



# Hodunk-Messenger Lake Chain Aquatic Plant Control Program 2022 Activity Summary

A publication of the Hodunk-Messenger Lake Improvement Board

## Hodunk-Messenger Lake Board

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Coldwater, MI 49036

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For many years, a nuisance plant control program has been ongoing on the Hodunk-Messenger Lake Chain. 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 the Hodunk-Messenger Lake Chain 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.

Insects and other invertebrates live on or near aquatic plants, and become food for fish, birds, amphibians, and other wildlife.

Plants and algae are the base of the food chain. Lakes with a healthy fishery have a moderate density of aquatic plants.

Aquatic plants provide habitat for fish and other aquatic life.

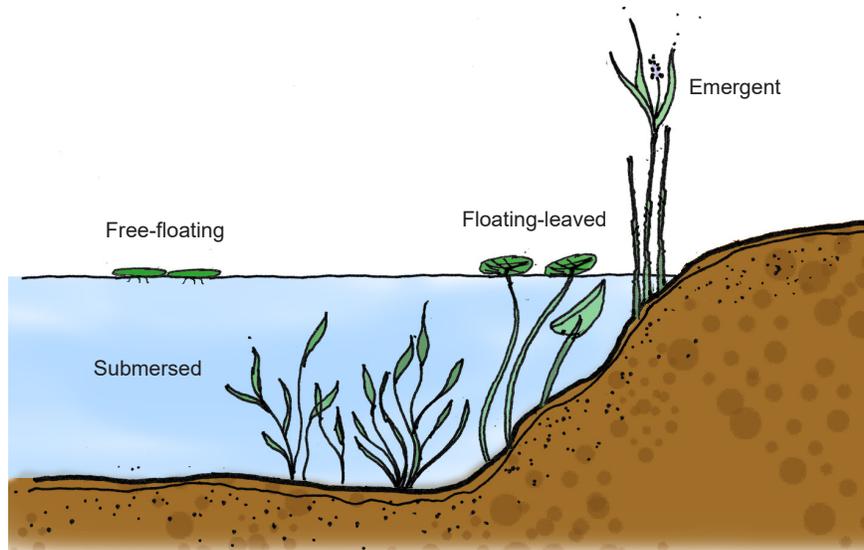
Aquatic plants help to hold sediments in place and improve water clarity.

Trees and shrubs prevent erosion and provide habitat.

Roots and stones absorb wave energy and reduce scouring of the lake bottom.

Predator-fish such as pike hide among plants, rocks, and tree roots to sneak up on their prey. Prey-fish such as minnows and small sunfish use aquatic plants to hide from predators.

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.

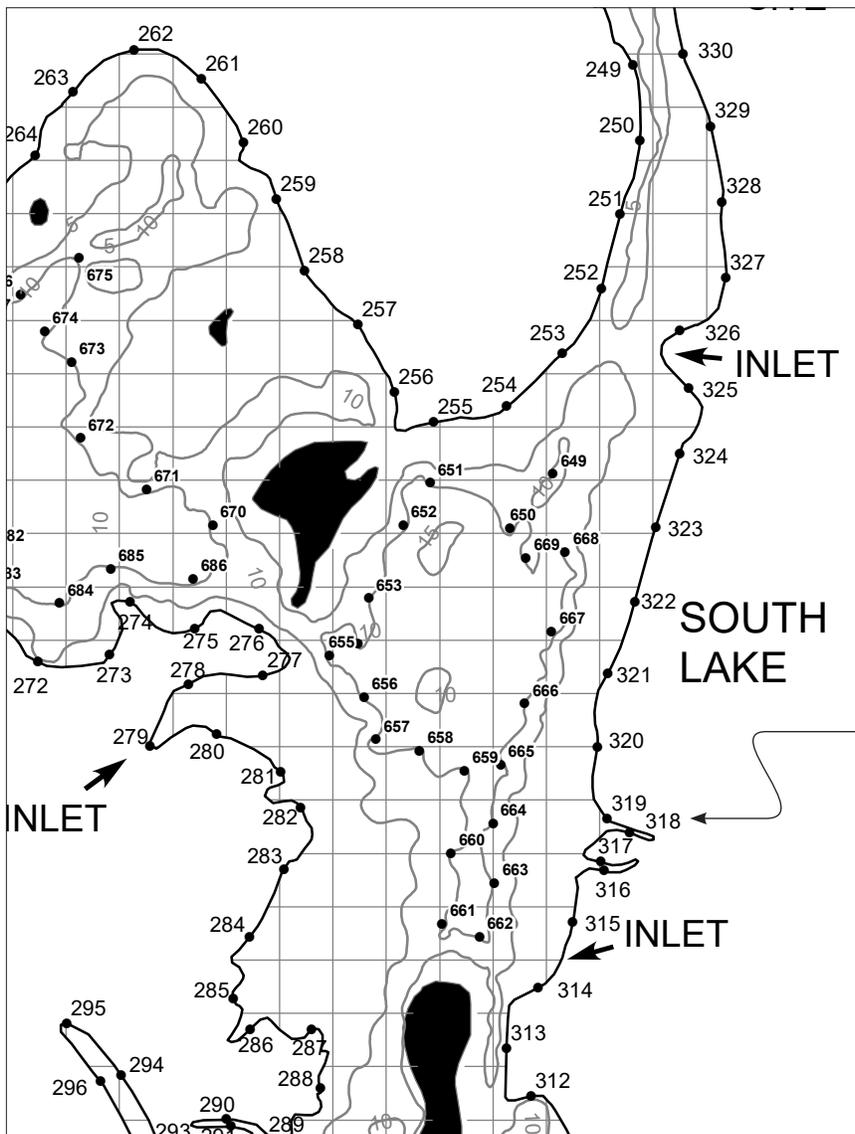


Environmental Consultant  
Progressive AE

Herbicide and Harvesting Contractor  
PLM Lake and Land Management Corp.

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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. Follow-up surveys are conducted throughout the growing season to evaluate results and the need for additional treatments and harvests. In 2022, surveys of the lake were conducted on May 11, June 13, June 16, July 18, August 10, and August 22.



GPS reference points established along the shoreline and drop-off areas of the Hodunk-Messenger Lake Chain are used to guide plant surveys and to accurately identify the location of nuisance plant growth areas.

Plant control in the Hodunk-Messenger Lake Chain involves the select use of herbicides and mechanical harvesting to control invasive plant growth. Primary plants targeted for control in the Hodunk-Messenger Lake Chain 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 the Hodunk-Messneger Lake Chain in 2022 are summarized in the table below.

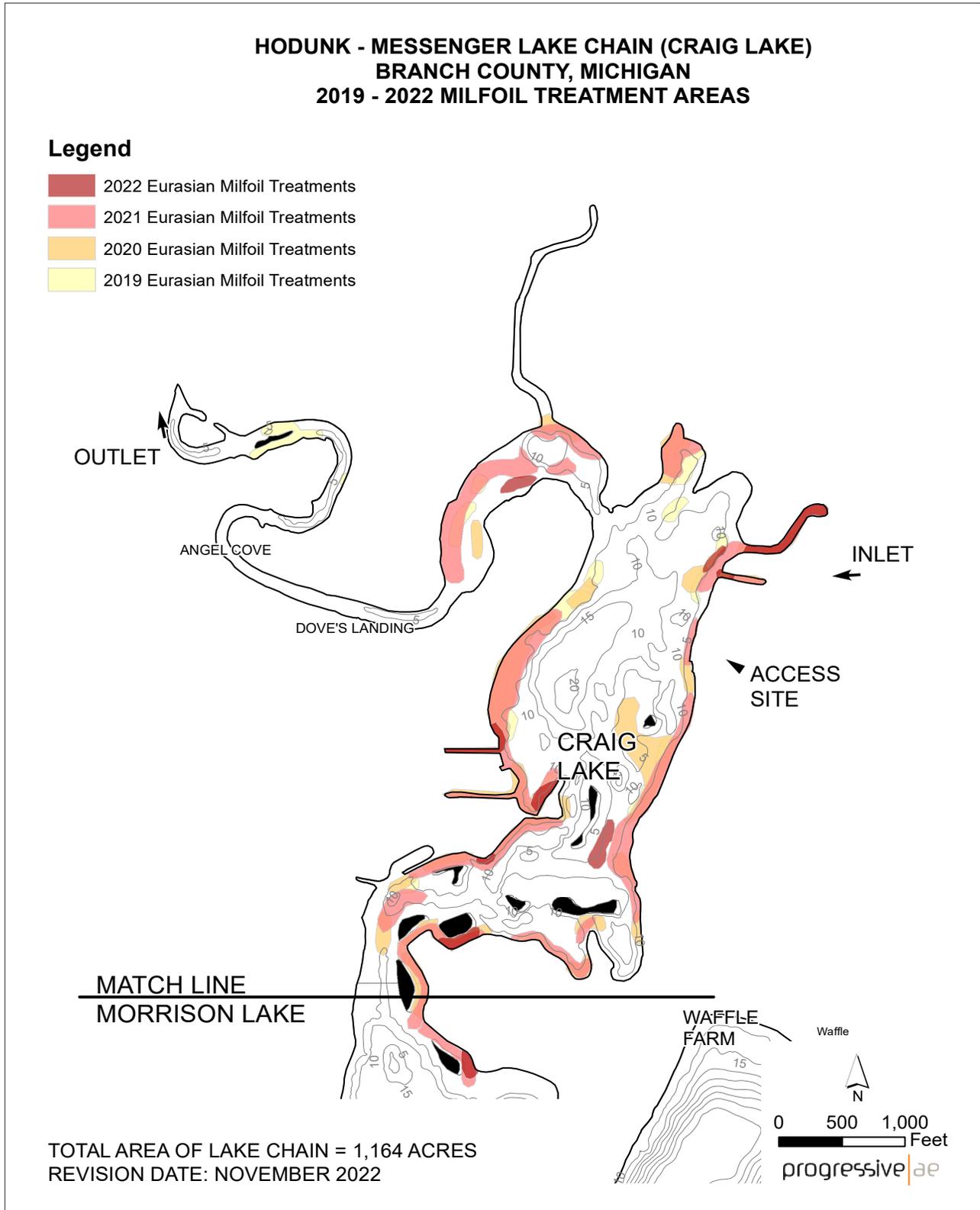
**HODUNK-MESSENGER LAKE CHAIN  
2022 NUISANCE AQUATIC PLANT CONTROL SUMMARY**

Date	Work Type	Acres Treated/Harvested
April 28	Herbicide: Algae	38.75
May 11	Survey	
May 19	Herbicide: Algae, E. milfoil, curly-leaf, starry stonewort	33.00
June 13	Survey	
June 13-16	Harvest: Starry stonewort, natives	52.50
June 16	Survey	
June 23	Herbicide: E. milfoil, curly-leaf, starry stonewort, natives	34.25
June 30	Herbicide: Algae	44.00
July 7	Herbicide: Natives	1.50
July 18	Survey	
July 27	Herbicide: Algae, E. milfoil, starry stonewort, natives	52.50
August 8-10	Harvest: Natives	15.25
August 10	Survey	
August 22	Survey	
August 30	Herbicide: Algae, E. milfoil, starry stonewort, natives	42.50
Total		314.25

# Eurasian Milfoil Mapping

Eurasian milfoil distribution from 2019 to 2022 is shown in the figures on pages 4 through 7. Eurasian milfoil continues to be a top priority for control on the Hodunk-Messenger Lake Chain.

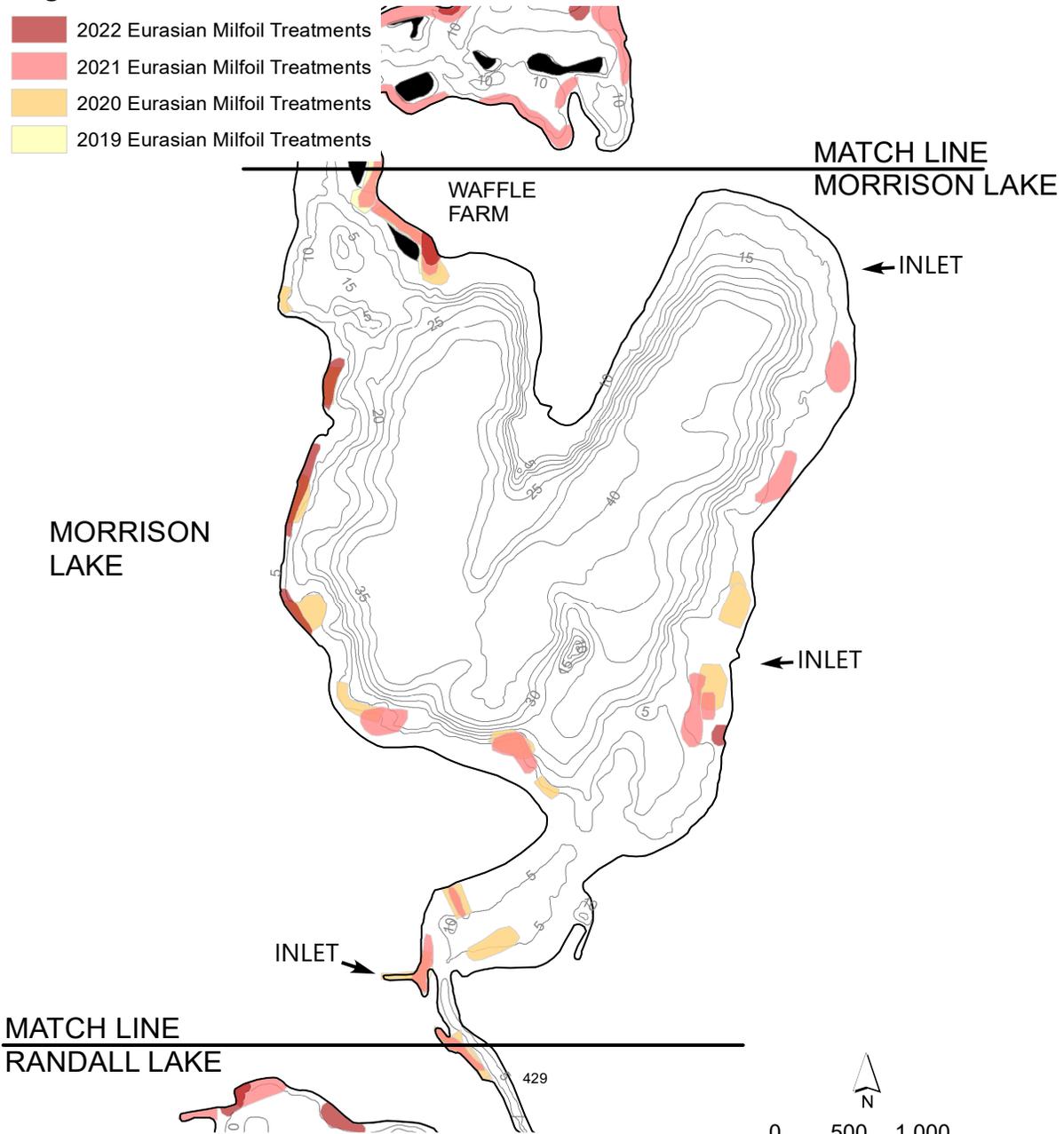
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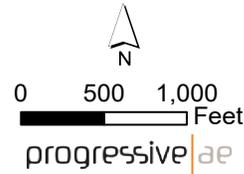
**HODUNK - MESSENGER LAKE CHAIN (MORRISON LAKE)  
BRANCH COUNTY, MICHIGAN  
2019 - 2022 MILFOIL TREATMENT AREAS**

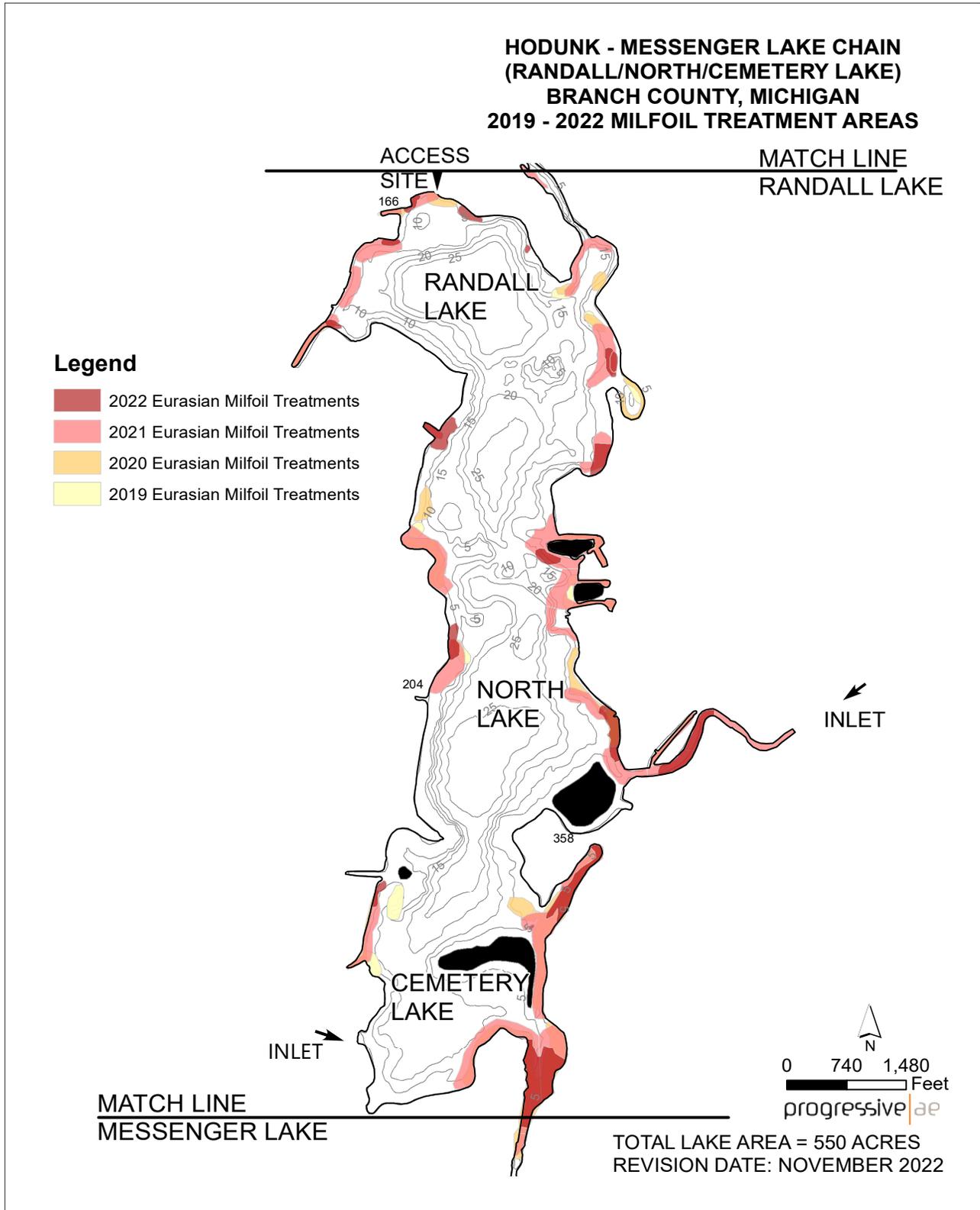
**Legend**

-  2022 Eurasian Milfoil Treatments
-  2021 Eurasian Milfoil Treatments
-  2020 Eurasian Milfoil Treatments
-  2021 Eurasian Milfoil Treatments



TOTAL AREA OF LAKE CHAIN = 1,164 ACRES  
REVISION DATE: NOVEMBER 2022





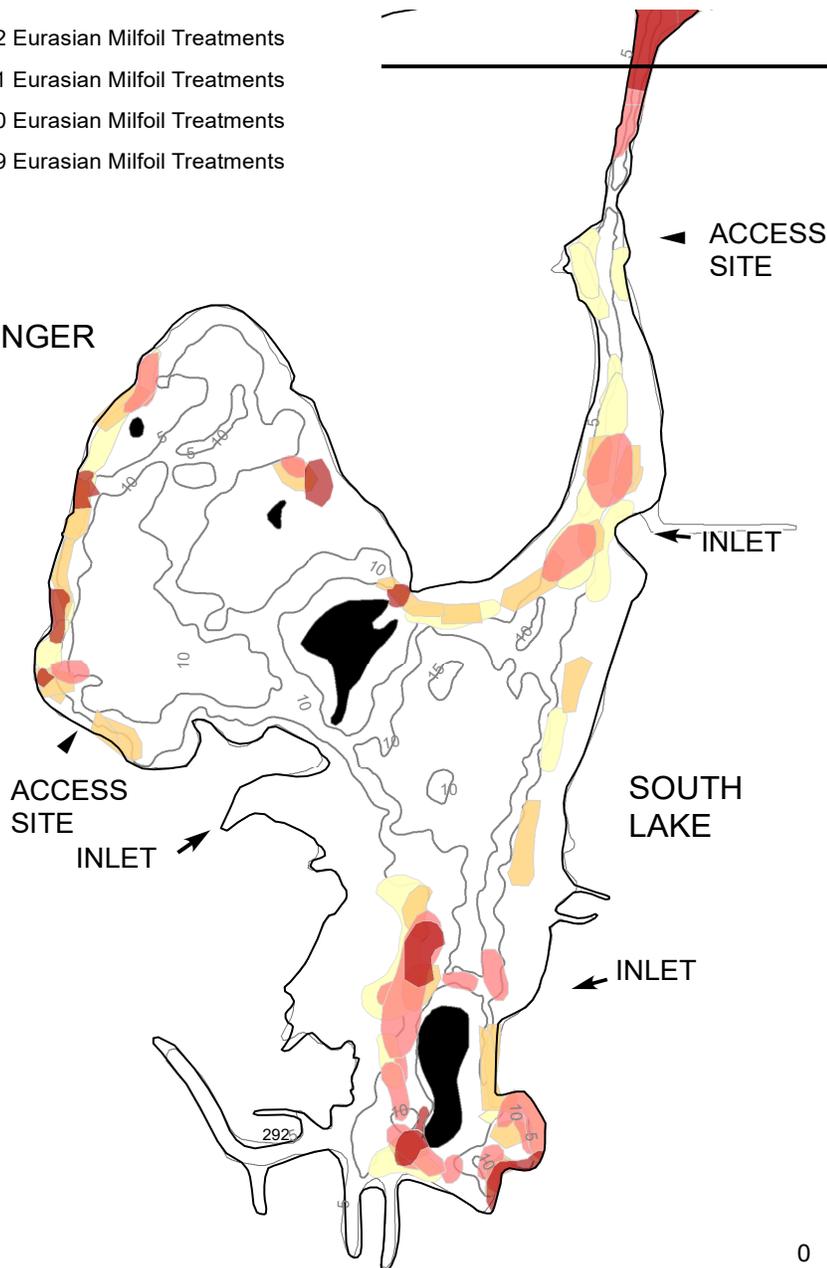
**HODUNK - MESSENGER LAKE CHAIN  
(SOUTH/MESSENGER LAKE)  
BRANCH COUNTY, MICHIGAN  
2019 - 2022 MILFOIL TREATMENT AREAS**

**Legend**

-  2022 Eurasian Milfoil Treatments
-  2021 Eurasian Milfoil Treatments
-  2020 Eurasian Milfoil Treatments
-  2019 Eurasian Milfoil Treatments

MESSENGER LAKE

MATCH LINE  
SOUTH LAKE



TOTAL LAKE AREA = 170 ACRES  
REVISION DATE: NOVEMBER 2022

