New York State
Adirondack
Park Agency

Brant Lake Association

P2023-0037

March 13, 2024

Presentation Overview

- Jurisdiction
- Conclusions of Law
- Project Location
- Eurasian Watermilfoil Overview
- Management History in Brant Lake
- ProcellaCor EC Overview
- Proposed Project
- Public Comment & Review by Others
- Staff Recommendation
- Q & A

Jurisdiction

9 NYCRR Section 578.3(n)(2)(i)

- Regulated Wetland Activity
  - Application of Herbicides in Wetlands

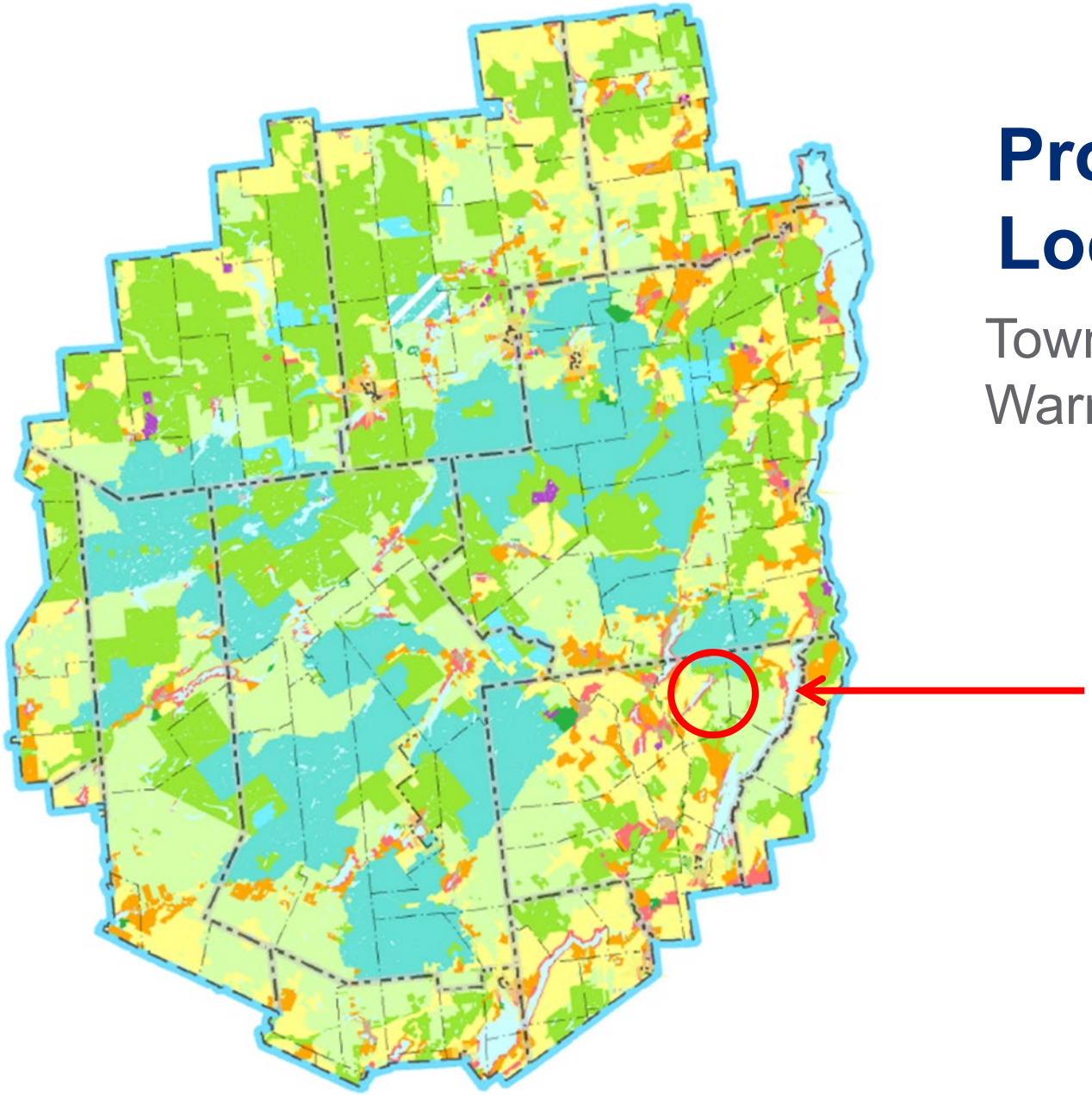
Conclusions of Law

a. that the project authorized as conditioned herein will be consistent with the Adirondack Park land use and development plan; and

b. that the project authorized as conditioned herein will not have an undue adverse impact upon the natural, scenic, aesthetic, ecological, wildlife, historic, recreational or open space resources of the Park, taking into account the economic and social or other benefits to be derived from the activity; and

c. the economic, social and other benefits to be derived from the activity proposed and as conditioned herein compel a departure from the guidelines of 9 NYCRR Part 578.10(a)(1), in order to secure the natural benefits of wetlands associated with the project, consistent with the general welfare and beneficial economic, social, and agricultural development of the state

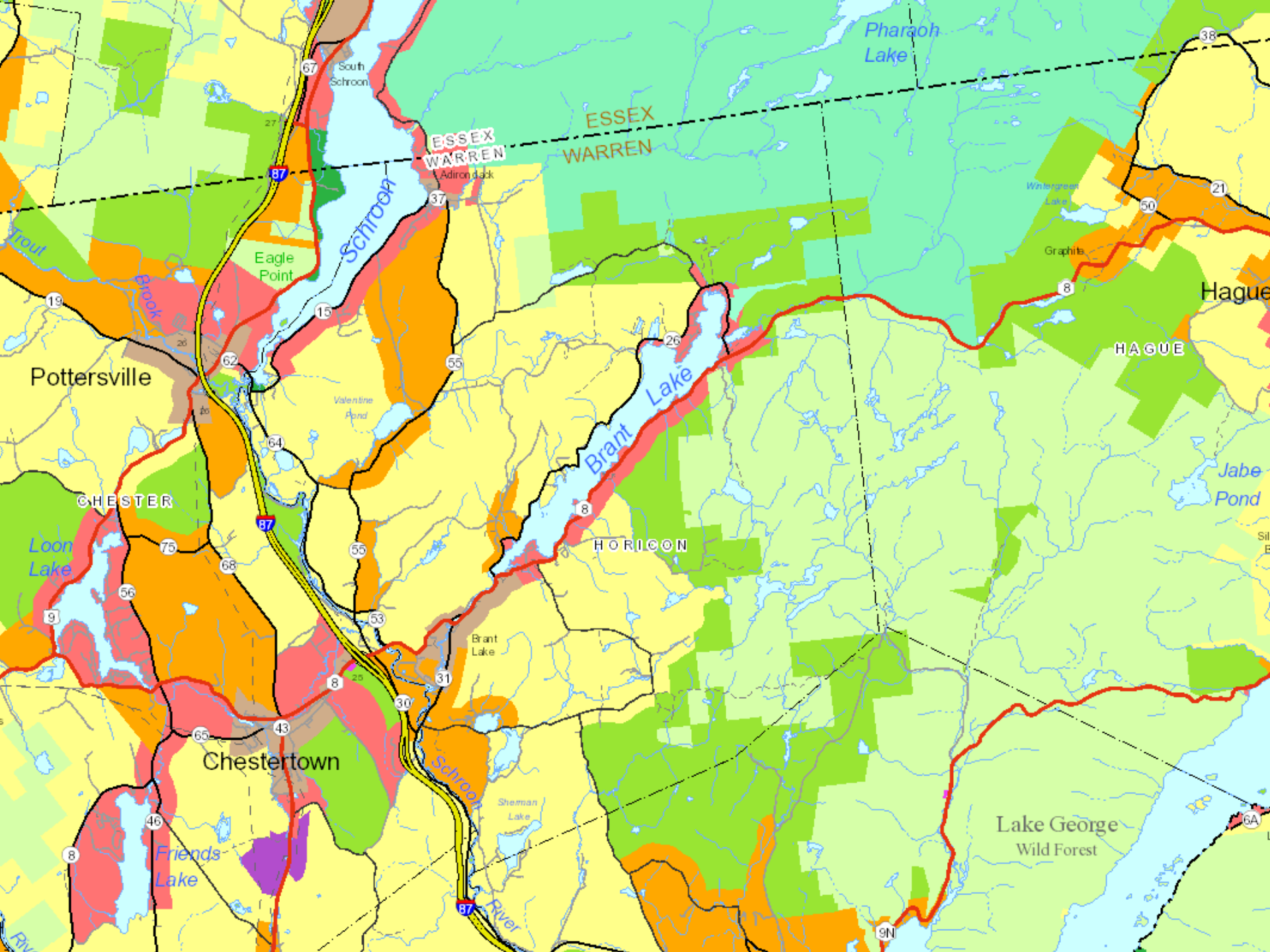
Project Location

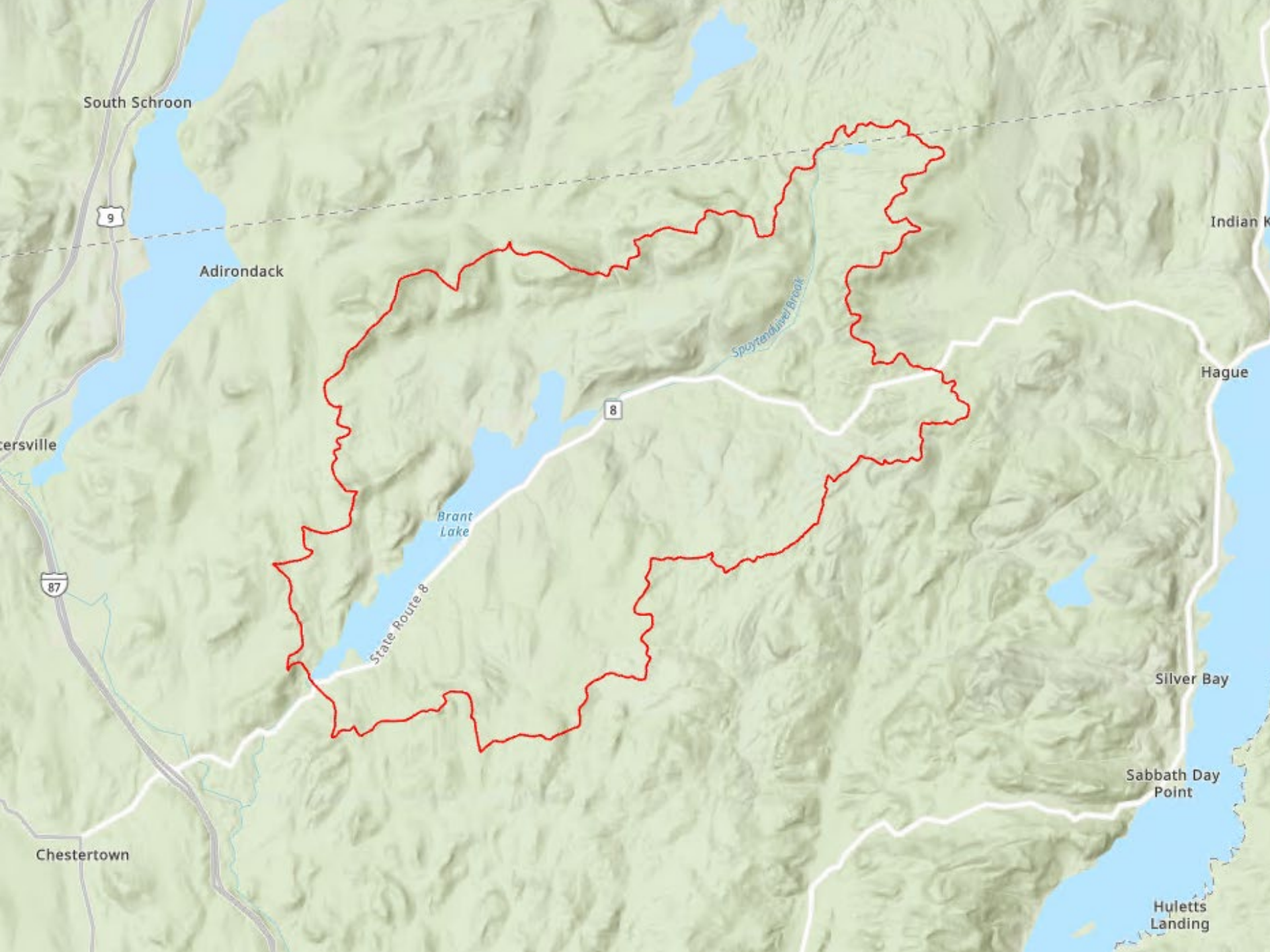


Project Location

Town of Horicon, Warren County

New York State Adirondack Park Agency


Pharaoh Lake
ESSEX
WARREN
ESSEX
WARREN
South Schroon
Adirondack
Schroon
Trout Brook
Eagle Point
Wintergreen Lake
Graphite
Hague
HAGUE
Pottersville
Valentine Pond
Brant Lake
Jabe Pond
CHESTER
HORICON
Loon Lake
Brant Lake
Chestertown
Schroon
Sherman Lake
Friends Lake
Lake George
Wild Forest
River


South Schroon
9
Adirondack
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Brant Lake
State Route 8
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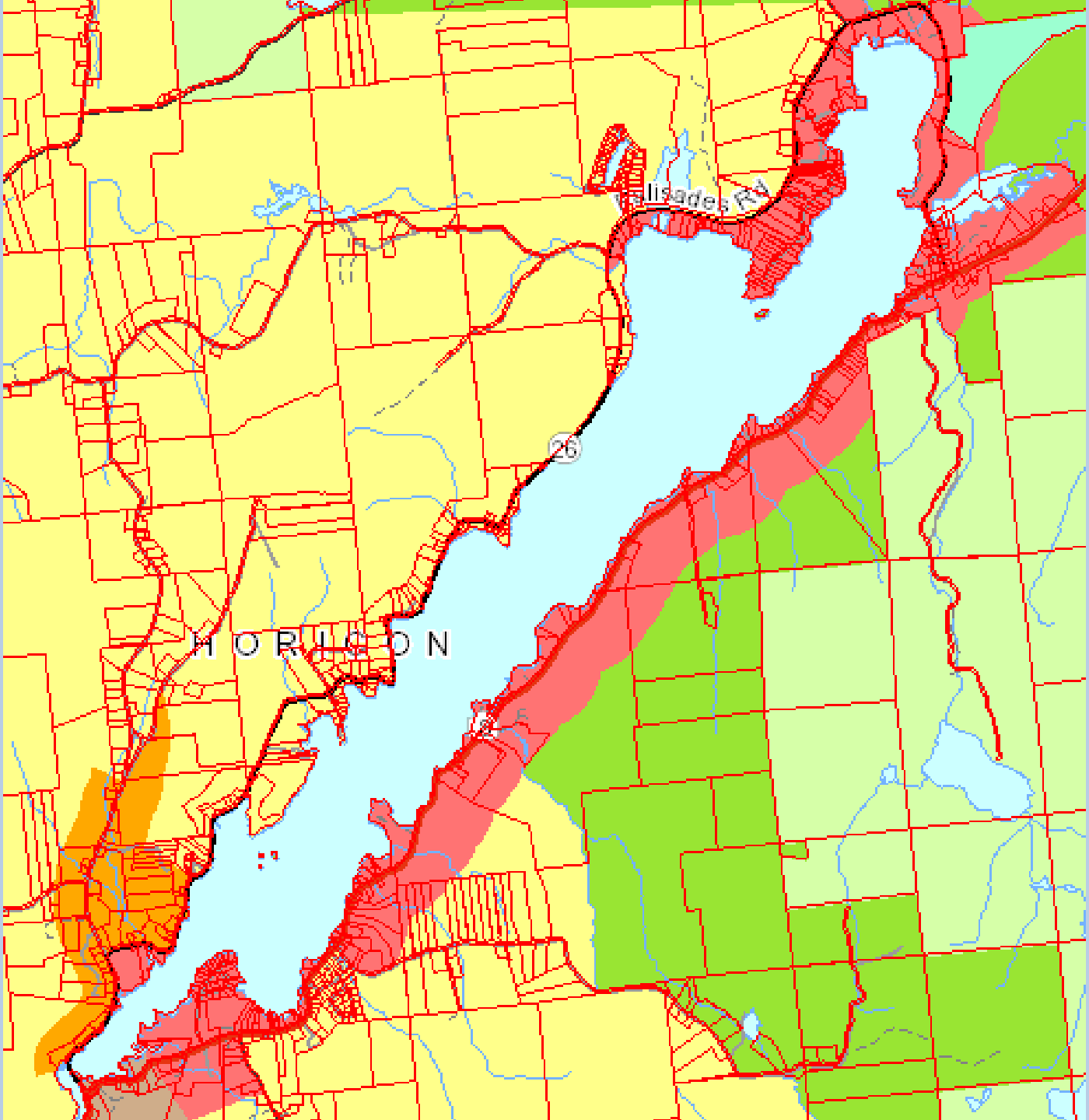
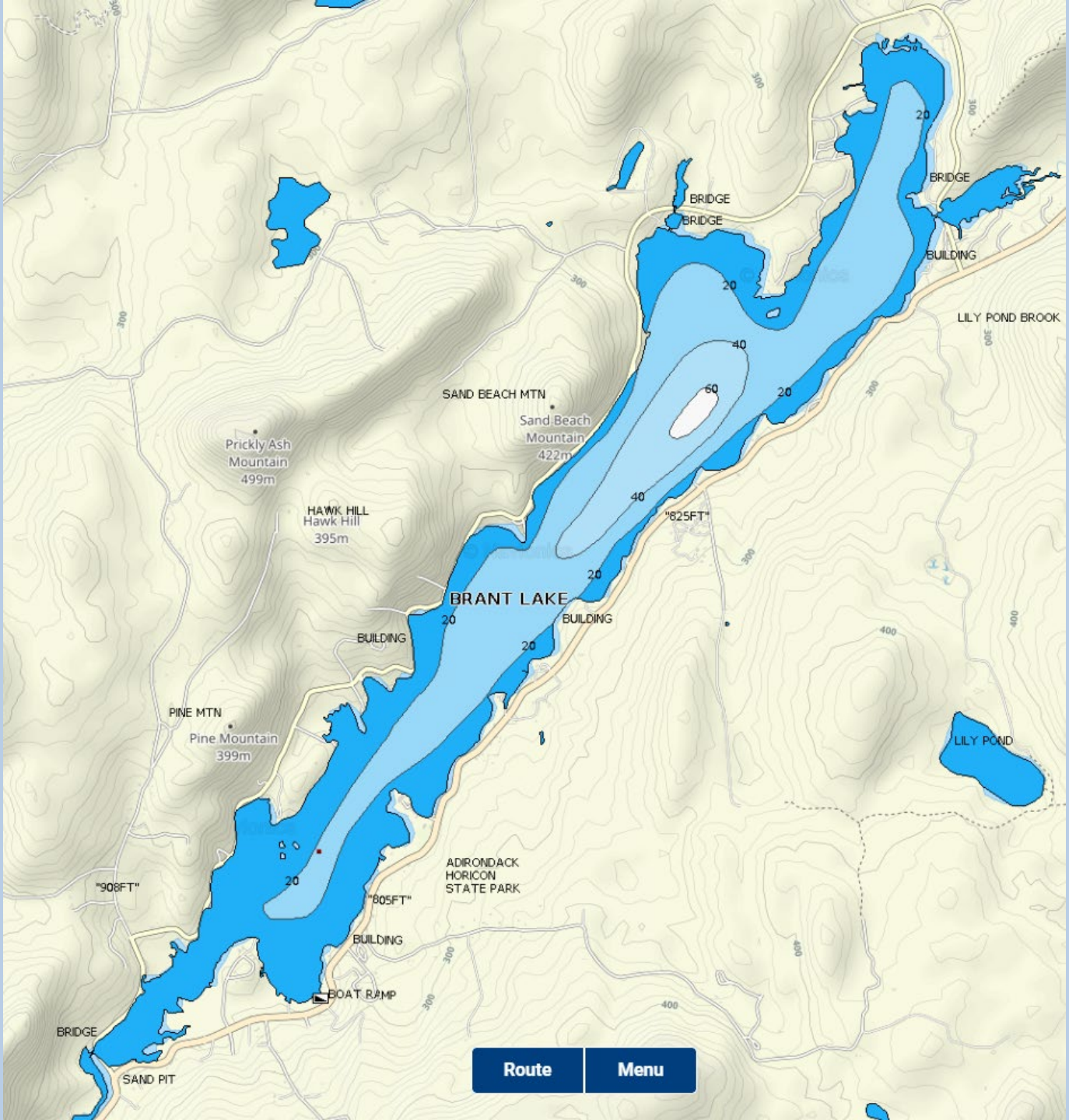
Silver Bay
Sabbath Day Point
Chestertown
Huletts Landing


Palisades Pk
26
HORICON


BRANT LAKE
BRIDGE
BRIDGE
BRIDGE
BUILDING
BUILDING
BUILDING
BUILDING
BOAT RAMP
SAND PIT
SAND BEACH MTN
Sand Beach Mountain 422m
Prickly Ash Mountain 499m
HAWK HILL
Hawk Hill 395m
PINE MTN
Pine Mountain 399m
"825FT"
"908FT"
"805FT"
ADIRONDACK HORICON STATE PARK
LILY POND BROOK
LILY POND
20
40
60
Route
Menu

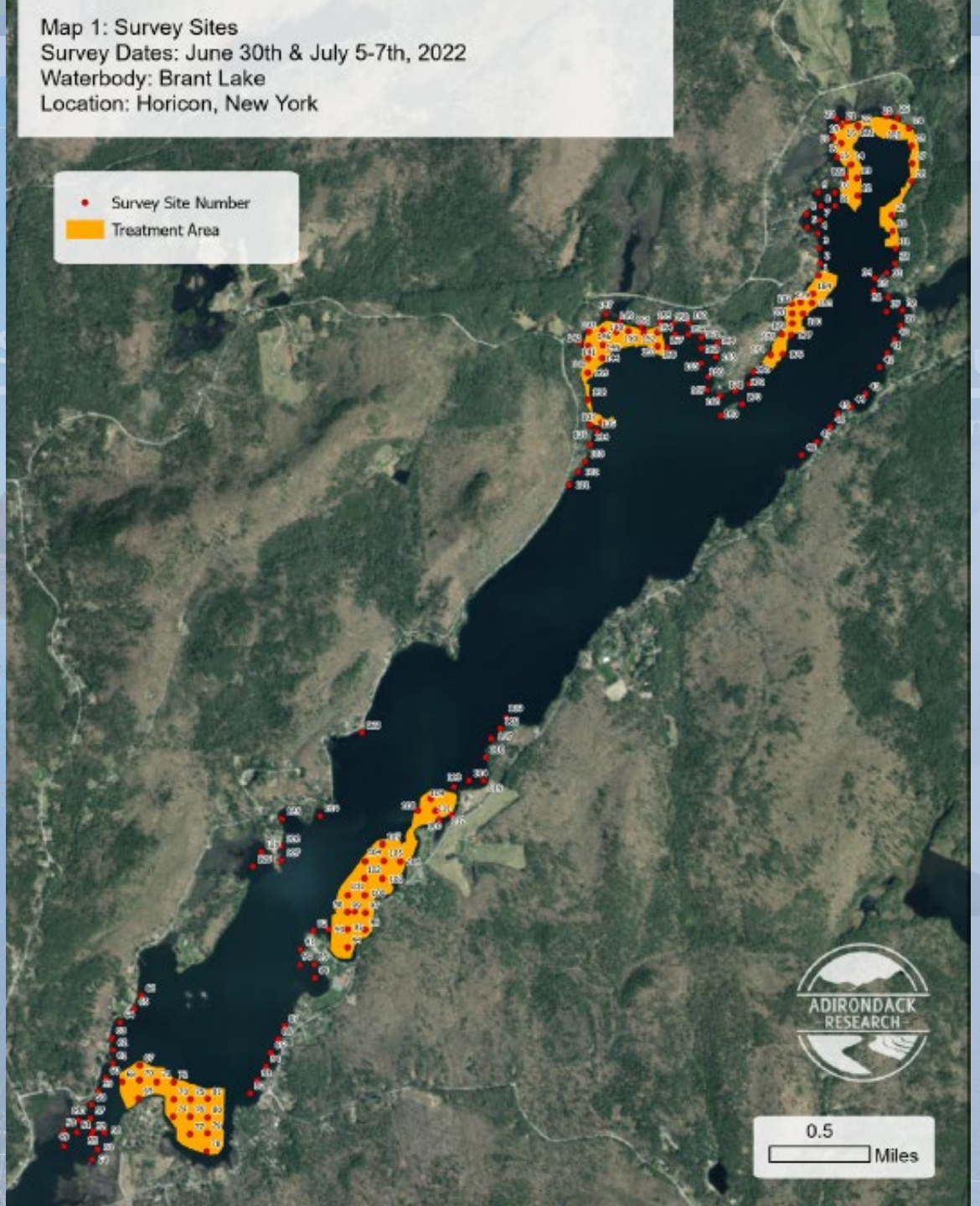
Brant Lake aerial view from west end in April

2022
Brant Lake AIS

urvey

nvasive Species Surveys
Survey Team Report

Map 1: Survey Sites
Survey Dates: June 30th & July 5-7th, 2022
Waterbody: Brant Lake
Location: Horicon, New York



ADIRONDACK RESEARCH

The state of Brant Lake, & Brant Lake management plan

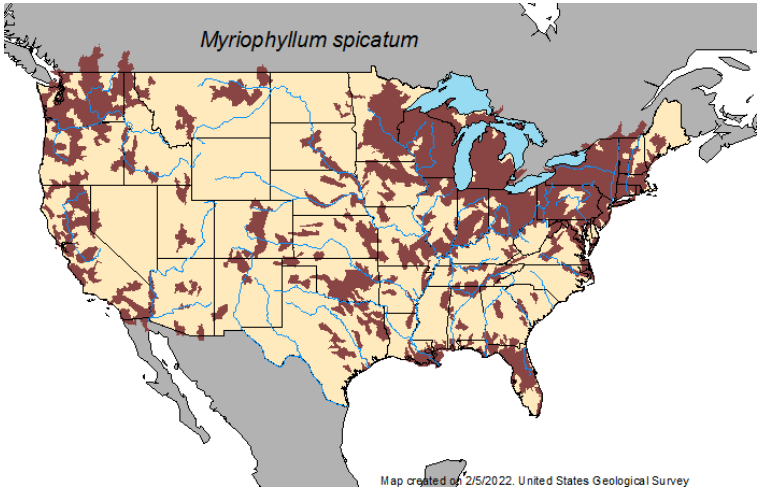
Alejandro Reyes

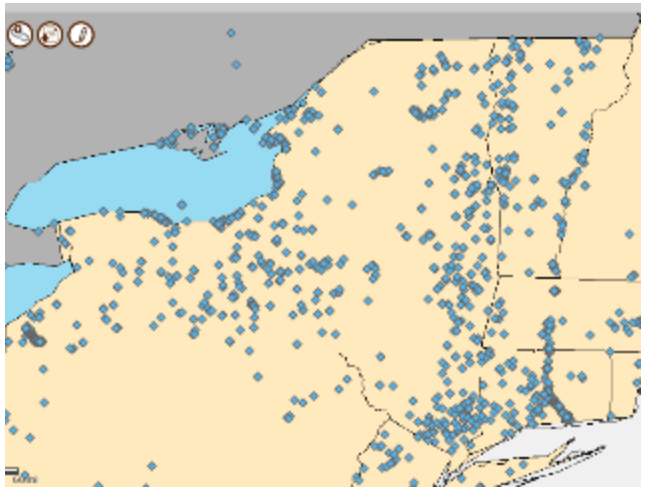
Occasional Paper No. 53
State University of New York
College at Oneonta

Eurasian Watermilfoil (EWM)

- Nonnative aquatic invasive plant
- Economic and environmental harm:
  - Impairs recreational use of waterways;
  - Degrades native habitat of fish and other wildlife.
- No native predators
- Can form dense beds

Once established, difficult if not impossible to eradicate.





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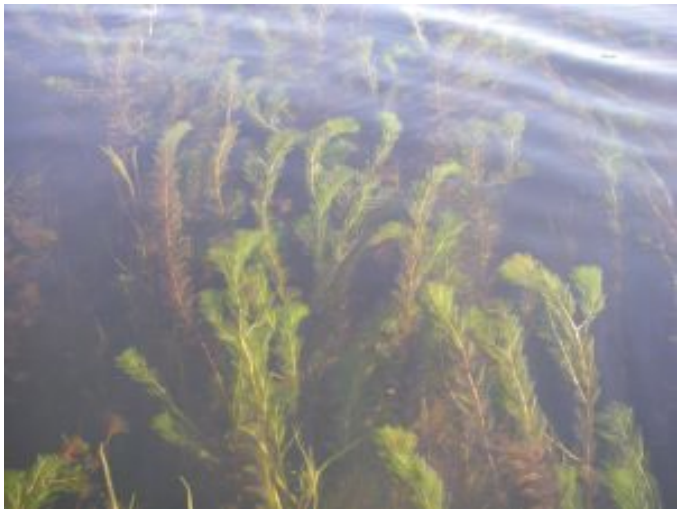


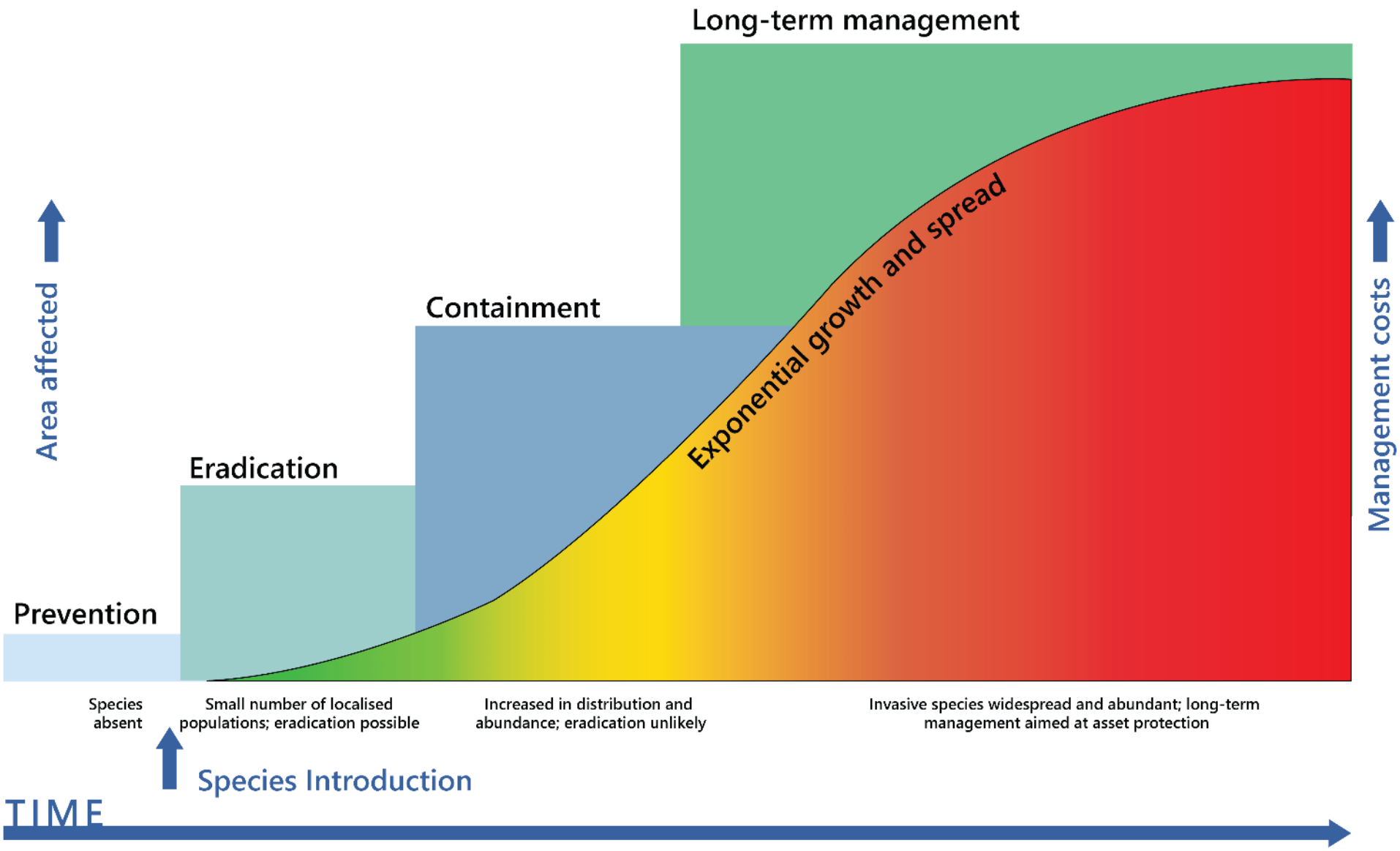
Grows well in disturbed areas

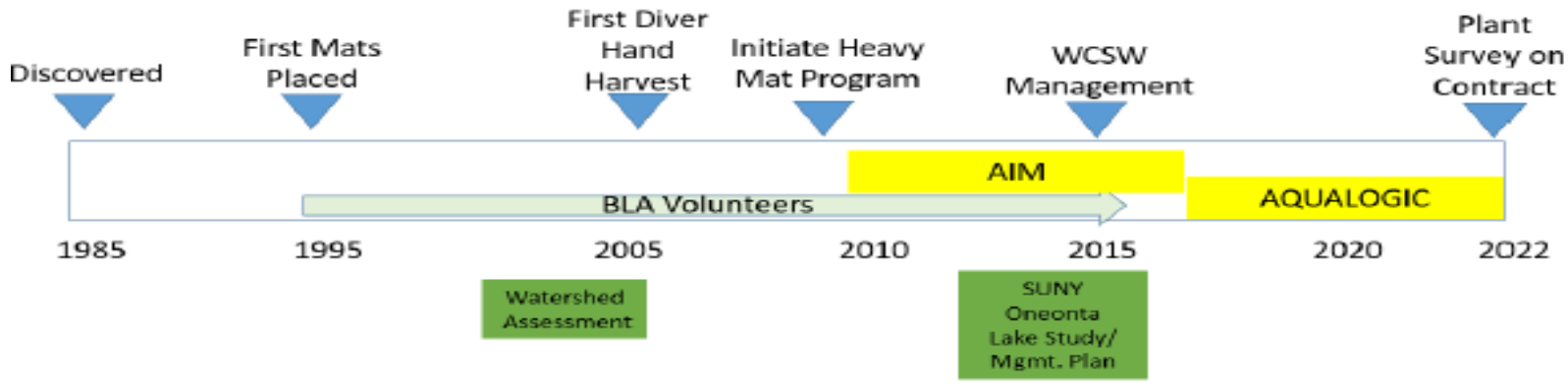
Each plant can produce 100 seeds per season, but much more successful at vegetative reproduction via fragments and runners.

After flowering, this species can undergo auto-fragmentation; fragments are then transported via wind, waves, or human activity.


Aqua-Bound

EWM Management in Brant Lake


Long-term management
Containment
Eradication
Prevention
Exponential growth and spread
Area affected
Management costs
Species absent
Small number of localised populations; eradication possible
Increased in distribution and abundance; eradication unlikely
Invasive species widespread and abundant; long-term management aimed at asset protection
Species Introduction
TIME



- Identified in Brant Lake in 1985
- Agency Permits Issued: 1992, 1993, 2002, 2016
  - Benthic Mats and Hand Harvesting
- 1990's → Benthic Mats Installed
- 2000's → Volunteer Divers and Increased Benthic Mats
  → Volunteer "Scouts" to Identify Infestations
- 2008 → Professional Harvesting Contracts Begin

- Professional Services → $35K - $97K annually
  → > $1 Million Total

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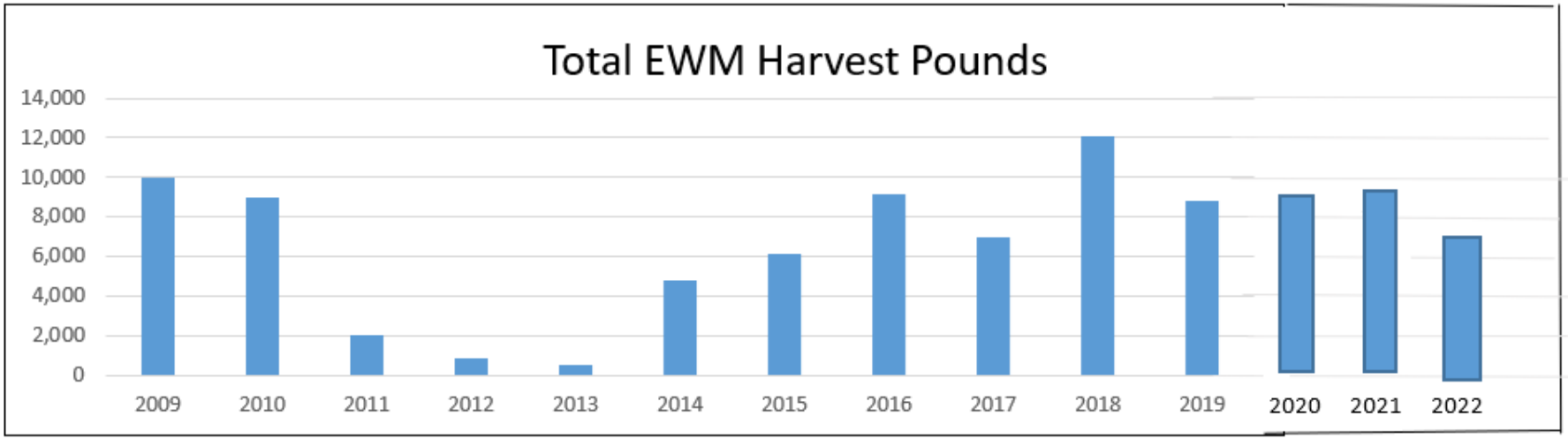
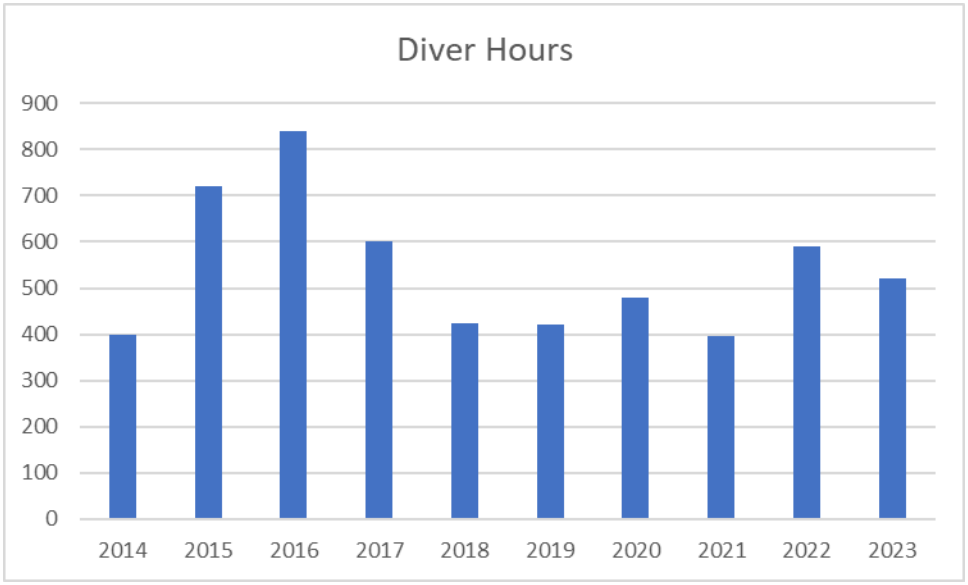
Management Goals and Strategies

Long Term: Recognizing Brant Lake as the economic engine of the Town of Horicon, and in coordination with the Town of Horicon First Wilderness Plan; the long-term goal is to preserve and protect Brant Lake.

- Three Key Areas
    - Lake Management Planning
    - EWM Harvesting
    - Education Program

Harvest Data





New York State Adirondack Park Agency

Aquatic Herbicide ProcellaCOR EC

ProcellaCOR EC (*florpyrauxifen-benzyl)*

- **Registration approved by:**
  - **USEPA in 2018**
  - **NYSDEC in 2019 (NYSDOH, Division of Fish and Wildlife)**

"The product application was fully reviewed regarding human health as well as ecosystem health. There were no objections to the registration of this product in New York State"

  - **Health Canada Pest Management Regulatory Agency in 2022**

"When used according to label directions, florpyrauxifen-benzyl and its transformation products do not pose a risk to wild mammals, birds, beneficial invertebrates, earthworms, bees, aquatic invertebrates, fish, amphibians, or algae."

ProcellaCOR EC
A Selective Systemic Herbicide

- Limited non-target impacts

- Rapid plant uptake (2-6 hours)

- Low dosage (<8 parts per billion)
  1 ppb = 3 seconds in a century
  = 1¢ in $10,000,000
  = 1 water drop in 10,000 gallon pool

- Fast degradation (Photolysis)

Auxin Mimic

Active Ingredient Florpyrauxifen-benzyl

Mimics plant growth hormone - causes uncontrolled rapid growth that ultimately kills the plant

- Leaves grow larger and become twisted,
- Stems lengthen,
- Leaf and shoot tissue becomes fragile
- Initial symptoms in hours to days
- Plant death and decomposition within 2-3 weeks.

<u>Plant fragments are not viable.</u>

Applied while plants are growing for efficient product uptake.

Half Life of ProcellaCOR EC		
Aquatic	Aerobic	4 to 6 Days
	Anaerobic	2 Days
Sediment	Aerobic	8 Days
	Anaerobic	3 Days
Metabolites in Sediment	Aerobic	21.5 Days
	Anaerobic	28.9 Days

Toxicity	
Fish	Practically NonToxic (Lowest Value Assigned by EPA)
Invertebrates	Slightly Toxic (Second Lowest Value Assigned by EPA)
Birds, Mammals, Amphibians, Reptiles	Practically NonToxic (Lowest Value Assigned by EPA)

ProcellaCOR EC

Maximum Treatment Concentration Allowed by Label for Controlling EWM is 7.72 parts per billion (ppb)

NYSDEC Use Restrictions:

- Drinking Water: No restrictions under 50 ppb. Can and has been used in public drinking supplies
- Swimming / Fishing : No restrictions
- Irrigation & Livestock Watering: Restriction until concentration is <1 ppb

Overview of Regional ProCellaCor EC Treatments

	Number of Treatments	Total Treatment Area	Range of Treatment Area
New York	NYS: ≈ 30 5' in Region 5 2 in Adirondack Park	NYS: Undocumented ADK's: 41 ac	NYS: Undocumented ADK's: 41 ac
Vermont	18 Undertaken	480 ac	4 to 70 ac
New Hampshire	43 Undertaken	990 ac	0.75 to 78

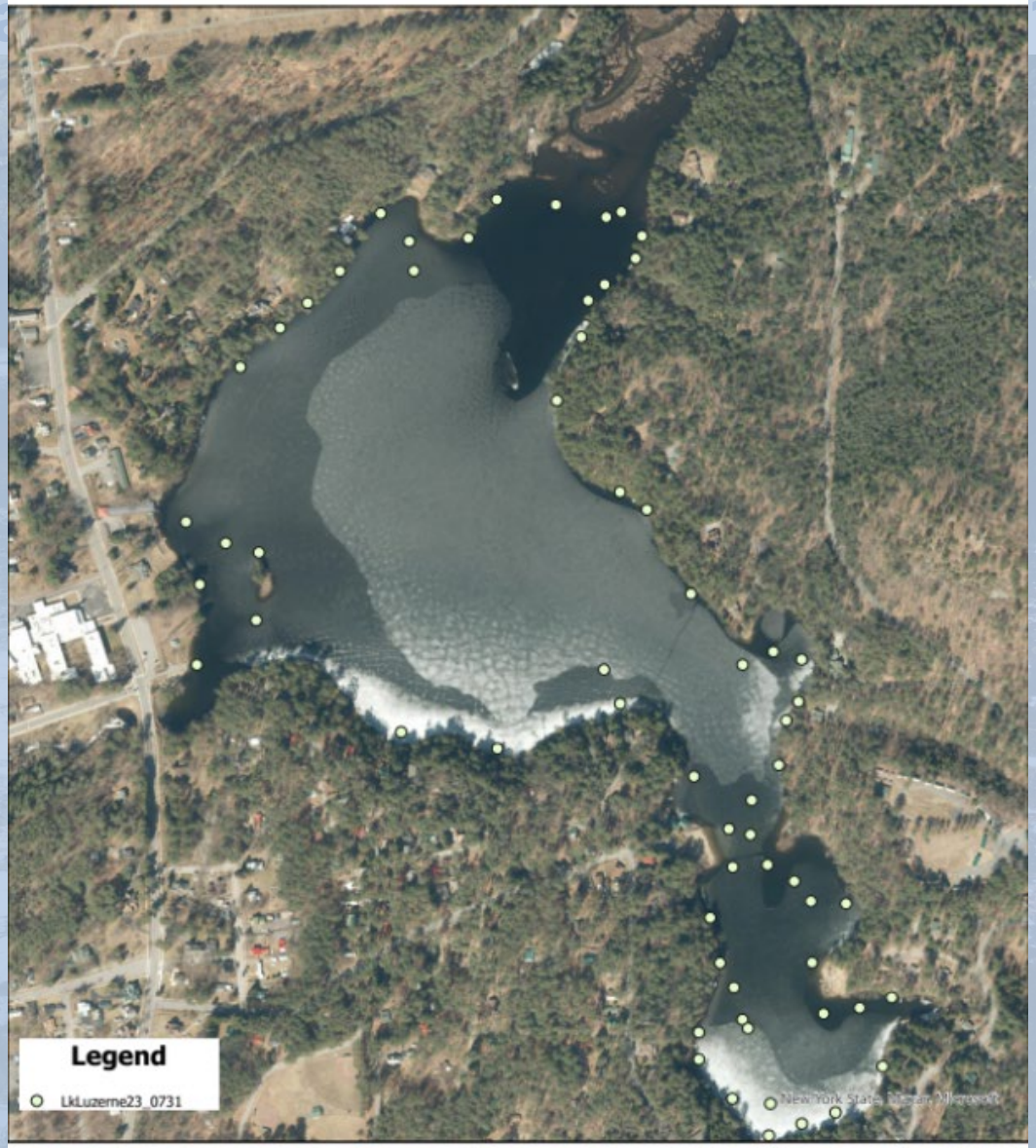
P2020-0044; Minerva Lake
Approval May, 2020; Treatment June 5, 2020

Table 2: 4 Year Change in common species abundance from 2019-2022.

COMMON NAME	SCIENTIFIC NAME	2019	2020	2021	2022	CHANGE
Eurasian watermilfoil	*Myriophyllum spicatum*	66%	0%	0%	2%	Decrease
Common waterweed	*Elodea spp.*	60%	63%	74%	71%	Increase
Flat-stem pondweed	*Potamogeton zosteriformis*	50%	54%	59%	65%	Increase
Southern naiad	*Najas guadalupensis*	41%	60%	10%	68%	Increase
Macro-algae	*Chara/Nitella spp.*	38%	48%	23%	24%	Negligible
Thin-leaf pondweed	*Potamogeton pusillus*	44%	21%	33%	16%	Decrease
Watershield	*Brasenia schreberi*	37%	26%	20%	21%	Decrease
Bassweed/Large-leaf pondweed	*Potamogeton amplifolius*	30%	37%	52%	43%	Increase
Ribbon-leaf pondweed	*Potamogeton epihydrus*	18%	34%	28%	7%	Decrease
Northern naiad (2019) Slender naiad (2020, 2021)	*Najas gracillima*	17%	9%	2%	0%	Decrease
Slender naiad (2019) Nodding naiad (2020, 2021)	*Najas flexilis*	16%	35%	82%	43%	Increase

GPS Points Collected
July 31, 2023

SOLITUDE
LAKE MANAGEMENT
888.480.5253
solitudelakemanagement.com



Lake Luzerne
Luzerne, NY

Lake Luzerne

1:6,282

0 160 320 640
Feet

N

Map Date: 8/10/2023
File: LkLuzerne23_0731
Prepared by: KV
Office: Shrewsbury, MA

Proposed Project

Brant Lake Association AIS Goals

Brant Lake treatment is proposed for the five EWM beds that produce 75-80% of the annual milfoil harvest. By treating these beds, it will allow harvesting efforts to focus on identified areas that have been difficult to harvest, and areas needing harvesting.

We will continue to spot [harvest] (volunteer and paid) the five beds throughout the harvesting seasons.

SOLITUDE LAKE MANAGEMENT
888.480.5253
solitudelakemanagement.com

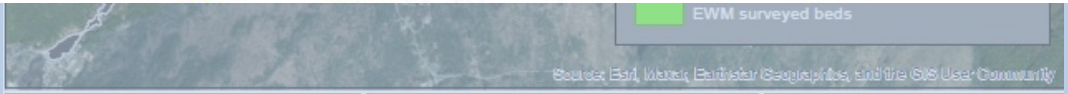
Submersed Aquatic Plant Density

Trace

Medium

Sparse

Dense

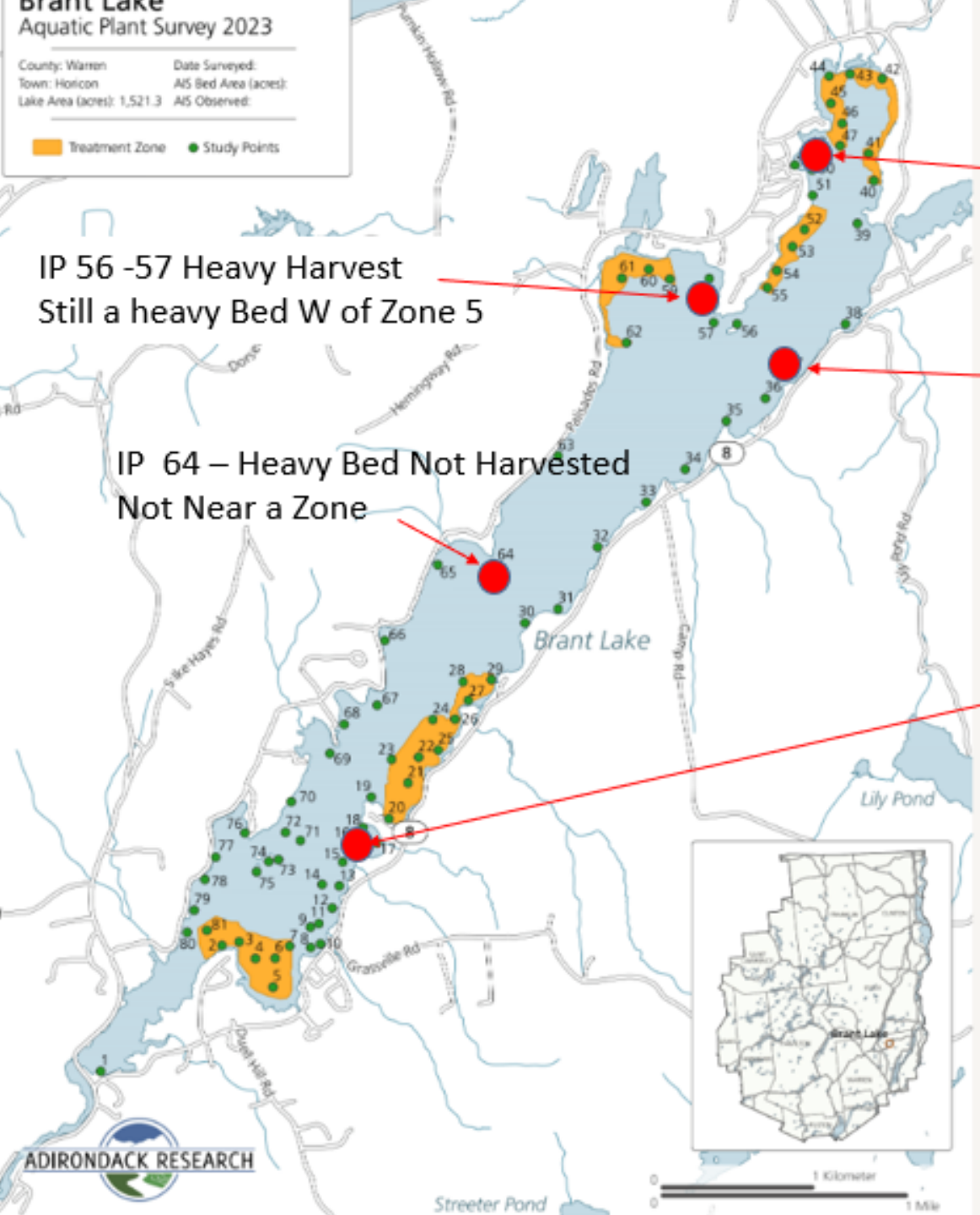


Brant Lake
Brant Lake, NY 12815
[Warren County]
43.716° , -73.303°

BRANT LAKE

0 1,250 2,500 5,000 Feet

Date: 3/14/2023
File: Brant_TrtMap_2023
Prepared by: KM
Office: Washington, NJ



IP 48 – Heavy Harvest 2023
Just S of Zone 3

IP 56 -57 Heavy Harvest
Still a heavy Bed W of Zone 5

IP 34 – Heavy Bed Not Harvested
Not Near a Zone

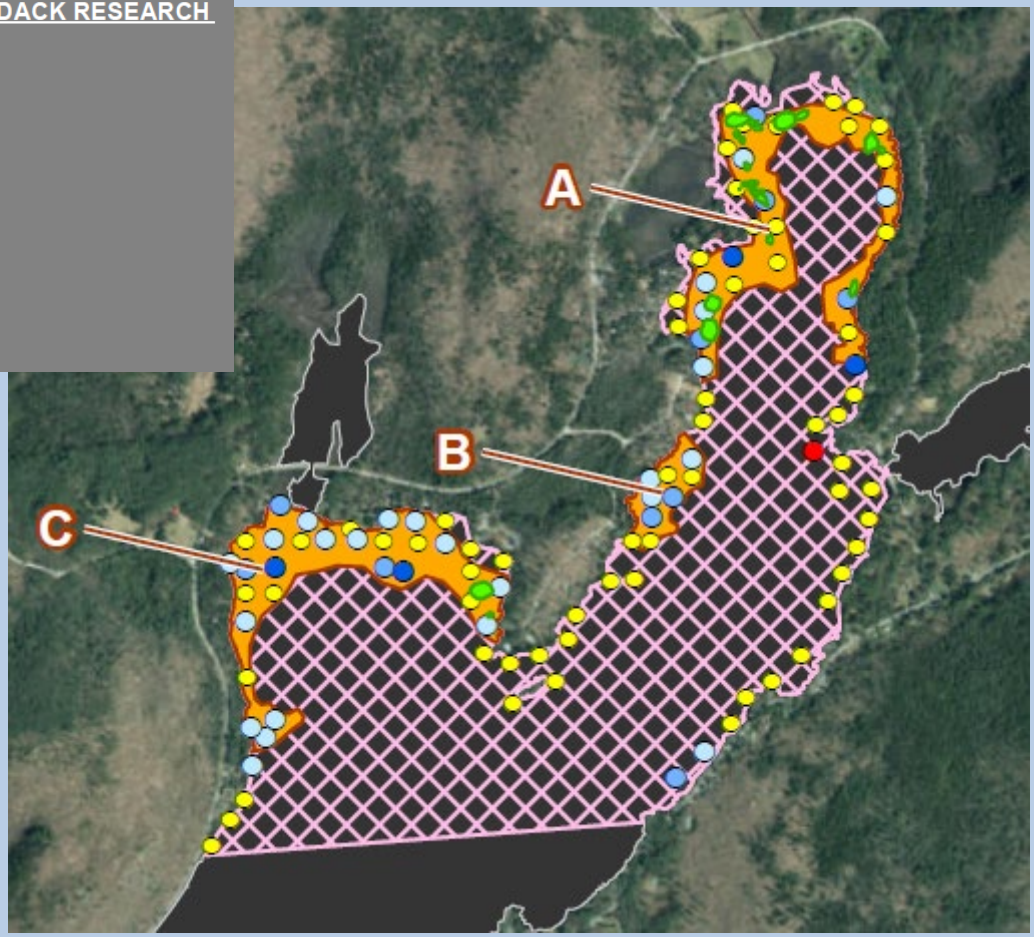
IP 64 – Heavy Bed Not Harvested
Not Near a Zone

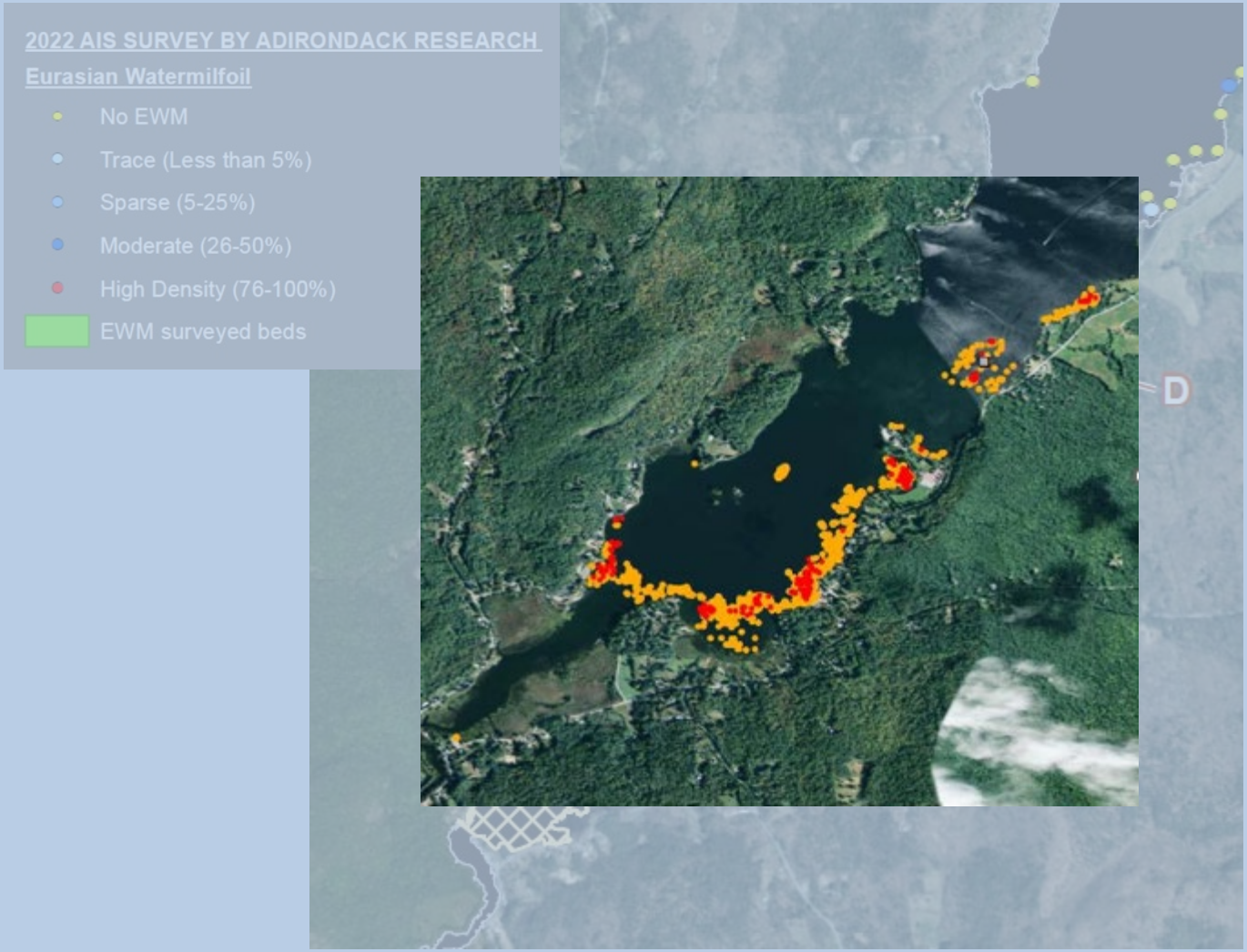
IP 17 Heavy Harvest
S of Zone 2

2022 AIS SURVEY BY ADIRONDACK RESEARCH

Eurasian Watermilfoil

- No EWM
- Trace (Less than 5%)
- Sparse (5-25%)
- Moderate (26-50%)
- High Density (76-100%)
- EWM surveyed beds




2022 AIS SURVEY BY ADIRONDACK RESEARCH
Eurasian Watermilfoil
No EWM
Trace (Less than 5%)
Sparse (5-25%)
Moderate (26-50%)
High Density (76-100%)
EWM surveyed beds
D

Treatment Plan

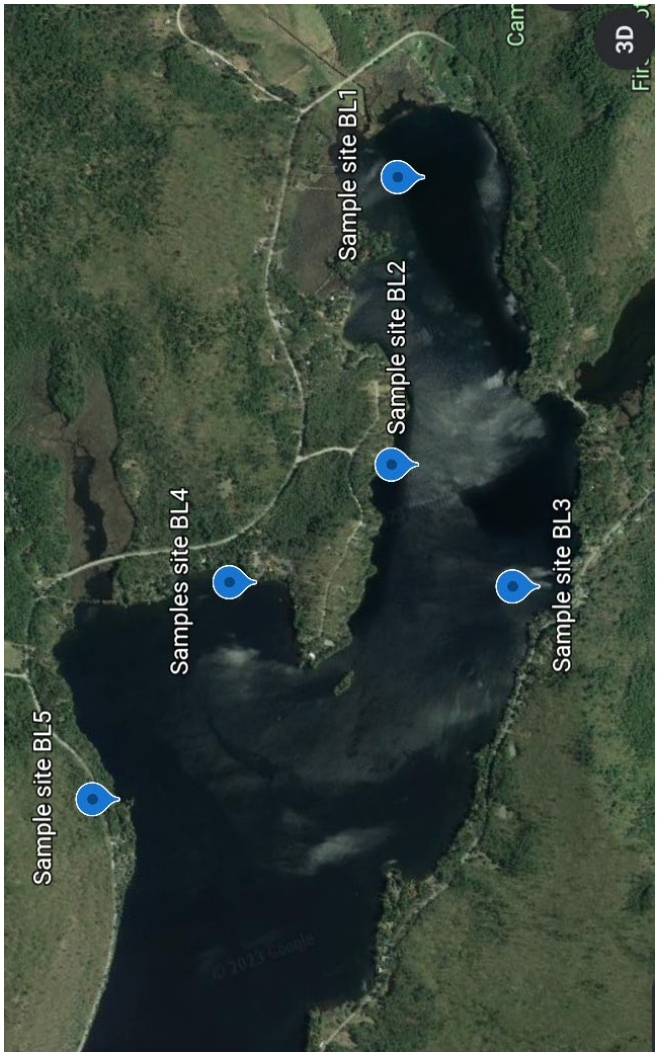
Treat 164 acres within five treatment areas in Brant Lake with ProcellaCor EC.

Concentrations: 3.86 – 5.79 ppb; 65 Total Gallons of Product

Water Quality Measurements Collected at Treatment Sites

- Secchi Depth (Measure of Photic Zone)
- Temperature

Residual Concentration Monitoring



Post Treatment Samples collected until herbicide concentration is below 1 ppb in all samples.

1 to 3 Hours
10 to 12 Hours
24 Hours
3 Days
7 Days
7-14 Days thereafter

N

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Table 2. Summary of Aquatic Vegetation Occurrences and Frequency – Brant Lake 2022

Common Name	Scientific Name	# Stations	% Occurrence
Stonewort	*Nitella sp.*	117	63.59%
Robbins pondweed	*Potamogeton robbinsii*	102	55.43%
Purple bladderwort	*Utriculaaria purpurea*	69	37.50%
Canadian water weed	*Elodea sp.*	67	36.41%
Bladderwort	*Utricularia macro*	63	34.24%
Eelgrass	*Vallisneria americana*	61	33.15%
Eurasian watermilfoil	*Myriophyllum spicatum*	50	27.17%
Slender naiad	*Najas flexilis*	47	25.54%
Watershield	*Brasenia schreberi*	41	22.28%
Hairgrass	*Eleocharis*	33	17.93%
Broadleaf pondweed	*Potamogeton natans*	30	16.30%
White waterlily	*Nymphaea odorata*	26	14.13%
Common pipewort	*Eriocaulon aquaticum*	24	13.04%
White stemmed pondweed	*Potamogeton praelongus*	23	12.50%
Clasping leaf pondweed	*Potamogeton perfoliatus*	22	11.96%
Small pondweed	*Potamogeton pusillus*	19	10.33%
Pickerelweed	*Pontederia cordata*	13	7.07%
Variable-leaf pondweed	*Potamogeton gramineus*	13	7.07%
Ribbon leaf pondweed	*Potamogeton epihydrus*	12	6.52%
Spatterdock	*Nuphar lutea*	10	5.43%
Bur-reed	*Sparganium sp.*	5	2.72%
Narrow-leaf Bur-reed	*Sparganium natans*	3	1.63%
Water lobelia	*Lobelia dortmanna*	2	1.09%
Water marigold	*Bidens beckii*	2	1.09%
Cattails	*Typha latifolia*	1	0.54%
Coontail	*Ceratophyllum demersum*	1	0.54%
Low water milfoil	*Myriophyllum humile*	1	0.54%
Quillwort	*Isoetes sp.*	1	0.54%

Milfoil Species in Brant Lake

Plant Species	Native	Protected
Eurasian watermilfoil ***Myriophyllum spicatum***	**No (Target Species)**	**No**
Low watermilfoil ***Myriophyllum humile***	**Yes**	**No**

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Susceptibility : Other Species in Brant Lake

Plant Species	Susceptibility
Watershield	Moderate - High
White waterlily	Moderate
Yellow waterlily	Low - Moderate
Pickerelweed	Low - Moderate
Coontail	Low - Moderate
All others (N= 20)	Low

Sources: Selective Control of Invasive Watermilfoils with ProcellaCOR® Aquatic Herbicide and Response of Native Aquatic Plants. January 28, 2019 Mark Heilman, Ph.D., Jon Gosselin, SePRO Technical Specialist, Pers.Communication

Public Comment and Review by Others

Public Comment

- Public Notice
  - Lakefront landowners notified when application was received, also when application was complete (780 +/- Addresses x 2 mailings = 1560 Notices)
  - Environmental Notice Bulletin: Comment Period Ended February 15, 2024
  - 104 comment letters received
    - 93 Supportive
    - 6 Not Supportive
    - 5 General Information Inquiries
    - 1 Letter of Response from BLA

Comments – Not Supportive (6 Letters)

- Only trace EWM densities were recorded in survey: Treatment not warranted.
  - Applicant Response: PTA has selectively used only one survey for density results (multiples exist with decades of EWM harvest data including locations)

- No Goals Established
  - Applicant Response: Goal has been stated: To treat areas of heavy production in order to focus harvest efforts elsewhere. To reduce hand harvesting efforts to 10-12 weeks

Comments – Not Supportive

- No information about status of other efforts to control EWM (ie: nutrient pollution control, septic maintenance, stormwater, etc)

  - Applicant Response: From 2015, The Brant Lake Association [and partners] has invested in education campaigns [about] proper maintenance of septic systems, runoff mitigation strategies, and shoreline enhancements. On website, Facebook, Boat launch signs, boater handouts, newsletters, beach association signage, etc

Comments – Not Supportive

- Non-Target Concerns
  - Discussed: Staff Recommendation includes consideration of likely non-target impacts
- Slow Moving, Acquiescent Waters
  - DEC Determination for use appropriate to label
  - Quick Uptake of Product
- Plant Matter Decay
  - Early Treatment = Small Plants = Low Biomass
  - Much Lower than Annual Natural Senescence
- Registration Methodology Concerns
- Post application reestablishment of EWM

Public Comment – Supportive (93 Letters)

- Hand harvest not keeping up with growth
- Losing Battle
- Fears of losing recreational opportunities
- Current spending is not sustainable
- Exhausted volunteers
- ProcellaCor is safe and effective

Review by Others

- NYS Department of Environmental Conservation
  - Pesticides Permit

Draft Permit Conditions

- Undertake project as proposed
- Adherence to Clean Drain Dry Standards for all equipment used
- Post-treatment concentration monitoring report
- Post treatment aquatic plant survey

Conclusions of Law

a. that the project authorized as conditioned herein will be consistent with the Adirondack Park land use and development plan; and

b. that the project authorized as conditioned herein will not have an undue adverse impact upon the natural, scenic, aesthetic, ecological, wildlife, historic, recreational or open space resources of the Park, taking into account the economic and social or other benefits to be derived from the activity; and

c. the economic, social and other benefits to be derived from the activity proposed and as conditioned herein compel a departure from the guidelines of 9 NYCRR Part 578.10(a)(1), in order to secure the natural benefits of wetlands associated with the project, consistent with the general welfare and beneficial economic, social, and agricultural development of the state

Staff Recommendation: Approve with Conditions