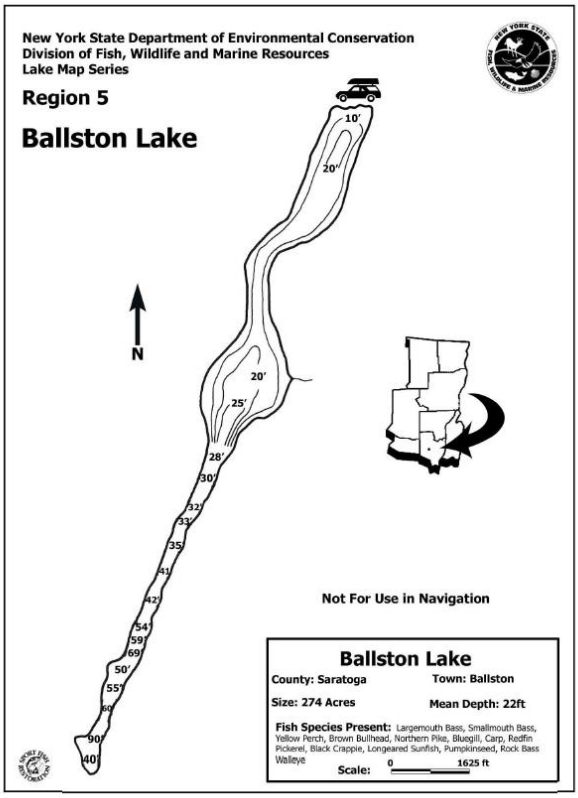
Capital Region PRISM AIS Survey Report

Date(s): July 6th, 2022
Site Name: Ballston Lake
Site Size: 274 acres
Waterbody Perimeter: 6.8 miles
Mean Depth: 22 feet
GPS Location: 42.957110, -73.851599
Physical Address: 59 Outlet Rd, Ballston Lake, NY 12019
Town: Ballston Lake
County: Saratoga

Property Owner Contact: Ballston Lake Improvement Association
Primary Contact: Ballstonlakeassoc@gmail.com
Secondary Contact: Finnegan's on the Water Launch

Survey Leader: Hannah Coppola (AIS Program Manager)
Phone: (518)885-8995
Team Members: Ben Caligiuri and Andrew Brunner (IS Technicians)
iMapInvasives User ID: 21052



Section 1: Survey Summary

On July 6th, 2022 the Capital Region PRISM conducted a partial aquatic survey on Ballston Lake, located in Saratoga County. The survey focused on early detection of starry stonewort and Tier 1 and 2 aquatic invasive species. Upon completion of the surveys it was determined that starry stonewort is not present in Ballston Lake.

Access to the lake was granted to the Capital Region PRISM by a private property owner concerned of the possible presence of starry stonewort. Ballston Lake is under active management by the lake association for water chestnut. The lake association has been encouraged to upload treatments to iMap Invasives to track progress.

Site Description

Ballston Lake is a 274-acre waterbody located in Ballston Lake, NY. The waterbody substrate is primarily muck, sand with a bottom cover of macrophytes. Ballston lake reaches depths of 90 feet, with the mean depth of 22 feet. This prevents aquatic plant growth in the middle areas of the waterbody. A large portion of the lake is surrounded by private properties. There is paid public launch access across from the Finnegan's restaurant.

Survey Techniques

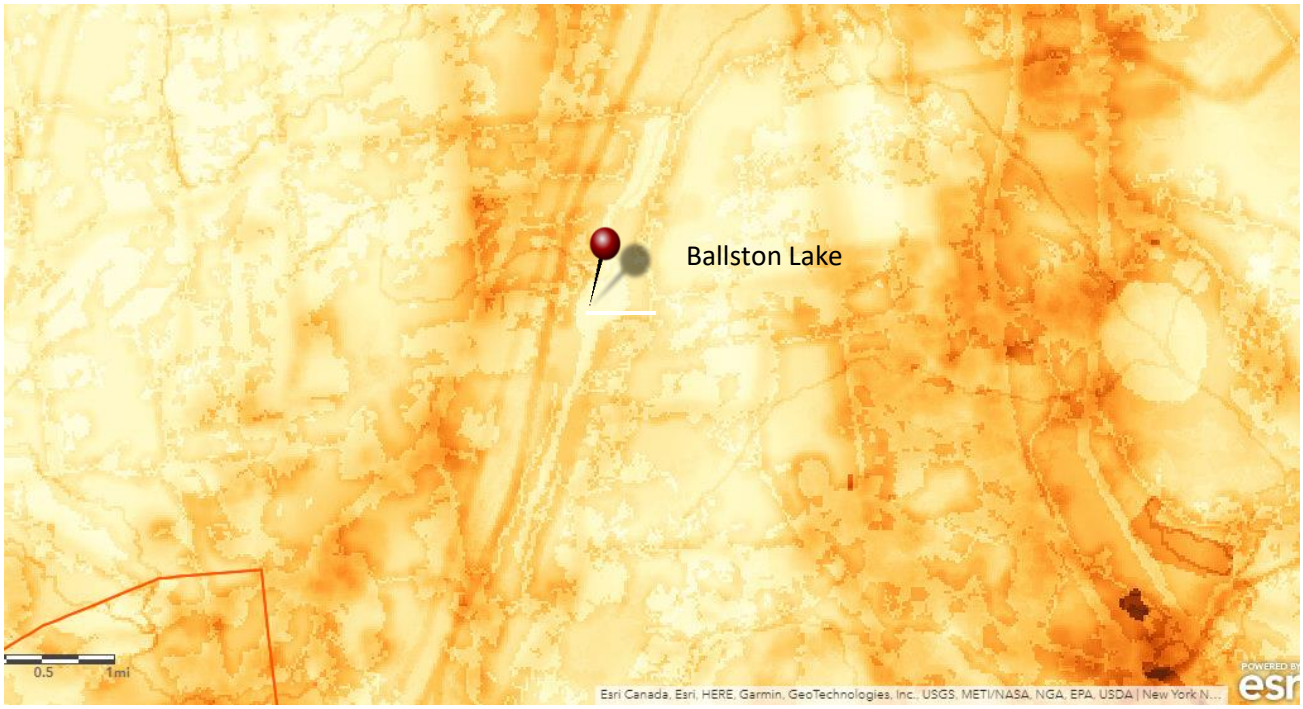
Entire waterbody, top water

- Top-side (visual) from motorized watercraft
- Rake toss

NYS Invasive Species Prioritization Model

Ballston Lake is located near an area with a medium-high comprehensive score on the NYS Invasive Species Prioritization Model. Locations with high comprehensive scores have high ecological significance, a high risk of spread of invasives into the area, and high value according to their protected status. Early detection is important in these locations to ensure timely management of new infestations if detected.

NYS Invasive Species Prioritization Model



Does this site contain previously treated infestations?

Yes, believed to receive annual management of water chestnut. No water chestnut was detected during AIS survey.

Section 2: Survey Result Summary

Aquatic Invasive Species Presence

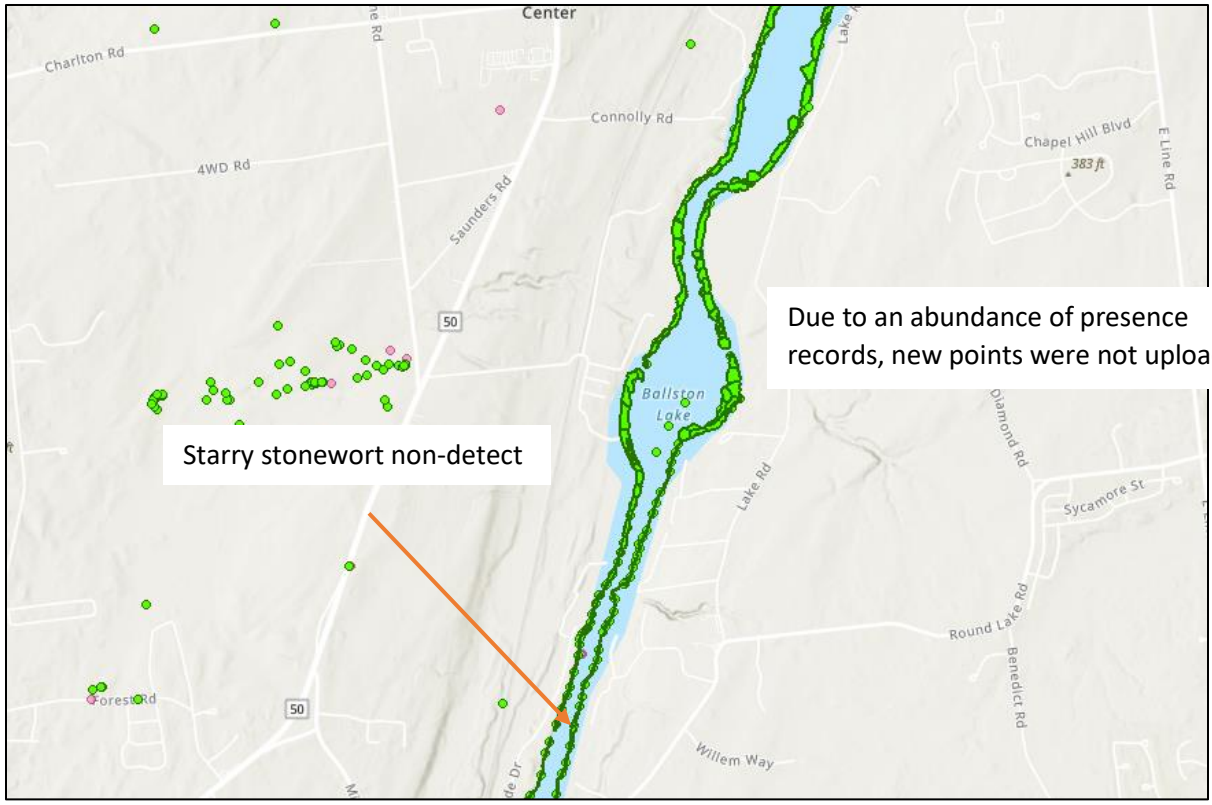
- Water chestnut
  - New York Non-Native Animal Invasiveness Ranking – 82
    - http://nyis.info/wp-content/uploads/2018/01/61a2d_Trapa-natans-NYS.pdf
- Curly-leaf pondweed
  - New York Non-Native Plant Invasiveness Ranking – 79.79
    - http://nyis.info/wp-content/uploads/2018/01/7223b_Potamogeton.crispus.NYS_.pdf
- Eurasian watermilfoil
  - New York Non-Native Plant Invasiveness Ranking – 100
    - http://nyis.info/wp-content/uploads/2018/01/5cdc8_Myriophyllum.spicatum.NYS_.pdf
- Zebra Mussel
  - New York Non-Native Animal Invasiveness Ranking - >80
    - https://nyis.info/wp-content/uploads/2017/10/6299f_Dreissena-polymorpha.ecological.pdf

Common Name	Scientific Name	Location (GPS)	Growth Type	Phenology	Abundance
Water chestnut	*Trapa natans*	Multiple locations	Floating	Fruit ripening	Not Visible – Treatment conducted

Curly Pondweed	*Potamongeton crispus*	Multiple Locations	Submerged	Vegetative	Not Visible – out of season
Eurasian Water-milfoil	*Myriophyllum spicatrum*	Multiple Locations	Submerged	Vegetative	Dense
Zebra Mussel	*Dreissena polymorpha*	Multiple locations	Animal	Animal	Dense

Growth Type: Tree, Shrub, Vine, Ground Cover, Herbaceous, Riparian, Submerged, Floating, Emergent, Wetland, Pest, Animal
Phenology: Flowering, Leaf unfolding, fruit ripening, leaf color change, dormant, swarming, spawning, emergence (insects), migrating, in seed, senesce
Distribution/Abundance: Trace (single plant/clump), Sparse (scattered plants/clumps), Dense plants/clumps, Linearly scattered, Monoculture

Map



Section 3: Summary of Recommendations

Prevention

Prevention efforts are recommended to reduce the chance of new aquatic invasive species introductions into Ballston Lake. The restricted/paid access to the lake helps prevent unwanted species being introduced through reduction of visitors.

- Identifying and reporting any suspected aquatic invasive species is encouraged to ensure early detection.

Management

Water chestnut

Mechanical

- Hand-pulling
  - Conduct hand-pulls between mid-June-July before fruit has ripened and dropped to reduce chances of adding to the seed bank.
  - Multiple visits per season may be necessary to remove regrowth.
  - Management/post-treatment monitoring of site should continue for up to 10 years to ensure seed bank in depleted.

- Mechanical Harvester
    - Cuts vegetation and transfers biomass onto a conveyor system to be disposed of. Multiple cutting may be necessary for regrowth later in the season.

Chemical

- Herbicide (2, 4-D or Glyphosate)
    - Should be administered before the fruit has ripened and dropped to reduce chances of adding to the seed bank.
    - Potential negative impacts to non-target species. Application of aquatic herbicides requires both a licensed pesticide applicator and a permit from your state environmental regulatory agency.

Eurasian watermilfoil

- 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.
- Non-Selective Control Strategies
    - Benthic Matts

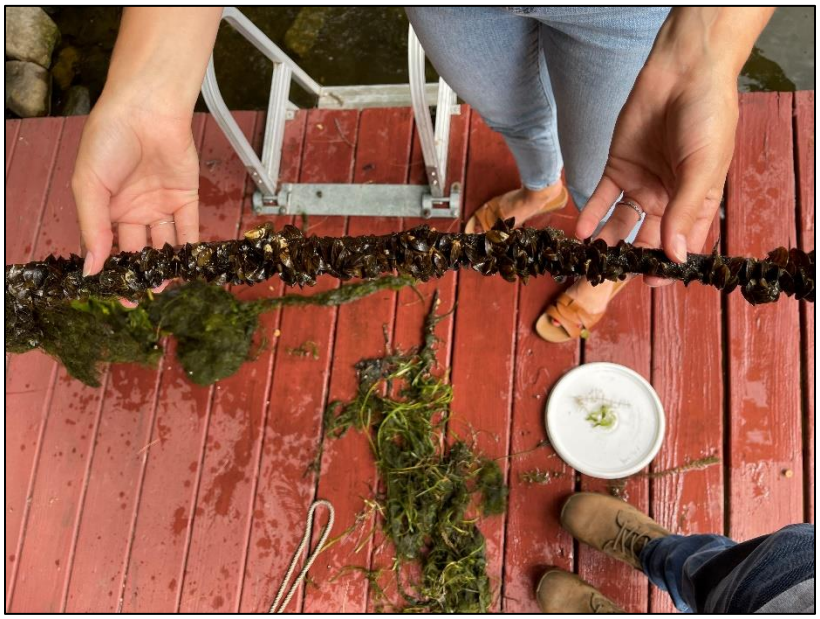
Post-Survey Monitoring

Ballston Lake is not considered a Priority Waterbody in the Capital Region PRISM and will not be surveyed on a regular schedule. The Capital Region PRISM may provide assistance with management strategies for water chestnut and other AIS in the future at the request of the lake association.

Will an Invasive Species Management Plan be created?

- Not at this time.

Photos



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