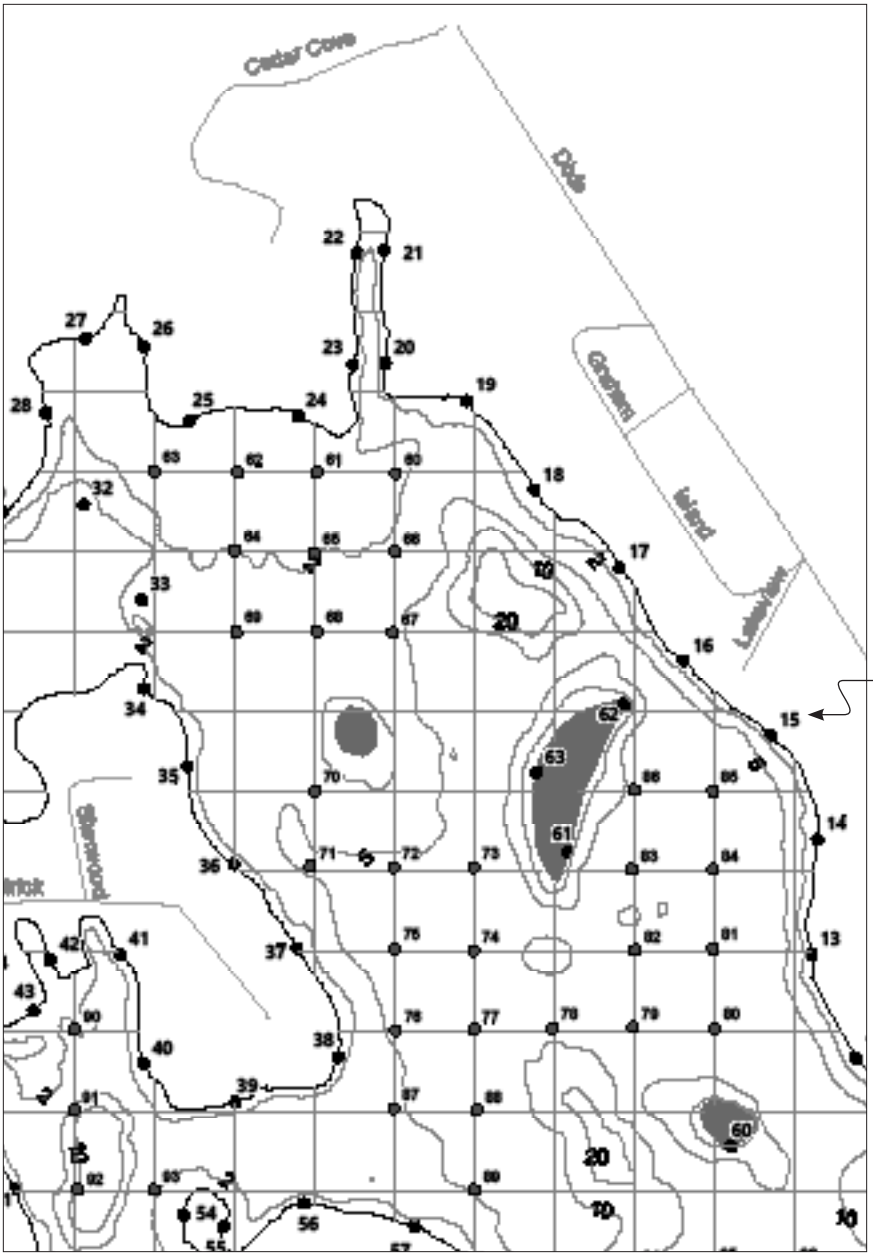
Aquatic plants are an important component of lakes. They produce oxygen during photosynthesis, provide food, habitat and cover for fish, and help stabilize shoreline and bottom sediments.



There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of aquatic plants is important to sustaining a healthy fishery and a healthy lake.

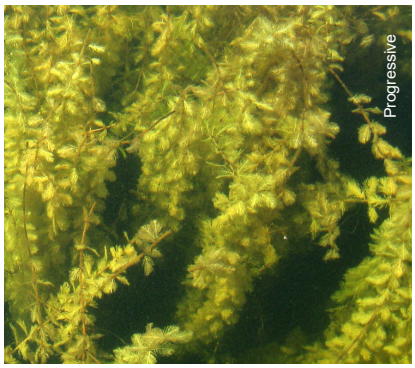


Plant control activities are coordinated under the direction of an environmental consultant, Progressive AE. Biologists from Progressive conduct GPS-guided surveys of the lake to identify problem areas, and georeferenced plant control maps are provided to the plant control contractor. In 2022, surveys were conducted on April 29, May 31, June 13, June 16, July 7, and August 10.



GPS reference points established along the shoreline and in off-shore shallow areas of Dixie Lake are used to guide plant surveys and to accurately identify the location of nuisance plant growth areas.

Plant control in Dixie Lake involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in Dixie Lake include Eurasian milfoil and starry stonewort. Both of these plants are non-native (exotic) species that tend to be highly invasive and have the potential to spread quickly if left unchecked.



Eurasian milfoil (*Myriophyllum spicatum*)

Starry stonewort (*Nitellopsis obtusa*)

Plant control activities conducted on Dixie Lake in 2022 are summarized in the table below.

DIXIE LAKE
2022 NUISANCE AQUATIC PLANT CONTROL SUMMARY

Work Type	Date	Plants Targeted	Acres
Algaecide	April 25	Algae, starry stonewort	9.75
Herbicide	May 9	E. milfoil, curly-leaf pondweed	6.25
Algaecide	May 27	Algae	18.00
Herbicide	June 6	E. milfoil, starry stonewort, curly-leaf, algae	13.25
Harvesting	June 14 - 22	Nuisance natives, chara, starry stonewort	32.50
Algaecide	June 16	Algae	7.25
Algaecide	July 1	Algae	25.00
Herbicide	July 14	E. milfoil, algae, starry stonewort	16.00
Algaecide	August 4	Algae	15.00
Algaecide	September 20	Algae	5.50
Total			148.50

In addition to the surveys of the lake to identify invasive plant locations, a vegetation survey of Dixie Lake was conducted on August 10 to evaluate the type and abundance of all plants in the lake. The table below lists each plant species observed during the survey and the relative abundance of each. At the time of the survey, 12 submersed species, one free-floating species, two floating-leaved species, and six emergent species were found in the lake. Dixie Lake maintains a good diversity of beneficial, native plants species.

DIXIE LAKE AQUATIC PLANTS
August 10, 2022

Common Name	Scientific Name	Group	Percent of Sites Where Present
Chara	*Chara* sp.	Submersed	76
Wild celery	*Vallisneria americana*	Submersed	70
Starry stonewort	*Nitellopsis obtusa*	Submersed	60
Thin-leaf pondweed	*Potamogeton* sp.	Submersed	56
Illinois pondweed	*Potamogeton illinoensis*	Submersed	52
Variable pondweed	*Potamogeton gramineus*	Submersed	43
Slender naiad	*Najas flexilis*	Submersed	37
Eurasian milfoil	*Myriophyllum spicatum*	Submersed	29
Large-leaf pondweed	*Potamogeton amplifolius*	Submersed	24
Bladderwort	*Utricularia vulgaris*	Submersed	11
Water stargrass	*Heteranthera dubia*	Submersed	10
Coontail	*Ceratophyllum demersum*	Submersed	3
Watermeal	*Wolffia punctata*	Free-floating	3
White waterlily	*Nymphaea odorata*	Floating-leaved	81
Yellow waterlily	*Nuphar* sp.	Floating-leaved	14
Cattail	*Typha* sp.	Emergent	24
Swamp loosestrife	*Decodon verticillatus*	Emergent	21
Purple loosestrife	*Lythrum salicaria*	Emergent	14
Phragmites	*Phragmites australis*	Emergent	8
Iris	*Iris* sp.	Emergent	3
Bulrush	*Schoenoplectus* sp.	Emergent	2

Invasive exotic species