

Highland Forests, LLC

P2024-0083

May 16, 2024

Presentation Overview

- Jurisdiction
- Conclusions of Law
- Project Location
- Management History in East and West Caroga Lakes
- Public Comment & Review by Others
- Staff Recommendation
- Q & A

Jurisdiction

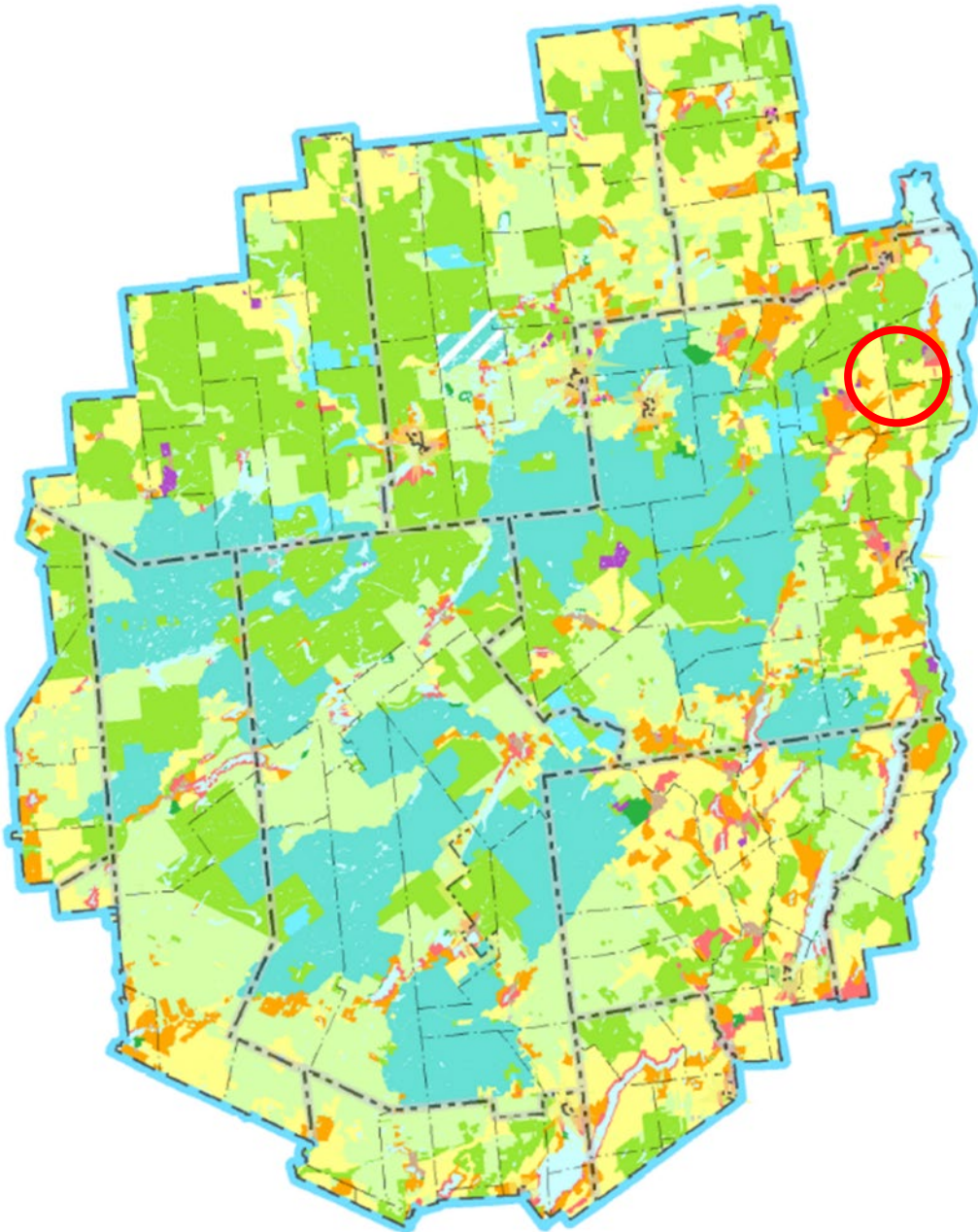
9 NYCRR Section 578.3(n)(2)(i)

- Regulated Wetland Activity
 - Application of Herbicides in Wetlands

Conclusions of Law

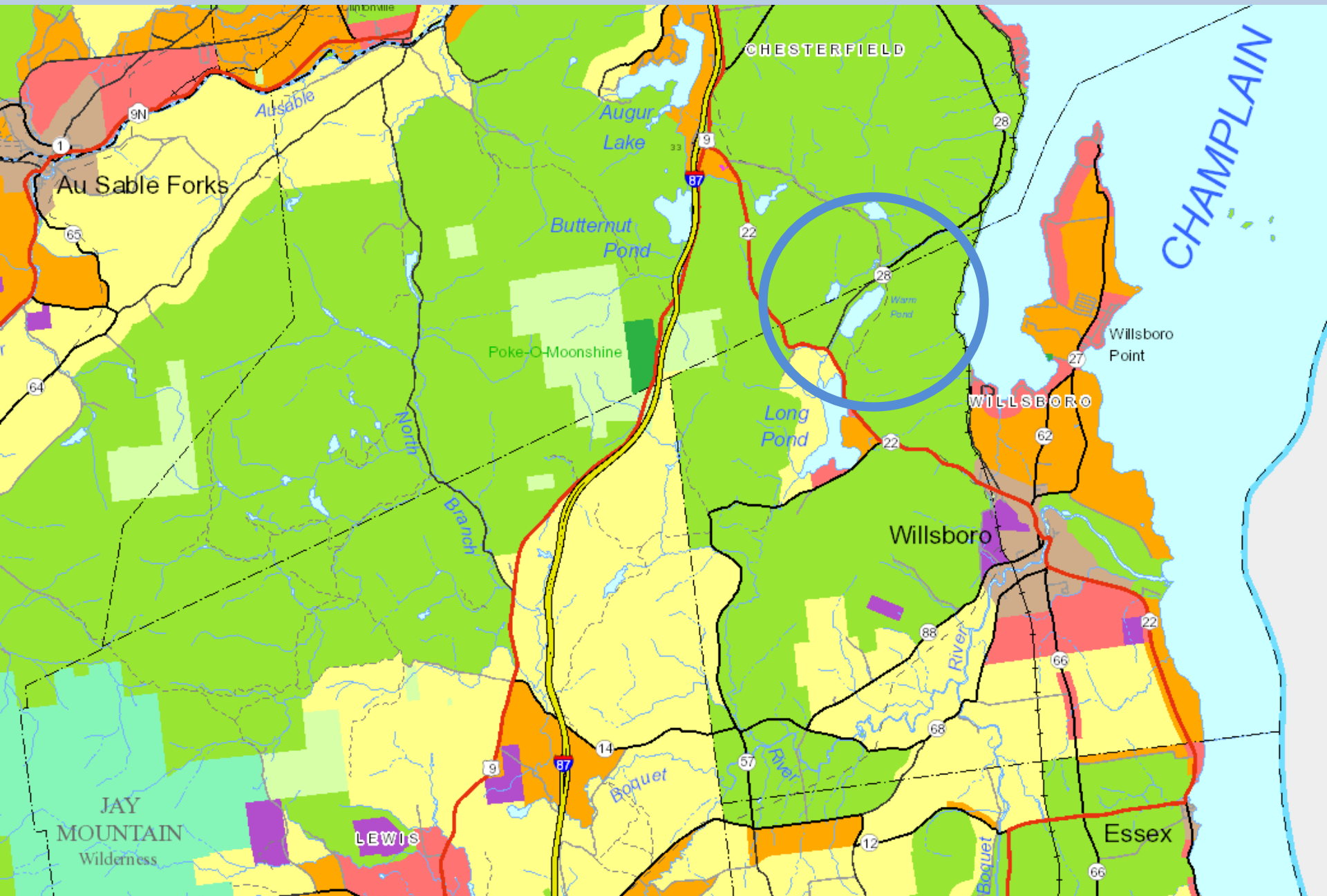
- a. that the project authorized as conditioned herein will be consistent with the Adirondack Park land use and development plan; and
- b. that the project authorized as conditioned herein will not have an undue adverse impact upon the natural, scenic, aesthetic, ecological, wildlife, historic, recreational 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

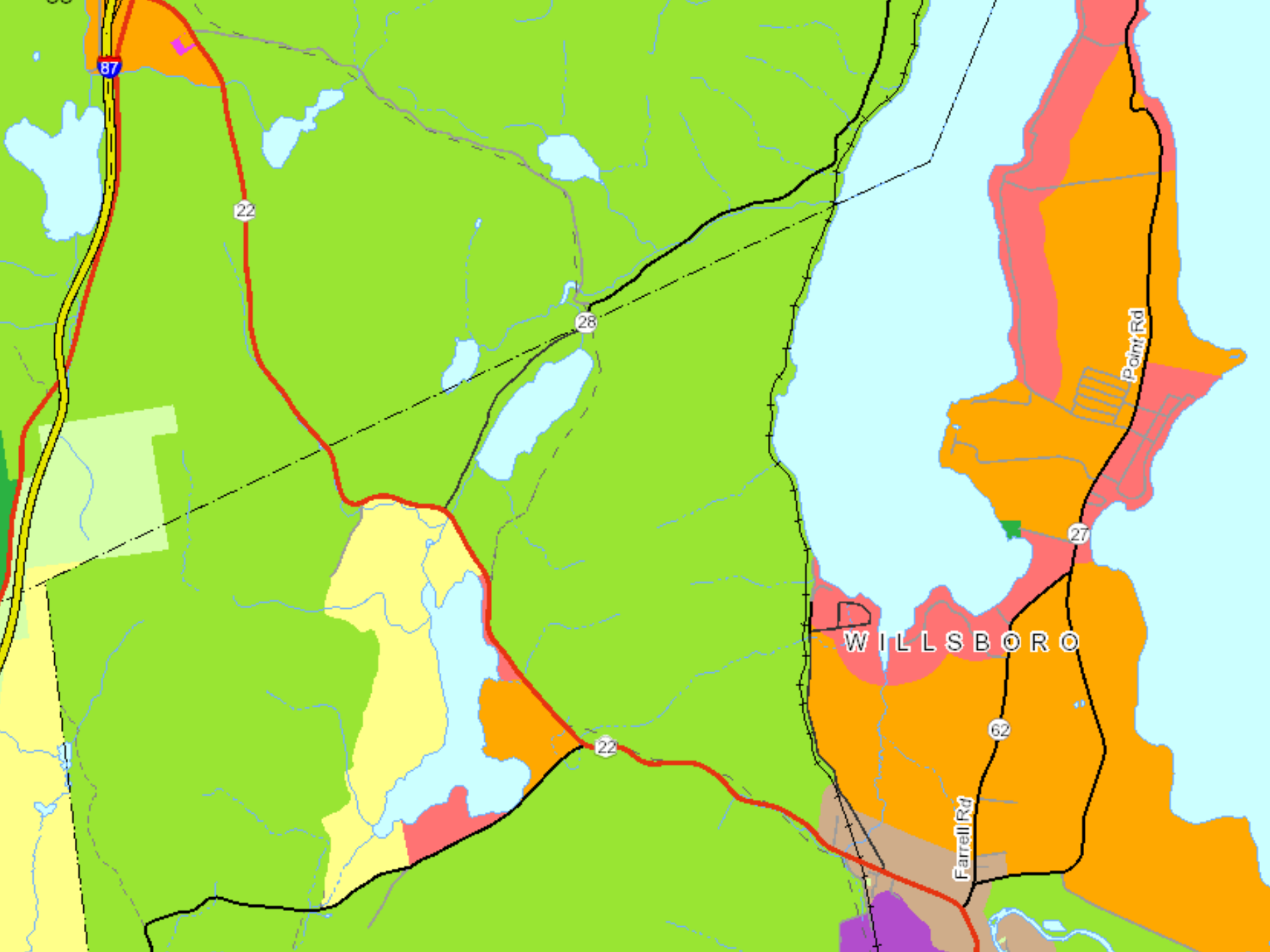
Project Location

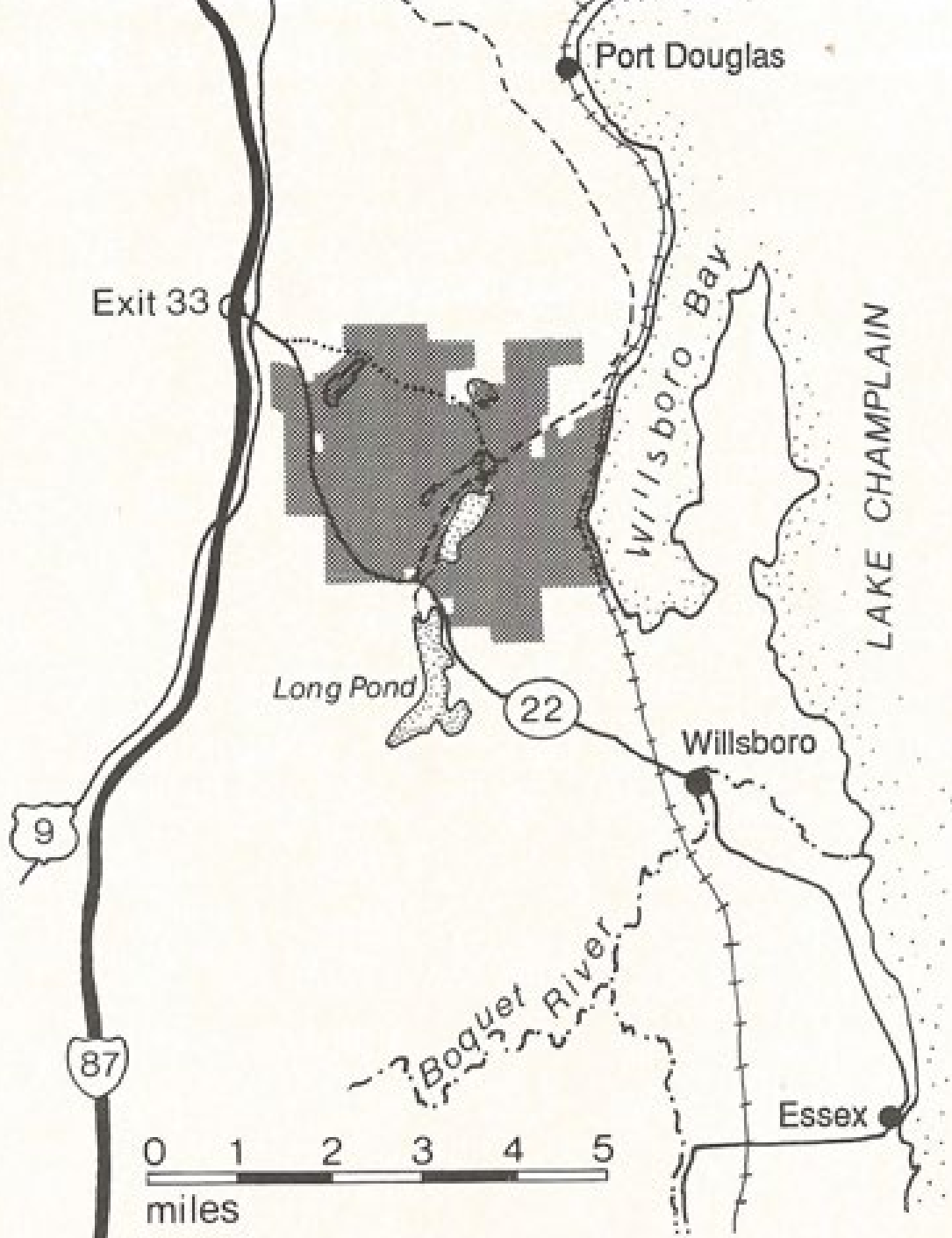


Project Location

Town of Willsboro,
Essex County









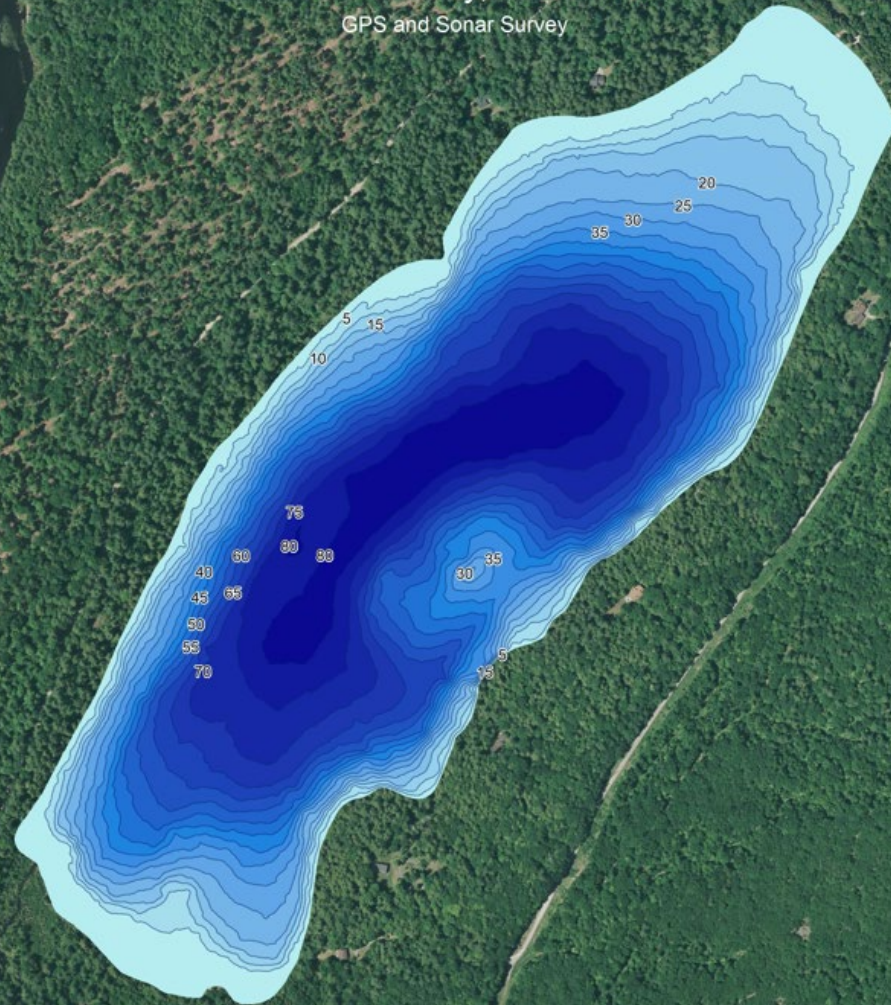
Highlands Forge Lake

Bathymetry

Essex County, New York

GPS and Sonar Survey

NORTH



Highlands Forge Lake Macrophyte Monitoring Report

*2023 Aquatic Plant Inventory and Management Program
Report for Highlands Forge Lake, Willsboro, NY*



SOLITUDE
LAKE MANAGEMENT

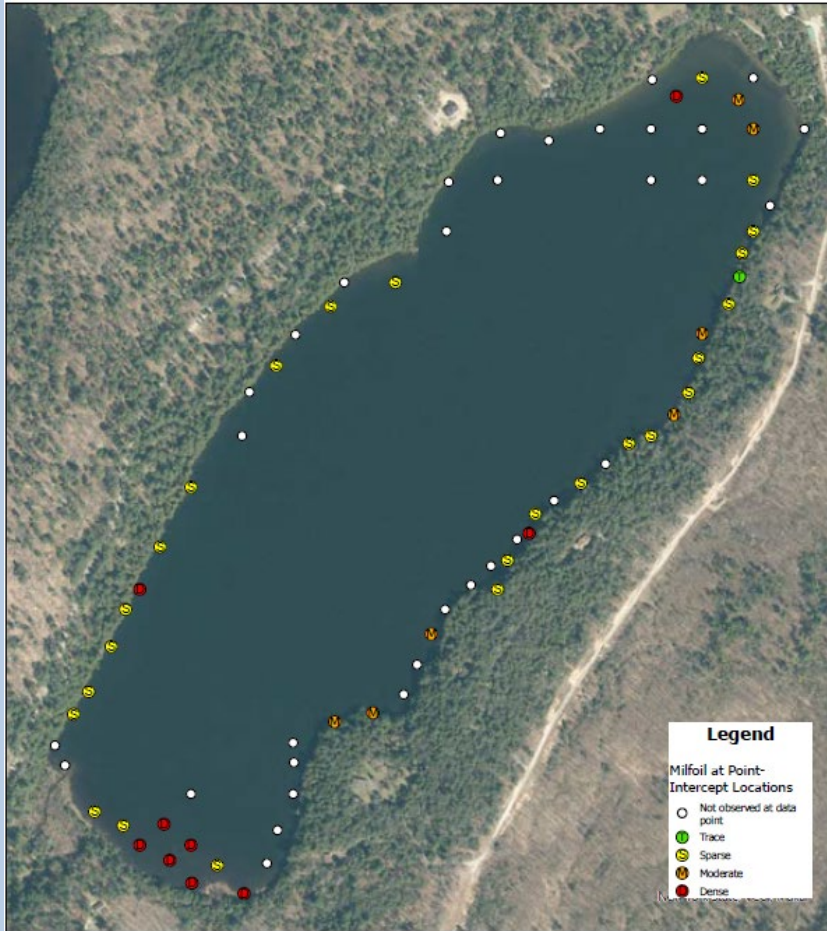
590 Lake Street

Shrewsbury, MA 01545

Phone: 888-480-5253

www.solitudelakemanagement.com

FIGURE 6a: Density and Distribution of Eurasian Watermilfoil at Point-intercept Locations



Highlands Forge Lake
Willsboro, NY



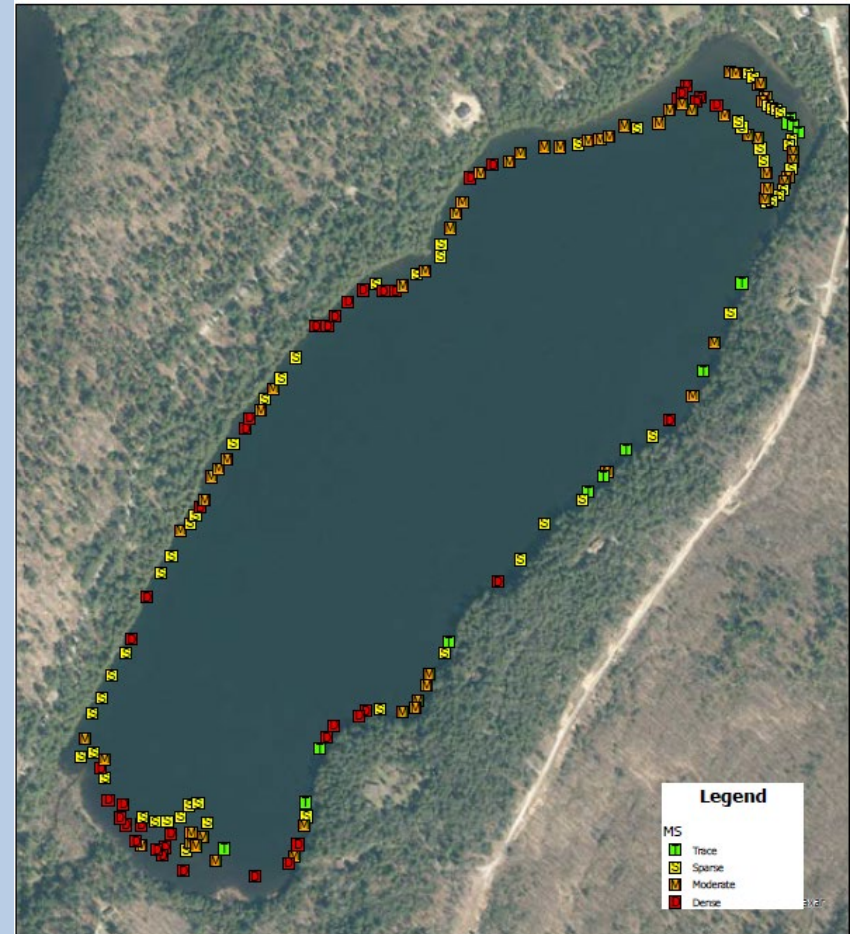
Highlands Forge Lake

0 150 300 600
Feet

1:5,877

Map Date: 10/5/2023
Survey Date: 09/26/2023
Prepared by: KV
Office: Shrewsbury, MA

FIGURE 6b: Density and Distribution of Eurasian Watermilfoil Visual Observations - Points



Highlands Forge Lake
Willsboro, NY



Highlands Forge Lake

0 150 300 600
Feet

1:5,877

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EWM Management in Highlands Forge Lake

Timeline

- Water quality Surveys; ALAP
- EWM Identified in mid 2000's
- Mid 2010's → Heavy Growth Lead to Professional Consultations
 - Hand Harvest
 - DASH
 - Benthic Mats
 - Herbicide (Renovate)
- 2014 – Present → Informal Hand Harvesting Program
 - Volunteer Work Crews
 - Targets: High Usage Areas, Personal Docks





By 2015 there was a serious infestation of Eurasian milfoil in the lake. Hand harvesting companies were called in ... to explore the issue and the members and work crews on site did the bulk of the annual hand harvesting.



Given the amount of milfoil and the depth of the problem it became apparent that hand harvesting would not effectively control the issue. DASH methods were explored – but given the quick drop offs and large areas of milfoil living at its maximum depths – that proved to be difficult



Two family members live [Downstate] where the reservoirs have serious Eurasian milfoil infestations. ProcellaCOR was used in those bodies of water to great effect and by 2022, Highland Forests was reaching out to vendors to explain the product and explore its potential use.

Proposed Project

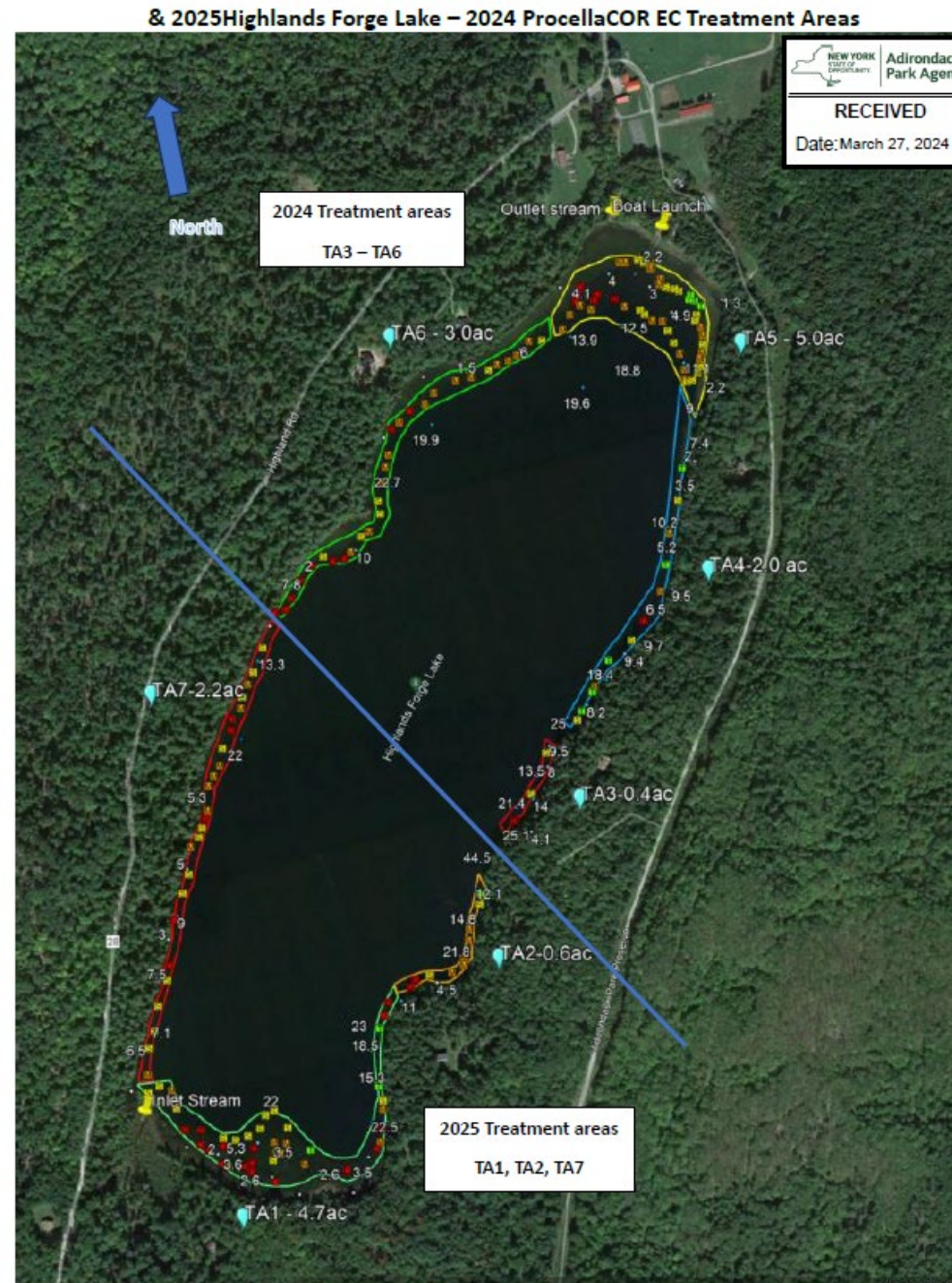
Treatment

Treat 17.9 acres within seven treatment areas in Highland Forge Lake with ProcellaCor EC.

Water Quality Measurements Collected at Treatment Sites

- Secchi Depth (Measure of Photic Zone)
- Temperature

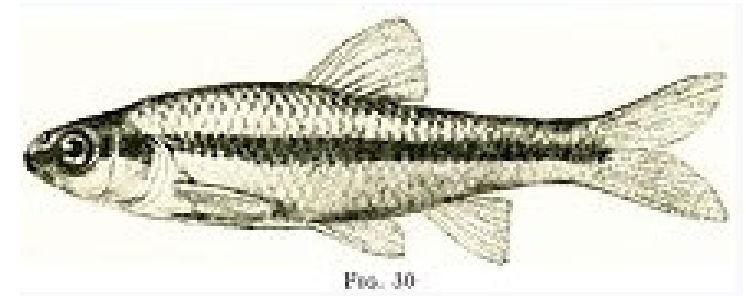
To be treated over two seasons



New York Natural Heritage Program

Blackchin Shiner (*Notropis heterodon*)

- Not protected as Rare, Threatened or Endangered in NYS
- Habitat preference for heavy vegetation
- NYS DEC asked the applicant to voluntarily spread out the treatments to avoid a single season impact to preferred habitat



Residual Concentration Monitoring

(S/D = Shallow & Deep samples)



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



Post Treatment

- Qualitative survey about 6 weeks post-treatment
- Quantitative Aquatic Plant Survey (August/September)
- Post Treatment Status Report (Due to APA Dec. 1)
 - Quantitative Aquatic Survey Results
 - Narrative assessment of lake health and discussion of effects on plant communities

Future Management and Monitoring

“Highland Forests has always been keen to be a leader in lake management... and is dedicated to subsequent study and future control of this invasive species while protecting all native fauna and flora in [Highlands Forge Lake]”

- Discussions with upstream neighbors (Long Pond) regarding EWM Management (anticipate 2024 Survey Work)
- Will install a filtration device on inlet stream to Highlands Forge Pond
- Have retained Ready Scout for lake management consultations and future surveys
- In communication with vendors for future hand harvest control if/when needed

Table 2. Percent occurrence of species in Highlands Forge Lake

Aquatic Macrophyte	Total		Trace		Sparse		Moderate		Dense	
	Sites	FOO*	Sites	%	Sites	%	Sites	%	Sites	%
Total Sites = 54	Sites	%	Sites	%	Sites	%	Sites	%	Sites	%
%Cover Total	49	91%	0	0%	18	37%	10	20%	21	43%
%Cover Target	42	78%	1	2%	25	60%	7	17%	9	21%
Eurasian watermilfoil	42	78%	1	2%	25	60%	7	17%	9	21%
Filamentous algae	1	2%	0	0%	1	100%	0	0%	0	0%
Macroalgae	6	11%	0	0%	4	67%	1	17%	1	17%
Big-leaf pondweed	21	39%	10	48%	9	43%	2	10%	0	0%
Illinois pondweed	9	17%	4	44%	5	56%	0	0%	0	0%
Clasping-leaf pondweed	8	15%	1	13%	6	75%	1	13%	0	0%
Flat-stemmed pondweed	1	2%	1	100%	0	0%	0	0%	0	0%
Ribbon-leaf pondweed	1	2%	0	0%	1	100%	0	0%	0	0%
Grassy pondweed	12	22%	6	50%	6	50%	0	0%	0	0%
Sago false pondweed	1	2%	1	100%	0	0%	0	0%	0	0%
Southern naiad	18	33%	3	17%	11	61%	2	11%	2	11%
Common waterweed	4	7%	0	0%	4	100%	0	0%	0	0%
Coontail	1	2%	0	0%	1	100%	0	0%	0	0%
Tape Grass	3	6%	1	33%	2	67%	0	0%	0	0%
Water stargrass	4	7%	4	100%	0	0%	0	0%	0	0%
White waterlily	4	7%	3	75%	0	0%	0	0%	1	25%
Yellow waterlily	2	4%	0	0%	2	100%	0	0%	0	0%
Arrowhead	2	4%	1	50%	1	50%	0	0%	0	0%
Spikesedge	2	4%	0	0%	1	50%	1	50%	0	0%
Bur-reed	1	2%	1	100%	0	0%	0	0%	0	0%
Cat tail	3	6%	0	0%	1	33%	0	0%	2	67%
Common reed	1	2%	0	0%	1	100%	0	0%	0	0%

Red indicates an invasive species.

* FOO = frequency of occurrence

Susceptibility: Other Species Present

Plant Species	Susceptibility
Coontail	Low- Moderate
Yellow waterlily	Low – Moderate
White waterlily	Moderate
Water stargrass	Low - Moderate
All others (N= 20)	Low

Public Comment and Review by Others

Public Comment

- Public Notice
 - Shoreline owners notified when application was received, also when application was completed (18 Recipients)
 - Environmental Notice Bulletin: Comment Period Ended May 16, 2024
 - 1 comment letter received (Not Supportive)

Public Comment - Concerns

- Non-target concerns
- Multiple year treatment plan
- Call for adjudicatory hearing

Review by Others

- NYS Department of Environmental Conservation
 - Issued Pesticides Permit AV-5-24-3 on April 5, 2024

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

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Staff Recommendation: Approve with Conditions