



Capital Region PRISM AIS Lake Survey Report

Date: July 22nd 2020

Site Name: Moreau Lake State Park General Information: (518) 793-0511

Site Size: 122 acre(s) / Lake Perimeter: / 2.9 Miles Mean Depth: 32 Feet

GPS Location of Site/Parking lot: 43.226288 -73.708176

Physical Address: 605 Old Saratoga Road Gansevoort, NY 12831

County: Saratoga

Town: Moreau NY 12831

Property Owner Contact: Andy Damon Stewardship Specialist

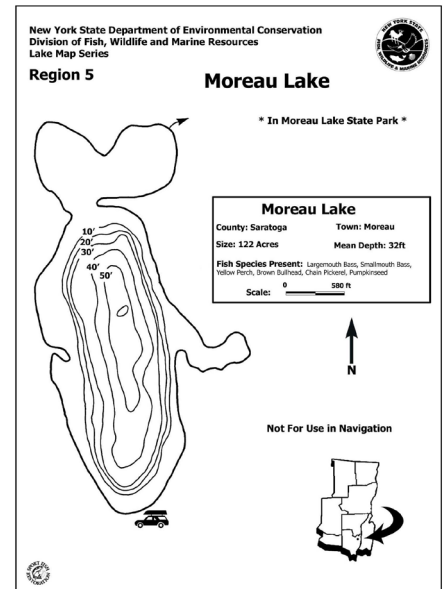
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Survey Leader: Kristopher Williams Team Leader / Lauren Henderson AIS
Coordinator

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iMapInvasives User ID: 9274



Summary

On July 22nd 2020 the Capital Region PRISM conducted an Early Detection AIS Survey on Moreau Lake in Saratoga County. A meandering rake toss method was conducted along the edge (littoral zone) of the shoreline to survey for AIS. The bio-volume and bathymetric maps aided in a more efficient search. Rake tosses were supplemented with visual inspection of the surface and subsurface in the littoral zone.

Aquatic Invasive Species Present

- Eurasian Water-milfoil; (*Myriophyllum spicatum*) is a very high threat species with an assessment score of 100. http://nyis.info/wp-content/uploads/2018/01/5cdc8_Myriophyllum.spicatum.NYS_.pdf For General Information: http://nyis.info/invasive_species/eurasian-watermilfoil/
- Chinese Mystery Snail (*Bellamya Cipangopaludina chinensis*) was detected.
- No other AIS species were observed.

Areas of Concern:

The suspected populations Eurasian Water-milfoil (EWM); (*Myriophyllum spicatum*) are growing and becoming more abundant and dense in population. Please note the estimated presence polygons and data table below for specific points as posted in iMap Invasives. The team attempted to draw polygons in collector and SAS Pro but experienced technical difficulties with the applications on that day.

- A new infestation of Eurasian Water-milfoil; (*Myriophyllum spicatum*) has formed in the North end of the lake (back pond) that was not previously reported by known observers. There is a healthy population of native aquatic plants in this area.
- South end of the lake off the boat launch has patches of (EWM) that are enlarging and merging.
- The bridge between the north and south body of water has trace to dense populations of milfoil posing a potential area of concern in the future.
- Overall the majority of the littoral zone/perimeter has trace populations of lesser concern.



Site Description:

The Moreau Lake State Park is within a NYS Bird Conservation Area. Moreau Lake BCA is a stopover site for Neotropical migratory songbirds especially forest dwelling migrants during both spring and fall migrations. Moreau Lake is accessible by non-motorized boats. There is a strong presence of personal watercraft recreation.

iMapInvasives Prioritization Model:

The area is ranked well on the New York State Natural Heritage prioritization model. The comprehensive score is high as indicated by a strong coloring on the heat map. The vector of transition exist and the region is surrounded by protected and natural areas

- <https://www.arcgis.com/home/webmap/viewer.html?webmap=57d30ff9bff7426c8950d90b0ba43bba&extent=-81.0352,39.2503,-70.2686,45.8067>

Does this site contain previously treated infestations? If yes- What species?

- Yes Eurasian Water-milfoil; (*Myriophyllum spicatum*) Confirm with the OPRHP.

Survey Techniques:

- Meandering rake tosses with in the Littoral Zone (Approximately 35)
- Visual Inspection of Surface and Subsurface

Map:

Develop a map of the survey area that has any iMapInvasives points and searched polygons included to clearly define infestation extent. Multiple maps may be added for multiple species or locations.

Searched Area: Moreau Lake State Park (Entire Littoral Zone)

Figure 1

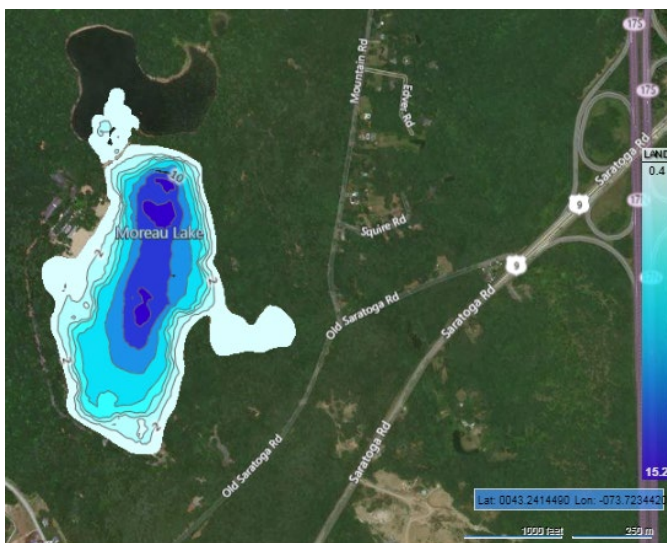


Figure 2

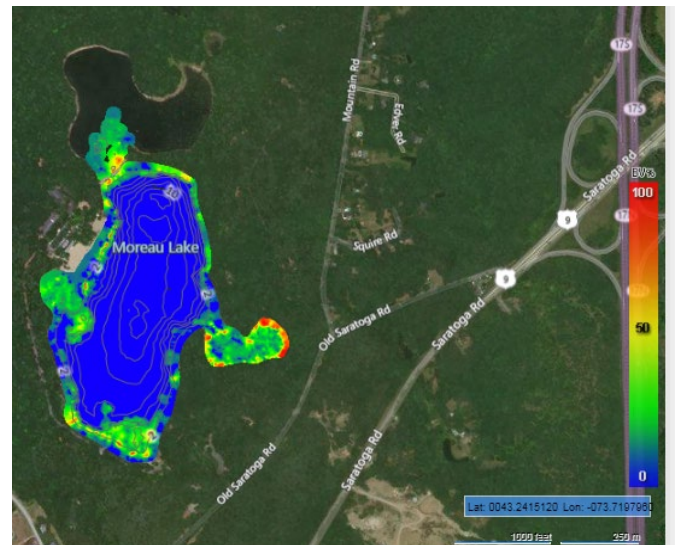


Figure 1: Bathymetric map of Moreau Lake and a portion of Back Pond indicating the topography as the thin contour lines. Color indicates the lake depth, with the lightest shade representing shallower waters and darkest shade representing deeper waters. Depth is measured in meters. Areas where data is missing (i.e. large portion of Back Pond) will be shown as the underlying aerial imagery, or black sections.

Figure 2: Percent Vegetation BioVolume map of Moreau Lake and a portion of Back Pond indicating the percent of water column occupied by plant matter at the mapped locations. Color indicates the percent of plant in a water column, with the blue shade representing open water (0%), green to yellow representing 1-50%, yellow to red representing 51-99%, and darkest red representing 100%. Areas where data is missing (i.e. large portion of Back Pond) will be shown as the underlying aerial imagery, or black sections. (Courtesy of April Brun NYS OPRHP Water Quality Unit)



Section 2: Survey Result Summary

Common Name	Scientific Name	Location (GPS)	Growth Type	Phenology	Abundance
Eurasian Water-milfoil; European Water-milfoil	Myriophyllum spicatum	Note iMap Invasive Polygons	Submerged/Rooted	Emergent Growth	Sparse/dense
Chinese Mystery Snail	(<i>Bellamya</i> <i>Cipangopaludina</i> <i>chinensis</i>)	Fie Sediments	- N/A	-N/A	Low
No other AIS Identified					

Searched Area:

Entire Littoral Zone including back pond of Moreau Lake.

Areas of Concern Locations:

1. North End of Back Pond
2. Bridge
3. South End Boat Launch

1. North End of Back Pond

New Infestation of Eurasian Water-milfoil

Location: 43.2587 -73.129

Area: 203.5 m² / 2185 sq. ft

iMap Invasives

- Searched Area Record: [#1077129*](#)

- Presence Record: [#1061006](#)



Estimated Presence Polygone based on selected iMap Invasive Presence Points.



2. Bridge Area and surrounding natural beech: Historically a problematic area human disturbance.

a. Location: 43.23.582; -73.71293

Area: Less than an acre (.7)

iMap Invasives: Presence Record #1057877

Sparse to dense populations mixed with native species.



Estimated Presence Polygone based on selected iMap Invasive Presence Points.

b. Location: 43.2351; -73.71268

Area: Less than a half-acre (.3)

iMap Invasives: Presence Record #1057844

Sparse to dense populations mixed with native species



Estimated Presence Polygone based on selected iMap Invasive Presence Points.

c. Location: 43.23.582; -73.71293

Area: Less than an acre (.5)

iMap Invasives: Presence Record #1057803

Sparse to dense clumps and segmented populations



Estimated Presence Polygone based on selected iMap Invasive Presence Points.



3. Boat Launch of Main Water Body (Southern End)

Known presence of Eurasian Water-milfoil; (*Myriophyllum spicatum*) enlarging infestations.

Polygon Location 1:

Location: 43.22759; -73.71181

Area: Up to a half an acre (.5)

iMap Presence Record: #1057862

Sparse to dense clumps



Estimated Polygon based on selected iMap Invasive Presence Points

Polygon Location 2:

Location: 43.22779; -73.71282

Area: Up to half an acre (.5)

iMap Invasives: Presence Record #1057800

Sparse to dense clumps



Estimated Polygon based on selected iMap Invasive Presence Points

Polygon Location 3:

Location: 43.22822; -73.7143

Area: Up to half an acre (.5)

iMap Invasives: Presence Record 1057798

Trace, sparse, and dense clumps forming



Estimated Polygon based on selected iMap Invasive Presence Points



Section 3: Summary of Recommendations

This page provides recommendations of any treatment methods, monitoring methods, and restoration efforts based on the survey.

Treatment: Describe briefly any recommendations for future treatment methods, why they are recommended, and any alternatives to consider. Please use abundance and site-specific factors in your treatment recommendation. Optional: Attach or reference BMP guidance document

Selective Control Strategies:

- Harvest/Suctioning
- Chemical Treatment with Selective Herbicide

A number of chemicals impact the growth and survival of *M. spicatum*. Amine salts of Endothall (Hyrothol 191®), and Dipotassium Salts of Endothall (Aquathol K®), Diquat dibromide (Reward®), Komeen® have been found to be effective. Some of these herbicides may also affect other non-target rooted submerged plants, including some rushes. Treatment is most effective in still water in the spring while the plant is actively growing. The amine formulations of 2,4-D granules (Navigate®, Aquakleen®, Aquacide®) are effective on controlling Eurasian watermilfoil and will not damage most non-target grasses. This herbicide method, however, is not appropriate for large unmanageable areas of milfoil. One lose-dose application (10 µg/ L) of fluridone (brand names Sonar® and Avast!®) applied in the early stages of growth has the potential to provide season-long control of milfoil. However, this application rate causes collateral damage to native vegetation. Liquid triclopyr (Renovate 3® and Renovate® OTF) can control milfoil without unintended damage to cattails and grasses. *Note: Always check state/provincial and local regulations for the most up-to-date information regarding permits for control methods. Follow all label instructions. Mention of chemicals, particularly the mention of brand names in this profile does not represent a recommendation by NY Sea Grant or Cornell University.* http://nvis.info/invasive_species/eurasian-watermilfoil/

Non-Selective Control Strategies

- Benthic Mats

Basic Primer on EWM Control:

- https://www.dec.ny.gov/docs/water_pdf/ch6p2.pdf

Post-Survey Monitoring: Briefly explain the monitoring procedure, when it will occur, and who will complete it. Consider the phenology of species when suggesting time-lines. If a separate management or monitoring plan was developed or to be completed, attach or describe here.

- The Capital Region PRISM will commit to Early Detection AIS Surveys in Moreau State Park in a Collaboration with the NYS OPRHP on an annual basis. The PRISM will continue to monitor the infestation(s) of Eurasian Water-milfoil; (*Myriophyllum spicatum*) and delineate their size using collector polygons. The PRISM will also monitor for other AIS.

Will post-treatment management be handled by another person/entity? Not Applicable at this time.

If yes- please provide the contact information:

Will an Invasive Species Management Plan be created? Not Applicable at this time.

