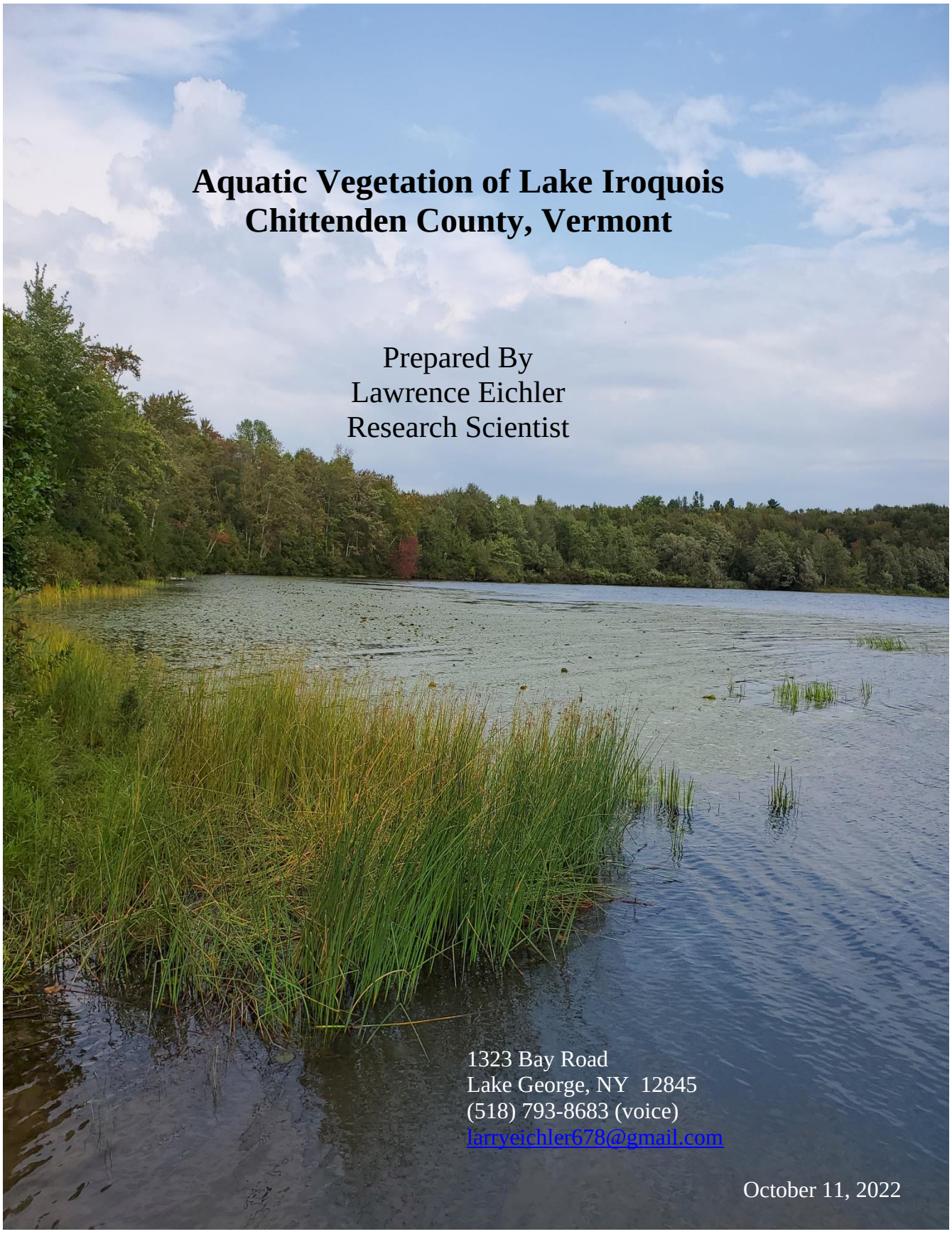

Aquatic Vegetation of Lake Iroquois
Chittenden County, Vermont

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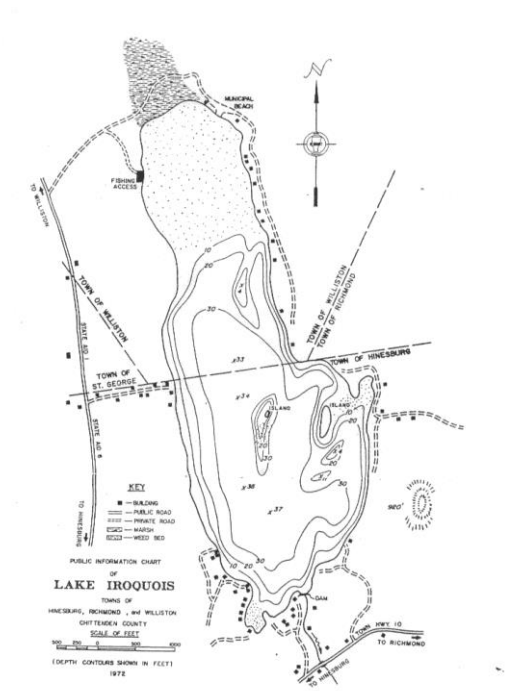
Background.

At the request of Chris Conant and Pat Suozzi of the Lake Iroquois Association, Spring and Fall 2022 quantitative aquatic plant surveys were undertaken for Lake Iroquois, Vermont. The surveys occurred one-year post- treatment following aquatic plant management efforts employing the herbicide ProcellaCOR EC in 2021 for Eurasian watermilfoil control. The survey largely duplicated the 2017, 2019 and 2021 surveys conducted by the author (Eichler 2017, 2019 and 2021). The surveys consisted of frequency of occurrence and relative abundance data for all aquatic plant species present in points distributed throughout the lake. The Point-Intercept Rake Toss method presently used by the US Army Corps of Engineers and others was employed. The assessment includes the distribution and density of existing aquatic plant communities, the extent of exotic species infestation and a review of ongoing management efforts to control Eurasian watermilfoil (*Myriophyllum spicatum*).

Methods

Survey Sites

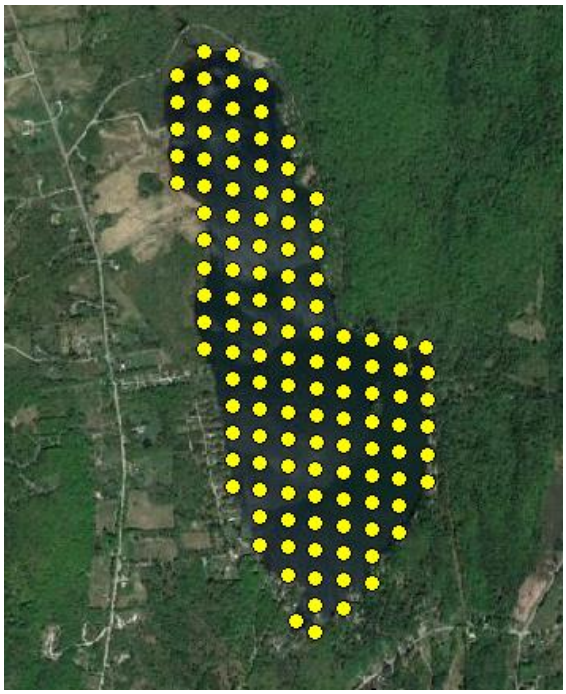


Lake Iroquois. Lake Iroquis is located in Chittenden County, in the towns of Hinesburg, Richmond and Williston. The lake has a surface area of approximately 244 acres with a watershed area of 2198 acres. Lake Iroquois has a single outlet with a control structure to maintain lake level. Maximum water depth is reported to be 37 ft with average water depth of 19 feet (VTDEC 2016a). Secchi disk transparency in 2015 averaged 12 ft (3.8 m; VT DEC 2015). Lake Iroquois is classified as eutrophic based on phosphorous and chlorophyll concentrations, indicating that nutrient levels are sufficient to support dense growth of planktonic algae and aquatic plants. Two invasive aquatic plant species are reported for Lake Iroquois, Eurasian watermilfoil (*Myriophyllum spicatum*) and Curly-leaf Pondweed (*Potamogeton crispus*) (VT DEC 2016b). VT DEC records indicate that Eurasian watermilfoil was first confirmed in 1991 while curly-leaf pondweed was present in 1984. An aquatic plant survey of Lake Iroquois in September of 2014 reported over 70 acres of dense Eurasian watermilfoil growth (Knoecklein 2015). A total of 45 aquatic plant species have been reported for Lake Iroquois in multiple surveys since 1984, however a 2014 survey only reported 23 species. Loss of native species is a commonly reported phenomenon in lakes with severe infestation by Eurasian watermilfoil and/or other invasive aquatic plant species (Madsen et al. 1991). In a survey conducted by the author in 2017, a total of 25 species of aquatic plants were observed in Lake Iroquois (Eichler 2017). The aquatic plant community included sixteen submersed species, two floating-leaved species, and seven emergent species.

Duck celery (*Vallisneria americana*) and coontail (*Ceratophyllum demersum)* were the most common native plants. Eurasian watermilfoil (*Myriophyllum spicatum*) was present in 24% of survey points. Small declines in the frequency of occurrence of the majority of native species were observed in 2019 (19 of 23 species when compared to the 2017 survey), possibly as a result of the expansion of Eurasian watermilfoil to 43% of survey points. In the Spring of 2021 prior to the herbicide treatment, Eurasian watermilfoil was present in 24% of survey points. In September post-treatment, Eurasian watermilfoil was absent from all survey points.

Hand harvesting efforts began on Lake Iroquois in 2008 to control dense growth of Eurasian watermilfoil. The aquatic weevil (*Euhrychiopsis lecontei*) population was supplemented in 2008 and 2009 to provide a biocontrol agent for Eurasian watermilfoil. Extensive growth of Eurasian watermilfoil reported in 2014 suggested a more intensive management effort was necessary. In 2016, diver assisted suction harvesting (DASH) for Eurasian watermilfoil control was employed in the boat launch area and near the LIRD beach. Over a period of 2 weeks, divers harvested over 5000 gallons of Eurasian watermilfoil. Benthic barriers (mats) were installed in 2017 to maintain the areas harvested by DASH in 2016. In 2019, DASH collected approximately 2000 gallons of Eurasian watermilfoil, representing a fraction of Eurasian watermilfoil growth. Residents remained concerned that Eurasian watermilfoil growth was exceeding the capacity of the existing management effort. The management effort was expanded in 2021 to include an herbicide, with 40 acres at the north end of Lake Iroquois treated with ProcellaCOR EC. No organized management efforts occurred in 2022.

Figure 1. Map of Lake Iroquois with potential point intercept survey locations .



Species List and Herbarium Specimens. As the lake was surveyed, the occurrence of each aquatic plant species observed in the lake was recorded and herbarium specimens collected where necessary. Herbarium specimens were pressed, dried, and mounted (Hellquist 1993); and became part of the permanent collection at the Darrin Fresh Water Institute in Bolton Landing, NY. All taxonomy is based on Crow & Hellquist, 2000.

***Point Intercept Surveys*.** The frequency and richness of aquatic plant species were evaluated using a point intercept method (Madsen 1999). At each grid point intersection, all species located at that point were recorded, as well as water depth. Species were located by a visual inspection of the point and by deploying a rake to the bottom, and examining the plants retrieved. A total of 73 points were surveyed in the Spring, and 79 points were surveyed in the Fall for Lake Iroquois, based on a 100 m grid. Point intercept plant frequencies were surveyed on June 7, 2022 and September 18,

2022 to provide pre- and post-management data. A global positioning system (GPS) was used to navigate to each point for the survey observation.

Relative abundance in the Point Intercept surveys. To characterize relative abundance of each of the species identified in the point intercept survey, a scale developed by Cornell University and the US Army Corps of Engineers was employed. For each rake toss, the relative abundance of each plant species collected was recorded based on this rating scale. Maps of the distribution of each species by its relative abundance is included in Appendix A.

Relative abundance scale based on US Army Corp/Cornell methods.

Code	Rating	Abundance
0	no plants	
1	trace growth of plants	fingerful on rake
2	sparse growth of plants	handful on rake
3	medium growth of plants	rakeful of plants
4	dense growth of plants	difficult to bring into boat

Results and Discussion

In September of 2022, the aquatic plant community of Lake Iroquois included twenty-three submersed species, two floating-leaved species, and six emergent species (Table 1), including some species observed but not collected in the point intercept survey. Twenty-four species were present in the point intercept portion of the 2022 survey, comparable to the 26, 25, 19 and 23 species reported in 2021, 2019, 2017 and 2014, even though a greater number of survey points

Table 1. Species list for Lake Iroquois. Species in red are invasive.

Species Name	Common Name	Habit
Brasenia schreberi	Water shield	fl
Ceratophyllum demersum L.	coontail	s
Chara sp.	muskgrass, chara	s
Eleocharis acicularis (L.) Roemer & Schultes	needle spike-rush	e
Elodea canadensis Michx.	elodea	s
Isoetes echinospora Dur.	quillwort	e
Lemna trisulca L.	duckweed	s
Megalodonta (Bidens) beckii Torr.	water marigold	s
Myriophyllum spicatum L.	Eurasian watermilfoil	s
Najas flexilis (Willd.) Rostk. & Schmidt.	bushy pondweed	s
Najas guadalupensis L.	southern naiad	s
Nymphaea odorata Ait.	white waterlily	fl
Polygonum amphibium	smartweed	e
Pontederia cordata L.	pickerelweed	e
Potamogeton amplifolius Tuckerm.	largeleaf pondweed	s
Potamogeton crispus L.	curlyleaf pondweed	s
Potamogeton foliosus Raf.	pondweed	s
Potamogeton natans L.	floating-leaf pondweed	s
Potamogeton perfoliatus L.	clasping-leaf pondweed	s
Potamogeton praelongus Wulfen	white-stem pondweed	s
Potamogeton pusillus L.	small pondweed	s
Potamogeton richardsonii Oakes	Richardsons' pondweed	s
Potamogeton spirillus Tuckerm.	pondweed	s
Potamogeton zosteriformis Fern.	flat-stem pondweed	s
Ranunculus longirostris Godron	white watercrowfoot	s
Sparganium sp.	burreed	e
Typha sp.	cattail	e
Utricularia gibba L.	humped bladderwort	s
Utricularia vulgaris L.	great bladderwort	s
Vallisneria americana L.	wild celery	s
Zosterella dubia (Jacq.) Small	water stargrass	s

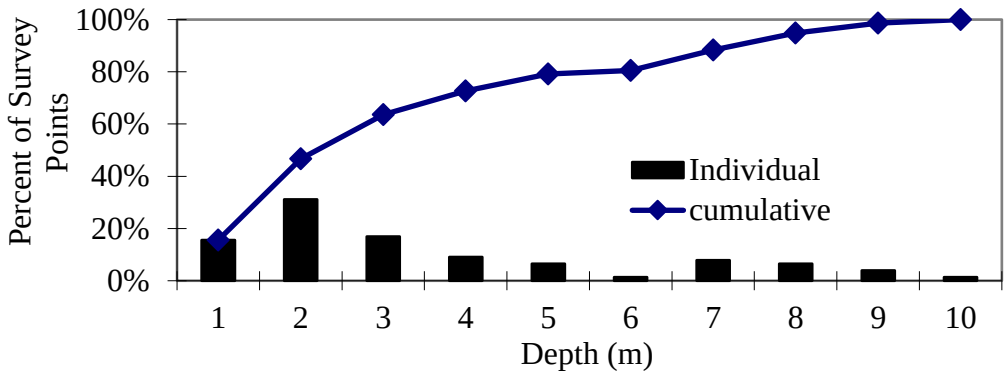
f=floating fl=floating leaved e=emergent s=submersed

were included in 2014. Combining the results of all surveys, a total of 45 aquatic plant species have been reported for Lake Iroquois, however many of these are classified as wetland species not typically captured by the current survey technique. This number of species greatly exceeds the 15 species typically reported for moderately productive lakes in our region and indicates good water quality and a variety of habitat types. Eurasian watermilfoil (*Myriophyllum spicatum)* and curly-leaf pondweed (*Potamogeton crispus*) were the only exotic species reported in Lake Iroquois. Species richness was quite high, with a number of species occurring in more than 5% of survey points (Table 2).

Maximum Depth of Colonization

Maximum depth of rooted aquatic plant growth, termed the littoral zone, extended approximately 5.0 meters (16 feet). The majority of survey points were in the littoral zone (Figure 2), providing a reasonable representation of the plant population of Lake Iroquois.

Figure 2. Depth Distribution of Lake Iroquois Sampling Points in 1 meter depth classes.



Species Lists

Maps of the distribution of aquatic plant species for Lake Iroquois are included in Appendix A. Frequency of occurrence results are presented in Table 2. For the June, one-year post-treatment survey, musk grass (*Chara/Nitella*) was the most common plant (43% of survey points). Eurasian watermilfoil (*Myriophyllum spicatum*) was absent from all survey points. Curly-leaf Pondweed, another invasive species, was present in 16% of survey points. Common native species in the June survey for Lake Iroquois included *Elodea canadensis* (37% of survey points), *Zosterella dubia* (19%), *Potamogeton foliosus* (16%), *Potamogeton amplifolius* (10%), *Potamogeton praelongus* (10%), *Nymphaea odorata* (8%), *Potamogeton zosteriformis* (8%), *Eleocharis acicularis* (7%), *Utricularia vulgaris* (6%) and *Ceratophyllum demersum* (6%). While the Spring survey provides a confirmation of the distribution of Eurasian watermilfoil, a perennial species, the timing of the survey precludes determination of the distribution and relative abundance of most native species that have not started growing this early in the season. The remainder of this report will focus on comparison of the Fall 2017, 2019, 2021 and 2022 survey results.

Table 2. Lake Iroquois percent frequency of occurrence data.

Species Name	Common Name	Fall 2017	Fall 2019	Fall 2021	Spring 2022	Fall 2022
Ceratophyllum demersum	coontail	27.5%	7.8%	6.5%	6.0%	10.1%
Chara sp.	muskgrass, chara	19.6%	10.4%	33.8%	42.5%	44.3%
Eleocharis acicularis	needle spike-rush	4.9%	1.7%	2.6%	6.8%	1.3%
Elodea canadensis	elodea	22.5%	30.4%	44.2%	37.0%	44.3%
Isoetes echinospora	quillwort	1.0%	1.7%		4.1%	
Lemna minor	duckweed		0.9%			
Lemna trisulca	duckweed	2.9%	0.9%	5.2%	2.7%	6.3%
Myriophyllum spicatum	Eurasian watermilfoil	23.5%	42.6%			1.3%
Najas flexilis (Willd.)	bushy pondweed	14.7%	4.3%	5.2%		8.9%
Najas guadalupensis	southern naiad	1.0%				
Nymphaea odorata	white waterlily	11.8%	12.2%	15.6%	8.2%	17.7%
Polygonum amphibium	smartweed	1.0%	0.9%	1.3%		
Potamogeton amplifolius	largeleaf pondweed	5.9%	6.1%	22.1%	9.6%	17.7%
Potamogeton crispus	curlyleaf pondweed	2.0%	1.7%	9.1%	16.4%	
Potamogeton foliosus	pondweed	6.9%		13.0%	16.4%	6.9%
Potamogeton natans	floating-leaf pondweed			1.3%		2.5%
Potamogeton perfoliatus	clasping-leaf pondweed	2.9%	1.7%	6.5%	9.6%	2.5%
Potamogeton praelongus	white-stem pondweed	9.8%	6.1%	9.1%	7.5%	8.9%
Potamogeton pusillus	small pondweed	6.9%	4.3%	6.5%		10.1%
Potamogeton richardsonii	Richardsons' pondweed	4.9%	2.6%	3.9%		
Potamogeton spirillus	pondweed	1.0%				
Potamogeton zosteriformis	flat-stem pondweed	6.9%	6.1%	13.0%	8.2%	21.5%
Ranunculus longirostris	white watercrowfoot	5.9%	4.3%	2.6%	2.7%	6.3%
Scirpus sp.	bulrush		0.9%			
Sparganium sp.	burreed	1.0%	0.9%	2.6%	1.4%	2.5%
Typha sp.	cattail	1.0%	1.7%	1.3%	1.4%	1.3%
Utricularia gibba	humped bladderwort	2.0%		1.3%		1.3%
Utricularia vulgaris	great bladderwort	3.9%	0.9%	6.5%	5.5%	7.6%
Vallisneria americana	wild celery	28.4%	19.1%	40.3%	4.1%	41.8%
Zosterella dubia	water stargrass	20.6%	23.5%	18.2%	19.2%	24.1%

For the September post-treatment sample, waterweed (*Elodea canadensis)* and muskgrass (*Chara* sp.) were the most common species, present in 44% of survey points. Eurasian watermilfoil (*Myriophyllum spicatum*) was present at a single survey site (1% of survey points). Common native species included *Vallisneria americana* (42% of survey points), *Zosterella dubia* (24%), *Potamogeton zosteriformis* (22%), *Nymphaea odorata* (18%), *Potamogeton amplifolius* (18%), *Ceratophyllum demersum* (10%), *Potamogeton pusillus* (10%), *Potamogeton praelongus* (9%), *Najas flexilis* (9%), *Utricularia vulgaris* (8%), *Ranunculus longirostris* (6%), and *Lemna trisulca* (6%). Native species results were generally comparable to those reported in prior

surveys with a few exceptions. A common native species, *Ceratophyllum demersum*, was dominant in Lake Iroquois in 2017 but was observed at lower frequency of occurrence in 2019, 2021 and 2022. Pondweed species (*Potamogeton amplifolius, P. foliosus* and *P. zosteriformis*) were generally more abundant in September post-treatment surveys, particularly Broad-leaf Pondweed (*Potamogeton amplifolius*). Slight declines in the frequency of occurrence of the majority of native species were observed (19 of 23 species) between 2017 and 2019. The majority of these species increased in frequency of occurrence in both 2021 and 2022 surveys. Declines in most native species are observed as a result of invasion and canopy formation by Eurasian watermilfoil, with recovery generally fairly rapid after removal of the canopy.

Seventy-six percent of whole lake sampling points were vegetated by at least one native plant species (Figure 3), 97% of survey points with depths less than 5 m (Figure 4) and 100% of survey points with depths less than 2 meters depth yielded native aquatic plants in Fall of 2022. These results are comparable to 2021, when 75% of whole lake sampling points were vegetated

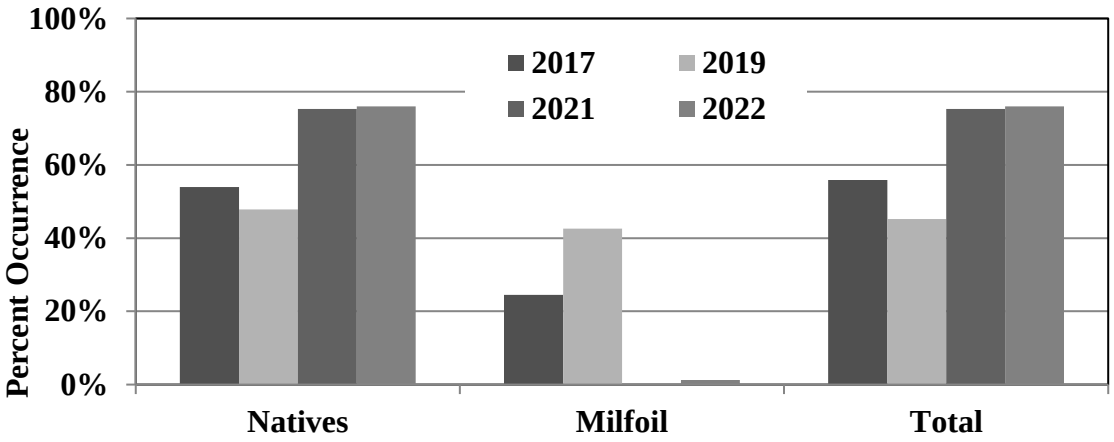


Figure 3. Lake Iroquois frequency of occurrence summaries.

by at least one native plant species, 94% of survey points with depths less than 5 m and 100% of survey points with depths less than 2 meters depth yielded native aquatic plants. In 2019, forty-five percent of whole lake sampling points were vegetated by at least one native plant species, 91% of survey points with depths less than 5 m and 97% of survey points with whole lake sampling points were vegetated by at least one native plant species. Eurasian watermilfoil was present in 1% of survey points in the Fall of 2022. Absent in 2021, Eurasian watermilfoil was present in 43% of whole lake survey points, and 86% of survey points less than 5 m water depth in 2019, representing the littoral zone or zone of aquatic plant growth. For survey points within the littoral zone, water depth less than 5 m, results similar to whole lake surveys are reported. The expected relationship of greater frequency of occurrence of aquatic plants with shallower water depth is consistent with that reported by other regional studies. Littoral zone frequency of occurrence values for both survey years were dominated by native species and similar to nearby lakes (Getsinger et al. 2002).

Species richness results are presented in Table 3 and Figure 4. Whole lake native species richness in 2022 was 2.94 species per sample point exceeding the 2.65, 1.50 and 2.13 species per

Table 3. Lake Iroquois species richness comparison.

Plant Grouping	Water Depth Class	Summary Statistic	Survey Result			
			2017	2019	2021	2022
Native plant species	Whole Lake (all depths)	Mean	2.13	1.50	2.65	2.94
		N	102	115	77	79
		Std. Error	0.25	0.12	0.26	0.25
	Points with depths <5m	Mean	3.62	3.02	3.33	3.75
		N	60	57	61	63
		Std. Error	0.30	0.27	0.26	0.22
	Points with depths <2m	Mean	4.50	3.86	4.11	4.35
		N	50	35	36	43
		Std. Error	0.31	0.31	0.32	0.22
All plant species	Whole Lake (all depths)	Mean	2.40	1.94	2.74	2.95
		N	102	115	77	79
		Std. Error	0.27	0.15	0.26	0.25
	Points with depths <4m	Mean	4.08	3.91	3.44	3.77
		N	60	57	61	63
		Std. Error	0.30	0.28	0.27	0.22
	Points with depths <2m	Mean	4.90	4.74	4.25	4.37
		N	50	35	36	43
		Std. Error	0.31	0.32	0.33	0.23

sample point reported in 2021, 2019 and 2017, respectively. Species richness in this range is comparable to other nearby lakes (Eichler 2016). For survey points exclusively within the littoral zone (depths less than 5 meters), native species richness was 3.75, 3.33, 3.02 and 3.62 species per survey point (Figure 4) for 2022, 2021, 2019 and 2017, respectively. As expected, species richness in the littoral zone and its shallow fringe was higher than whole lake species richness and native species richness increased with the removal of Eurasian watermilfoil.

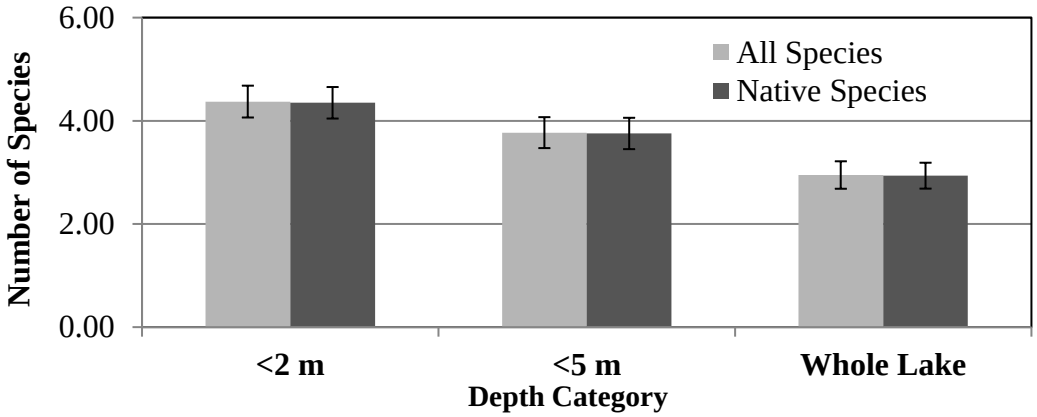


Figure 4. Lake Iroquois species richness.
Error bars are standard error of the mean.

Summary

Spring and Fall quantitative aquatic plant surveys were undertaken for Lake Iroquois, Vermont in June and September 2022. The surveys occurred one-year post-treatment following aquatic plant management efforts employing the herbicide ProcellaCOR EC in 2021 for Eurasian watermilfoil control. The September component of the survey duplicated prior surveys conducted by the author (Eichler 2021). The surveys consisted of frequency of occurrence and relative abundance data for all aquatic plant species present in points distributed throughout the lake. The Point-Intercept Rake Toss method presently used by the US Army Corps of Engineers and others was employed. The assessment generated the information necessary to: 1) evaluate the effectiveness of the aquatic plant management efforts, 2) determine the impact of the management efforts on non-target aquatic plant species, and 3) provide data for comparison of post-treatment conditions to prior survey information.

Eurasian watermilfoil (*Myriophyllum spicatum*) populations were first reported in 1990 in Lake Iroquois and confirmed in 1991. Hand harvesting by skin and SCUBA divers has been the basis of the program since the formation of the lake association in 2007. The aquatic weevil (*Euhrychiopsis lecontei*) population of the lake was supplemented in 2008 and 2009 to provide a biocontrol agent for Eurasian watermilfoil. However, by 2014 approximately 70 acres of Lake Iroquois was reported to support dense growth of Eurasian watermilfoil. Benthic barrier and diver assisted suction harvesting (DASH) were included in 2016 through 2019. A more intensive management effort based on herbicide treatment occurred in the Spring of 2021.

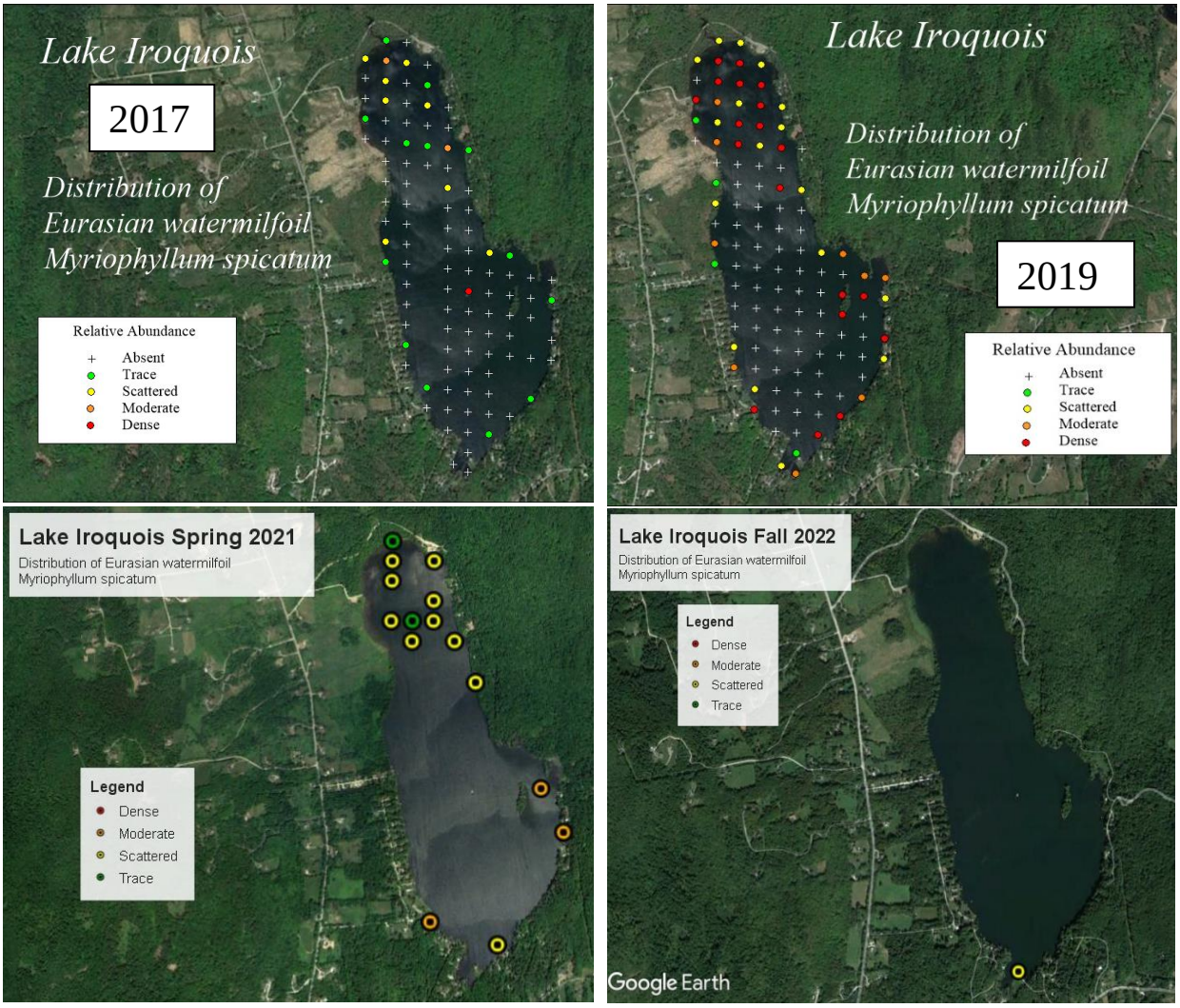
The aquatic plant community of Lake Iroquois in 2022 included twenty-three submersed species, two floating-leaved species, and six emergent species. Twenty-four species were collected in the point intercept portion of the survey, comparable to the 26, 25, 19, and 23 species reported in 2021, 2019, 2017 and 2014, respectively. This number of species greatly exceeds the 15 species typically reported for moderately productive lakes in our region and indicates good water quality and a variety of habitat types. One of the species present in Lake Iroquois, Humped Bladderwort (*Utricularia gibba*) is found on Vermont's rare plant list (VT DEC 2012). Present in 1% of survey points in the Fall 2022 survey, Eurasian watermilfoil was absent in the Spring of 2022 and Fall, post-treatment survey of 2021. Eurasian watermilfoil was present in 24% of survey points in the Spring of 2021, 43% of survey points in the Fall of 2019 and 24% of survey points in the Fall of 2017, representing a decline from the dense growth reported for over 67% of the littoral zone in 2014. The density of Eurasian watermilfoil growth also varied, with most points described as dense growth in 2014 reduced to scattered or moderate growth in 2017 and 2019. Absent in the Fall 2021 and Spring 2022 surveys, Eurasian watermilfoil was reported as scattered growth at a single location in the Fall of 2022.

Species richness in Lake Iroquois was quite high, with a number of species occurring in more than 5% of survey points. Seventy-six percent of sampling points were vegetated by at least one native plant species in the Fall 2022 survey. The large number of points supporting native plant species suggests that Lake Iroquois is a prime candidate for recovery of its native plant population following management of Eurasian watermilfoil. Native species richness in the littoral zone was 3.75, 3.33, 3.02 and 3.62 species per sample in 2022, 2021, 2019 and 2017, respectively; and at the high end of species richness values for other regional lakes, which ranged

from 1.79 to 4.00 species per sample.

Common native species for Lake Iroquois in the Fall 2022 survey included waterweed (*Elodea canadensis,* 44% of survey points), muskgrass (*Chara/Nitella,* 44%), wild celery (*Vallisneria americana,* 42%), water stargrass (*Zosterella dubia,* 24%), flat-stem pondweed (*Potamogeton zosteriformis*, 22%), white waterlily (*Nymphaea odorata,* 18%), broad-leaf pondweed (*Potamogeton amplifolius,* 18%), coontail (*Ceratophyllum demersum,* 10%), white-stem pondweed *(Potamogeton praelongus,* 9%), giant bladderwort (Utricularia vulgaris, 8%), bushy pondweed (*Najas flexilis,* 9%), white watercrowfoot (*Ranunculus longirostris,* 6%) and duckweed (*Lemna trisulca,* 6%) Native species results are generally comparable to those reported in prior surveys with a few exceptions. A common native species, *Ceratophyllum demersum,* remains dominant in Lake Iroquois but at lower frequency of occurrence. Pondweed species (*Potamogeton amplifolius, P. foliosus and P. zosteriformis*) were generally more abundant in September post-treatment surveys, particularly Broad-leaf Pondweed. Declines in

Figure 5. Distribution of Eurasian watermilfoil in Lake Iroquois. Eurasian watermilfoil was absent in Fall 2021 and Spring 2022 surveys.



most native species are observed as a result of invasion and canopy formation by Eurasian watermilfoil, with recovery generally fairly rapid after removal of the canopy. Shifts in plant growth from year to year are common, particularly with new invaders like Eurasian watermilfoil. These shifts are often attributed to changing weather patterns, plant disease outbreaks or differences in the abundance of plant predators.

Eurasian watermilfoil growth in Lake Iroquois was present primarily as scattered and moderate density growth in September of 2017, while native plant populations were robust and similar to other regional lakes. By the Fall 2019, moderate to dense growth of Eurasian watermilfoil was more typical and native plant populations had declined. In May of 2021 (Figure 5) immediately prior to application of ProcellaCOR EC, Eurasian watermilfoil frequency of occurrence was similar to Fall 2017 and was most abundant at the north end of the lake, the area chosen for treatment with the herbicide. Eurasian watermilfoil was absent in post-treatment surveys in September of 2021 and June of 2022, most likely attributable to the use of the herbicide. In September of 2022, Eurasian watermilfoil was present in 1% of survey points.

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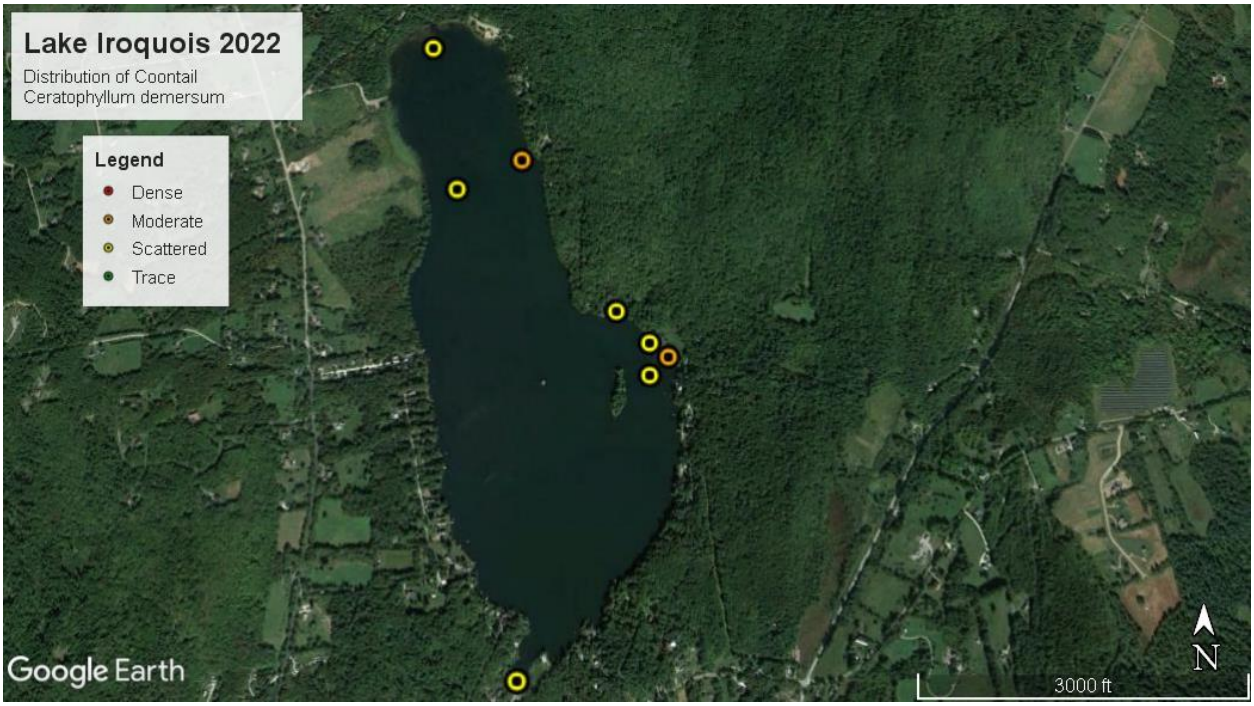
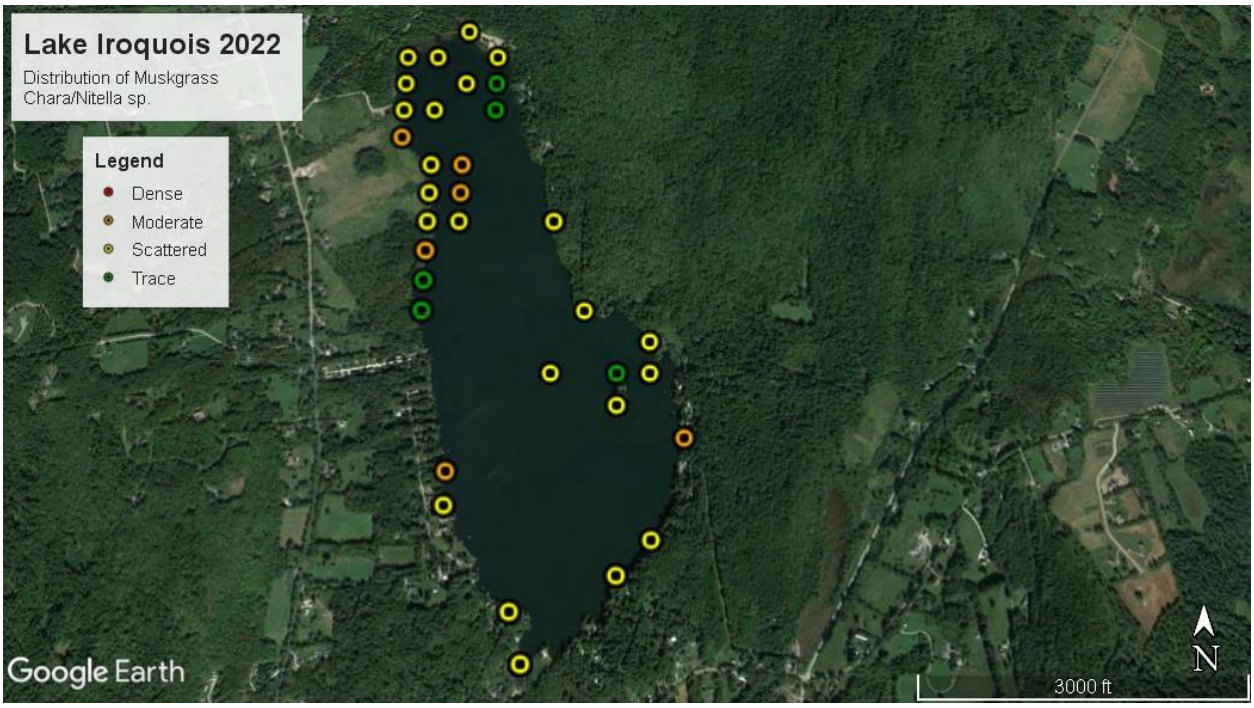
Acknowledgements

The author would like to acknowledge Chris Conant and Pat Suozzi of the Lake Iroquois Association for their assistance in coordinating the current survey project.

Appendix A

Lake Iroquois Aquatic Plant Distribution Maps


Lake Iroquois 2022
Distribution of Coontail
Ceratophyllum demersum
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N


Lake Iroquois 2022
Distribution of Muskgrass
Chara/Nitella sp.
Legend
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Moderate
Scattered
Trace
Google Earth
3000 ft
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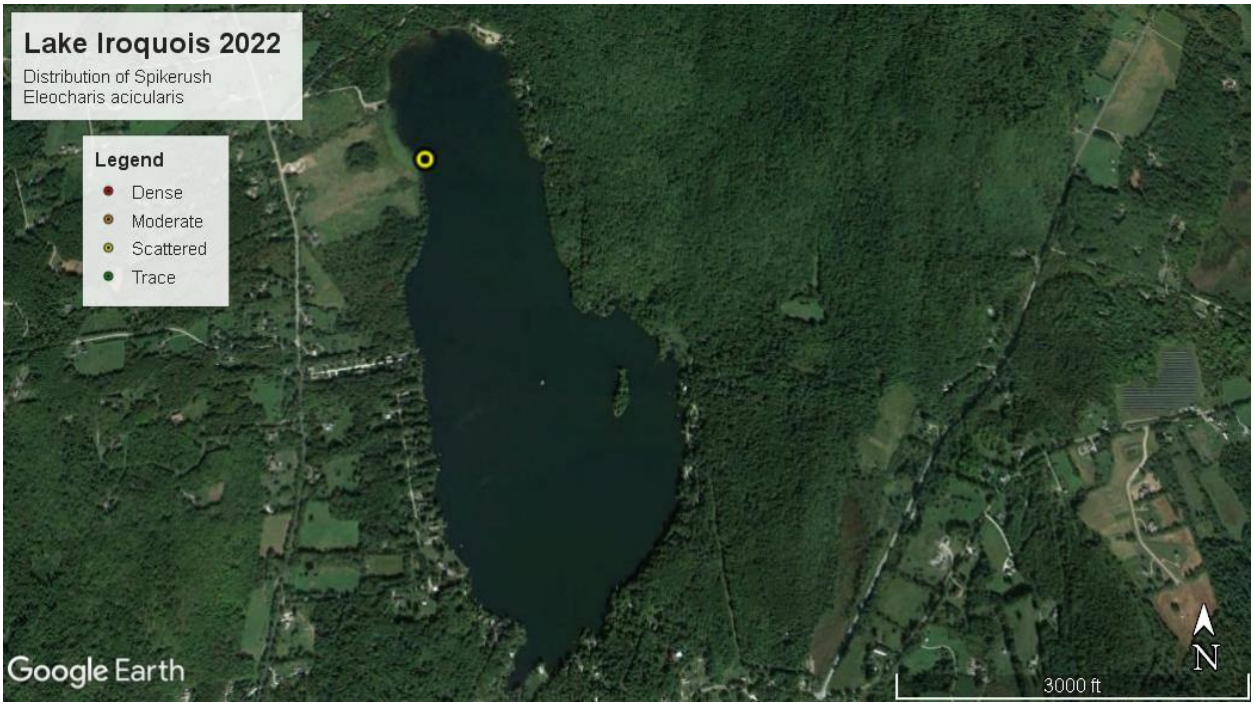
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Distribution of Spikerush
Eleocharis acicularis
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Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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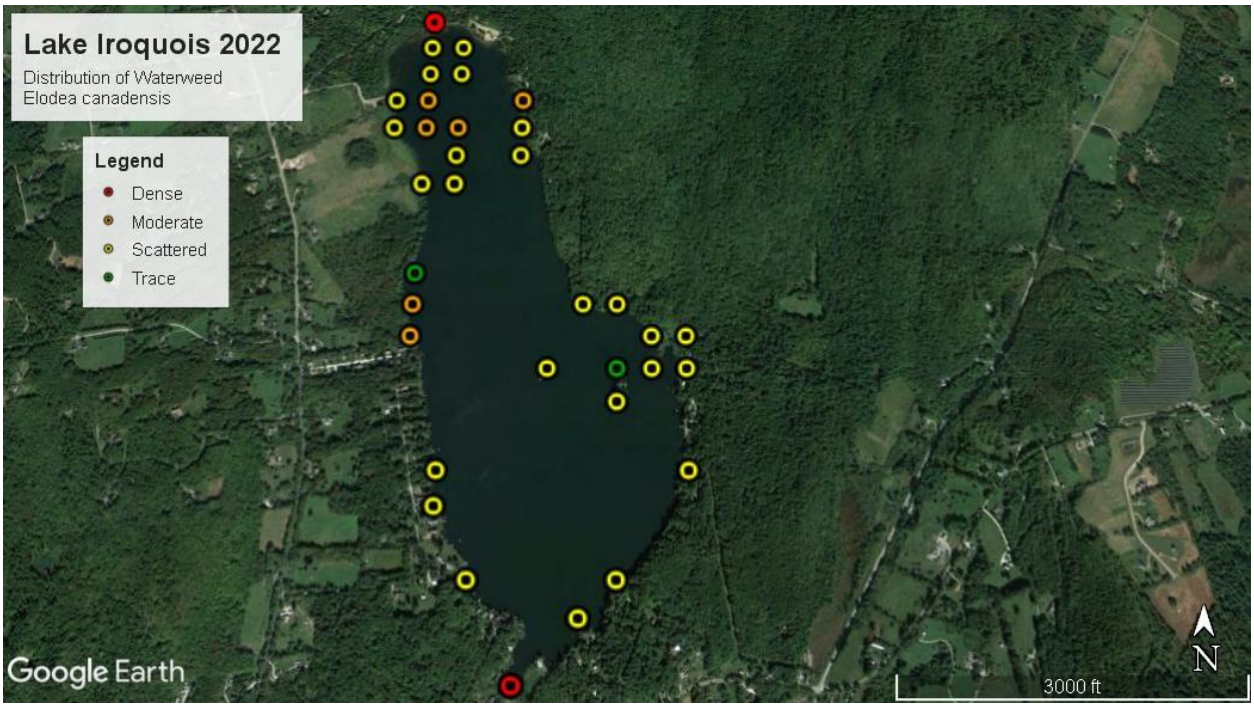
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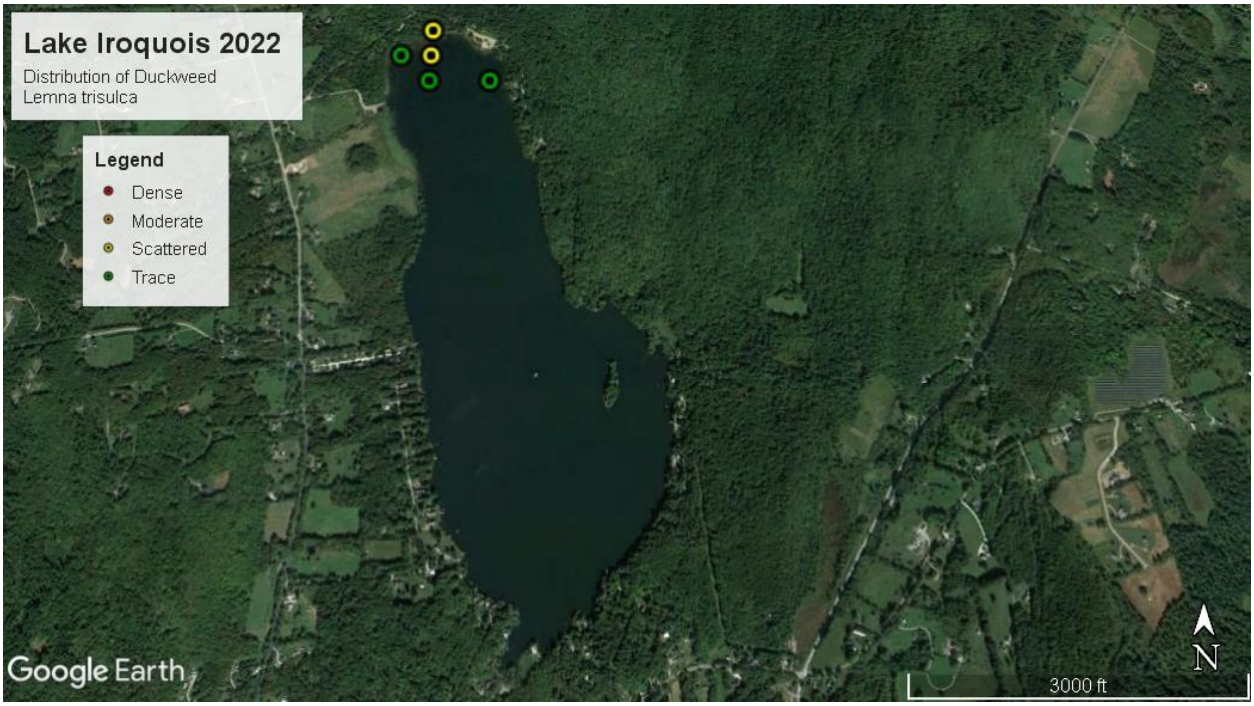
Distribution of Waterweed
Elodea canadensis
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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Distribution of Duckweed
Lemna trisulca
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N


Lake Iroquois Fall 2022
Distribution of Eurasian watermilfoil
Myriophyllum spicatum
Legend
Dense
Moderate
Scattered
Trace
Google Earth
4000 ft
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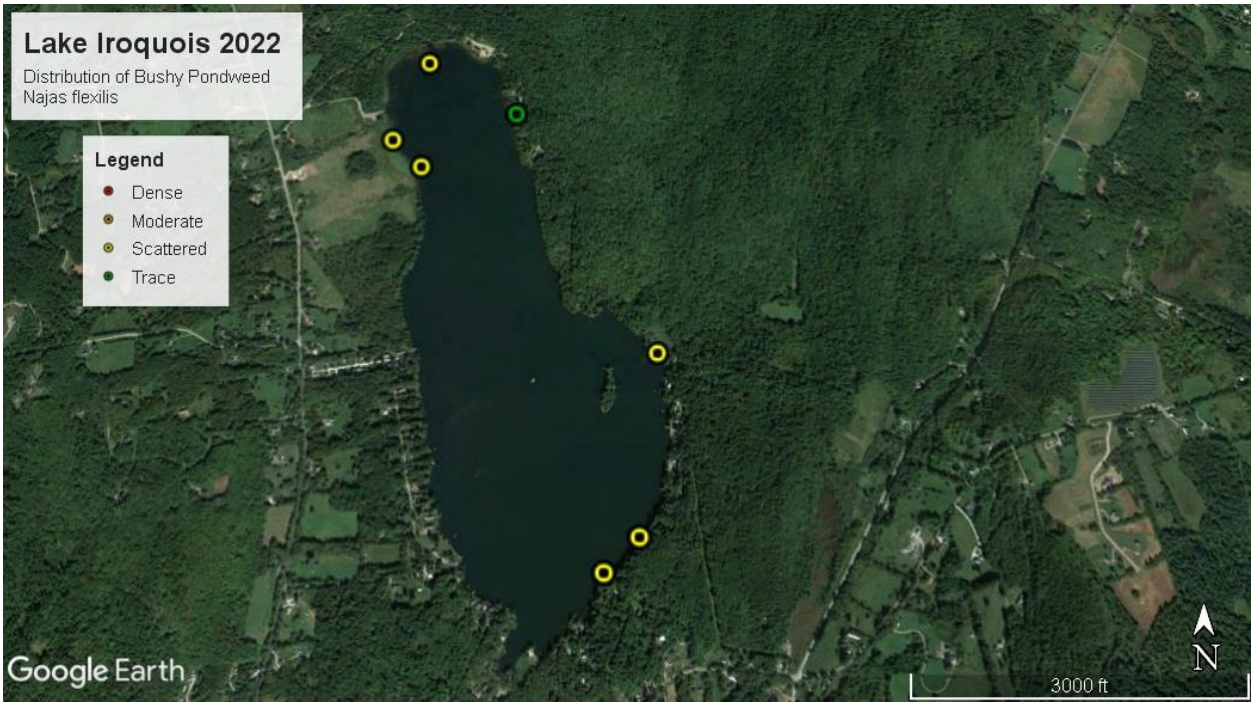
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Distribution of Bushy Pondweed
Najas flexilis
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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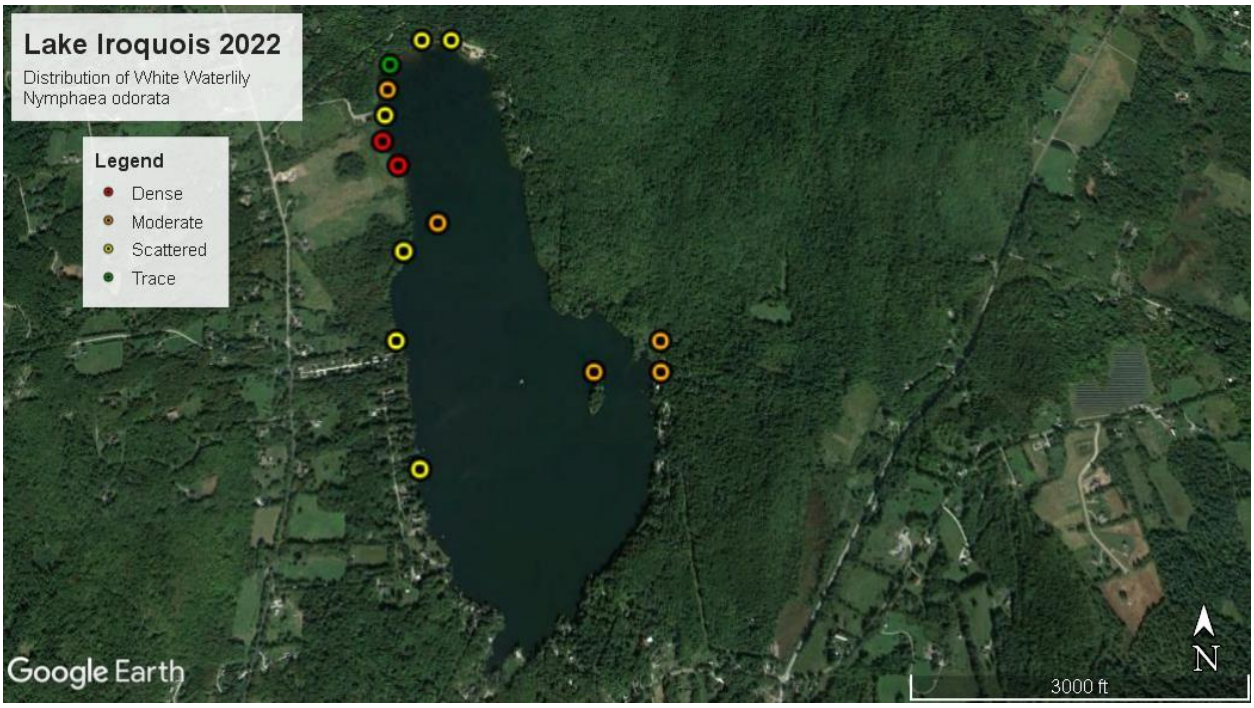
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Distribution of White Waterlily
Nymphaea odorata
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Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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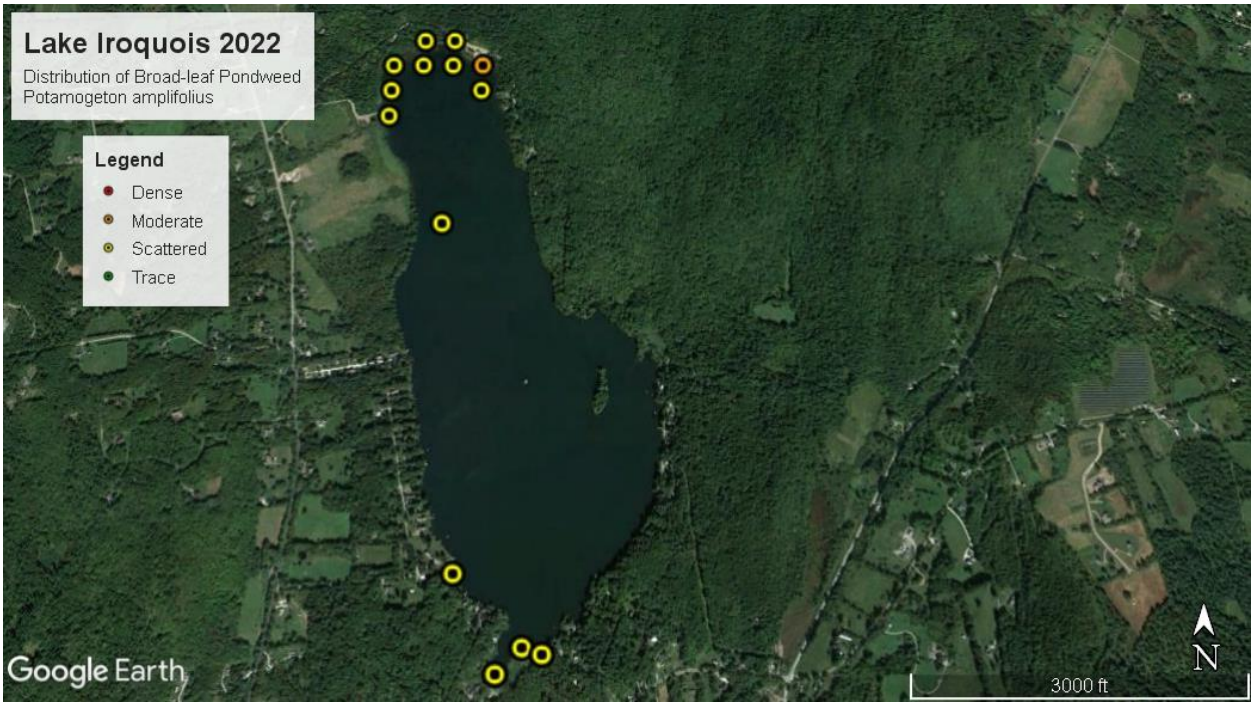
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Distribution of Broad-leaf Pondweed
Potamogeton amplifolius
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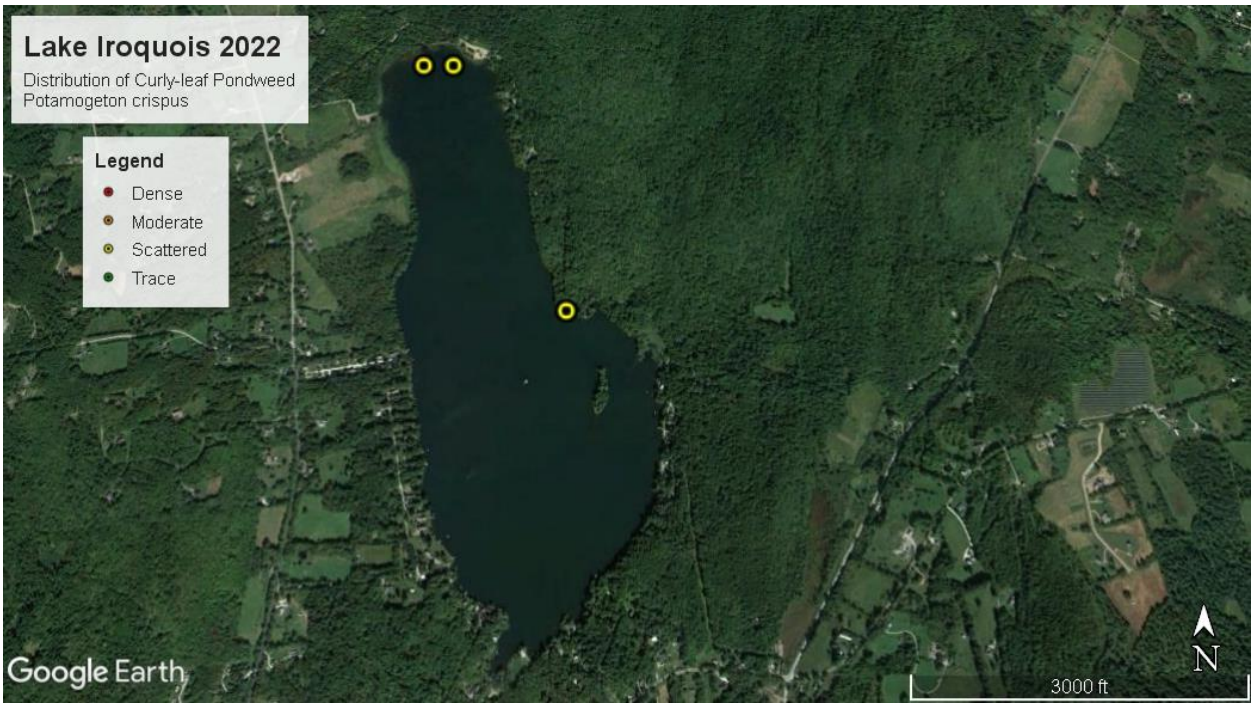
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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Distribution of Curly-leaf Pondweed
Potamogeton crispus
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Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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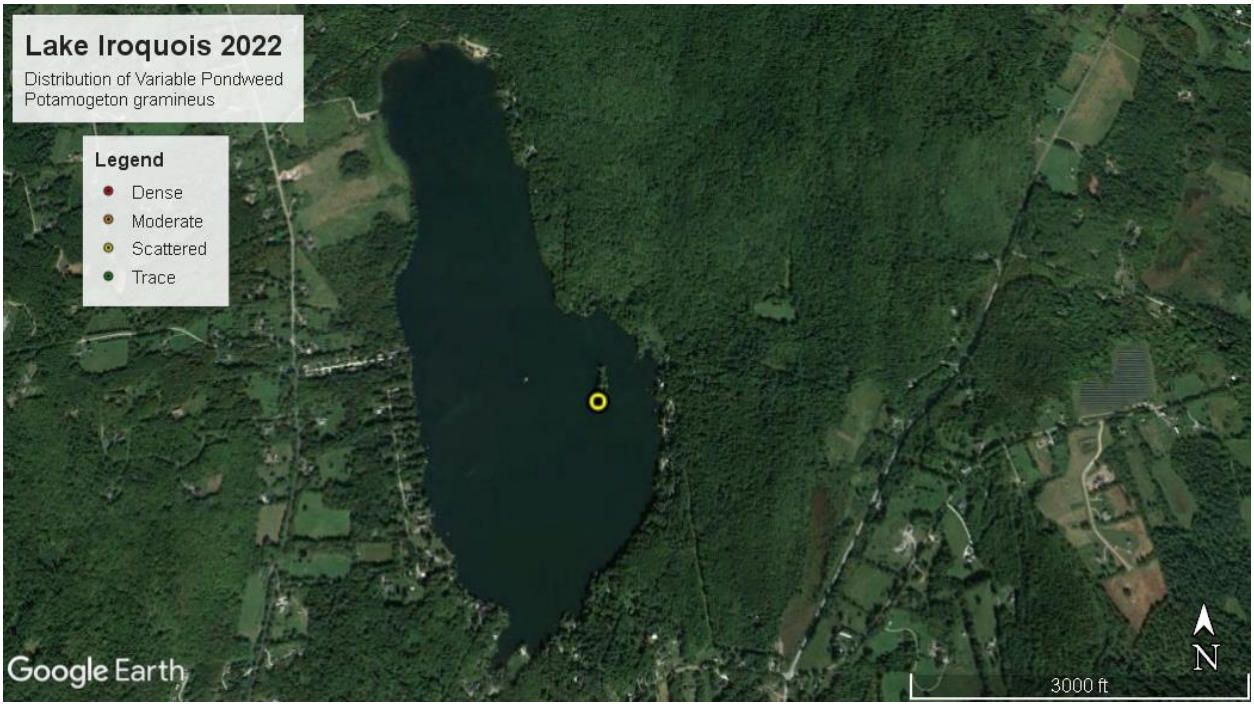
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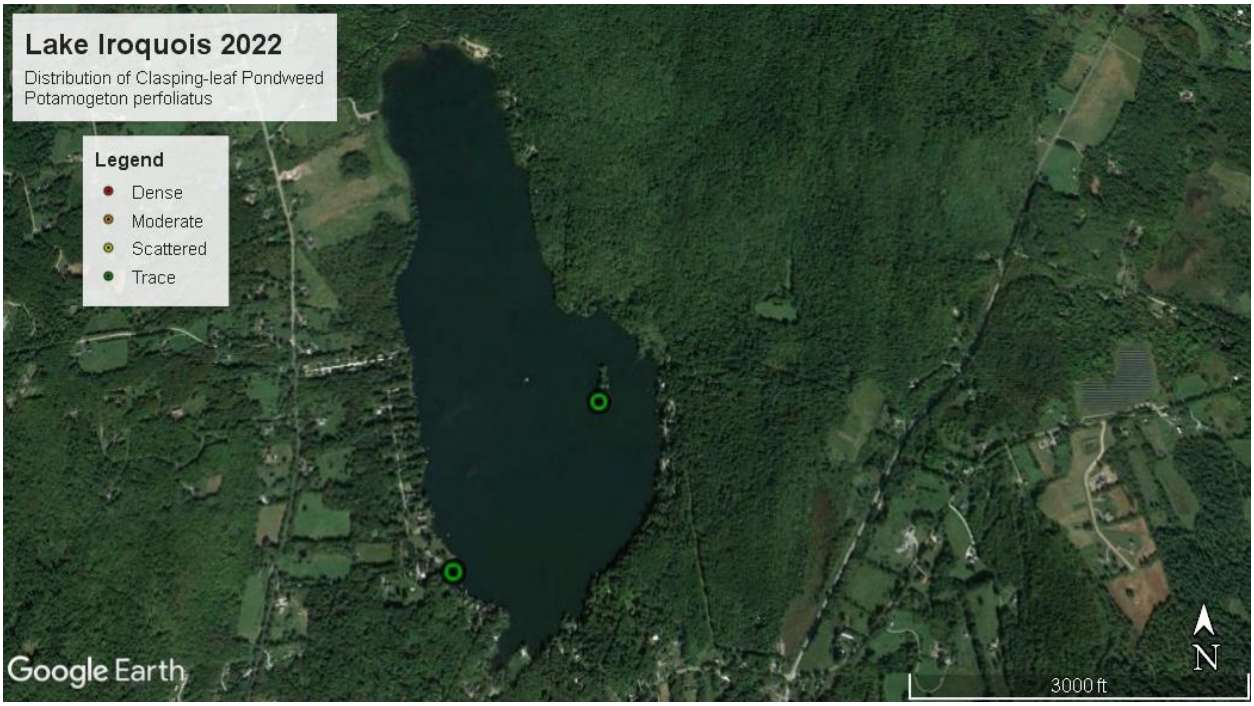
Distribution of Variable Pondweed
Potamogeton gramineus
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N


Lake Iroquois 2022
Distribution of Floating-leaf Pondweed
Potamogeton natans
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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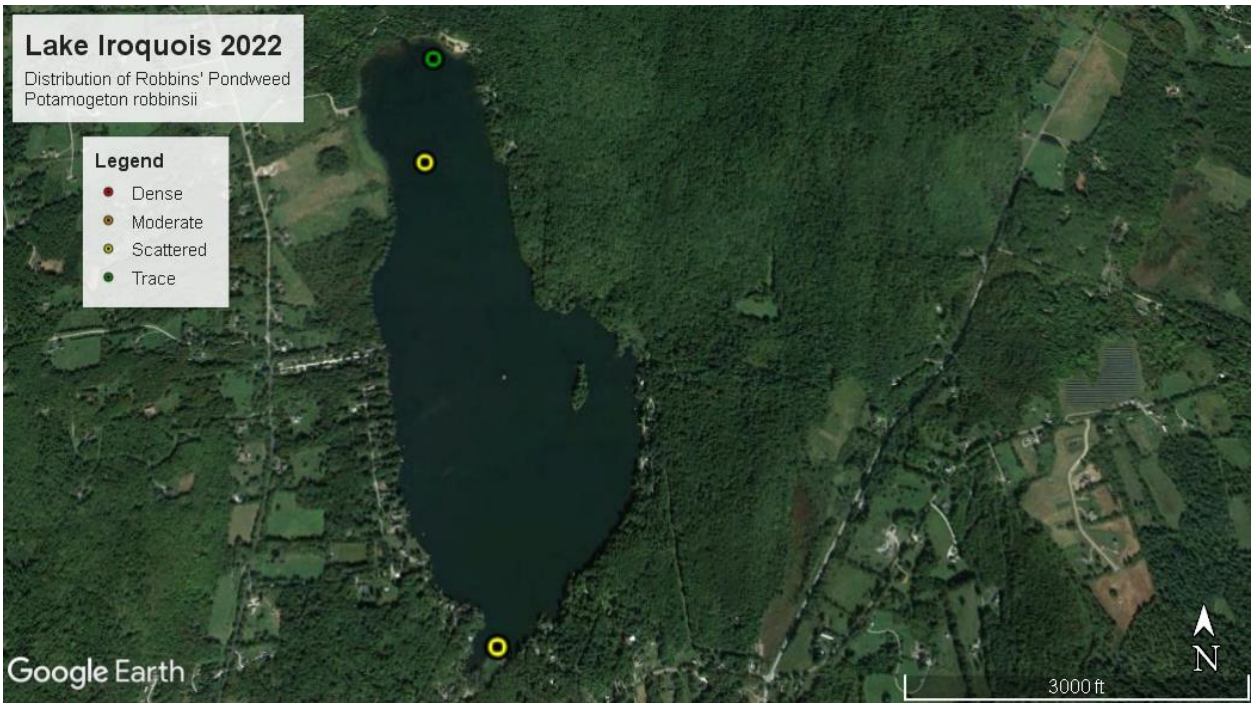
Distribution of Clasping-leaf Pondweed
Potamogeton perfoliatus
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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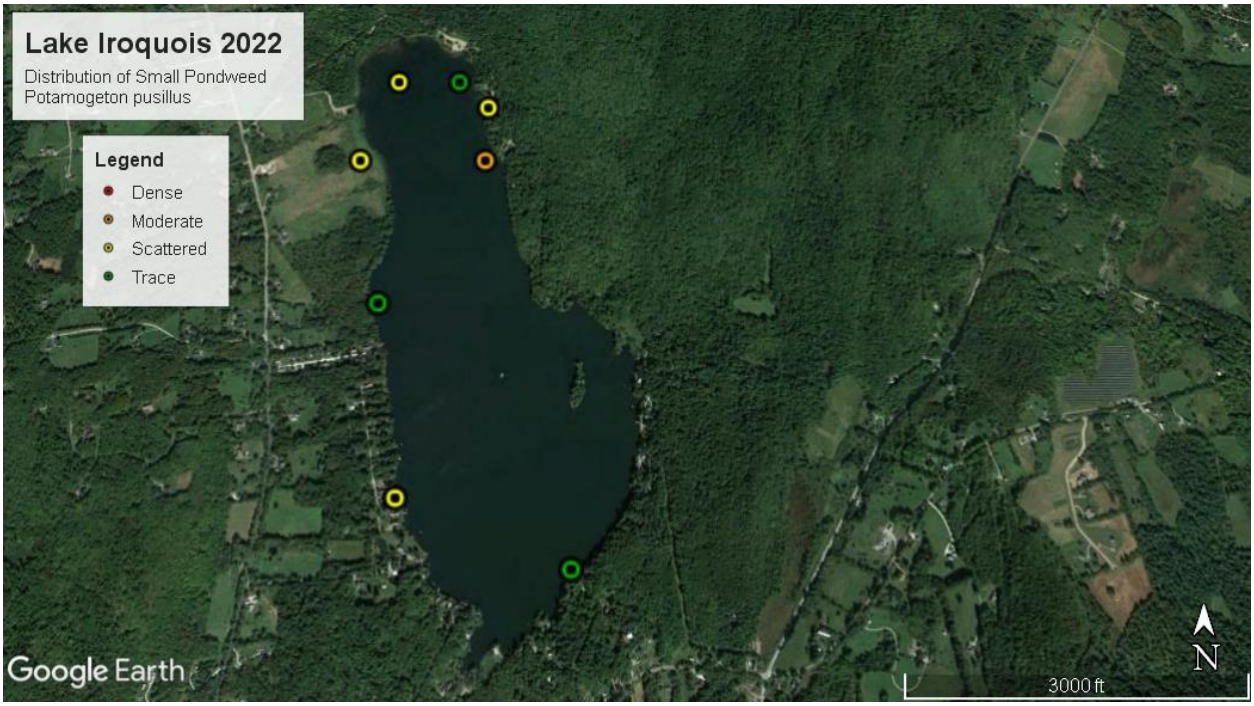
Distribution of Robbins' Pondweed
Potamogeton robbinsii
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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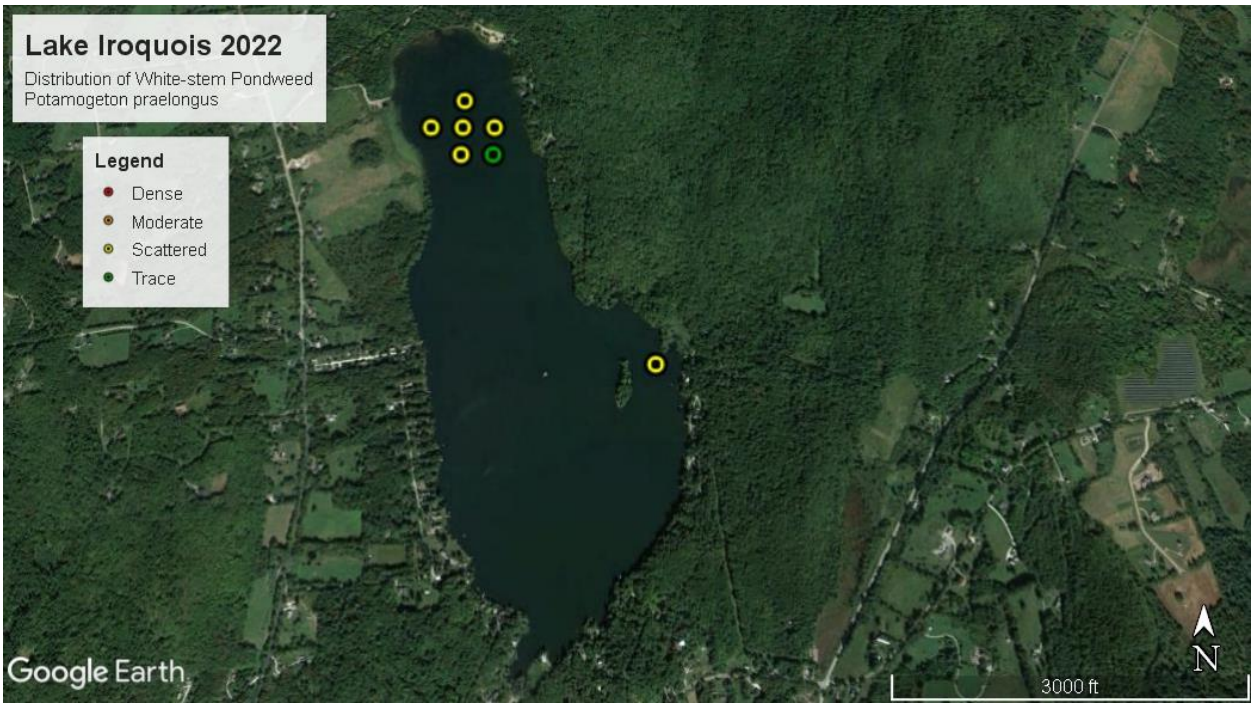
Distribution of Small Pondweed
Potamogeton pusillus
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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Distribution of White-stem Pondweed
Potamogeton praelongus
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Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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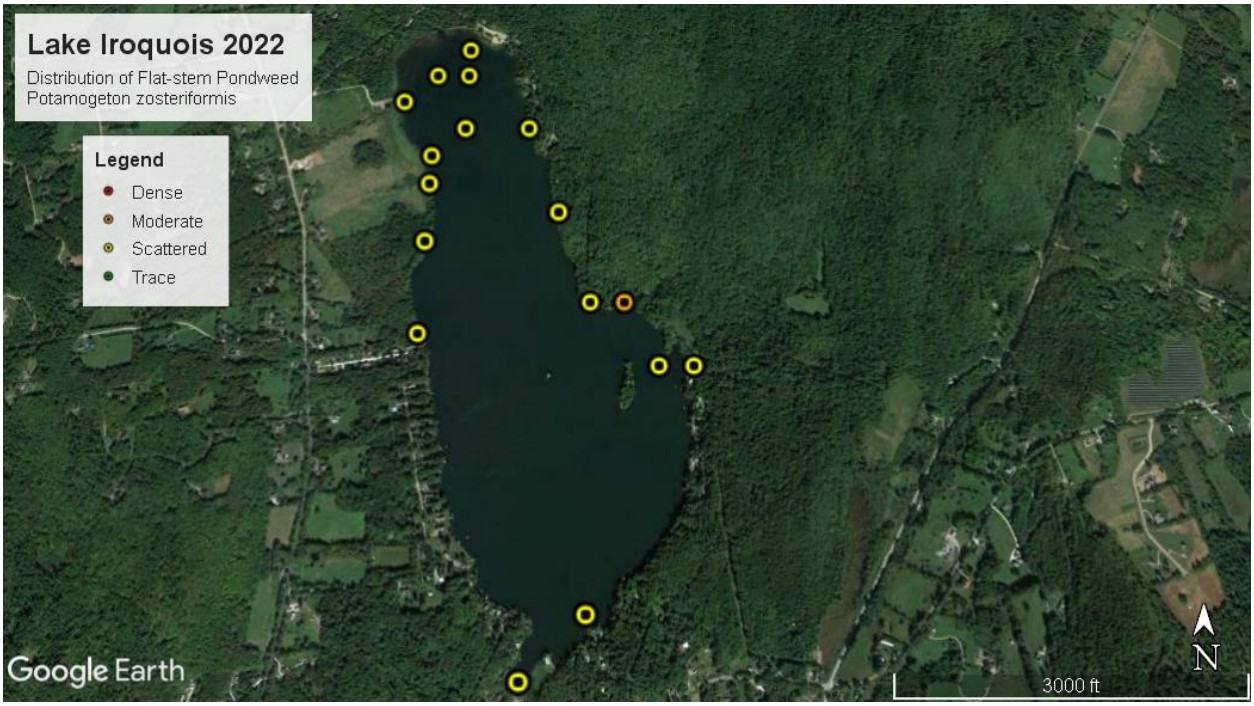
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Distribution of Flat-stem Pondweed
Potamogeton zosteriformis
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Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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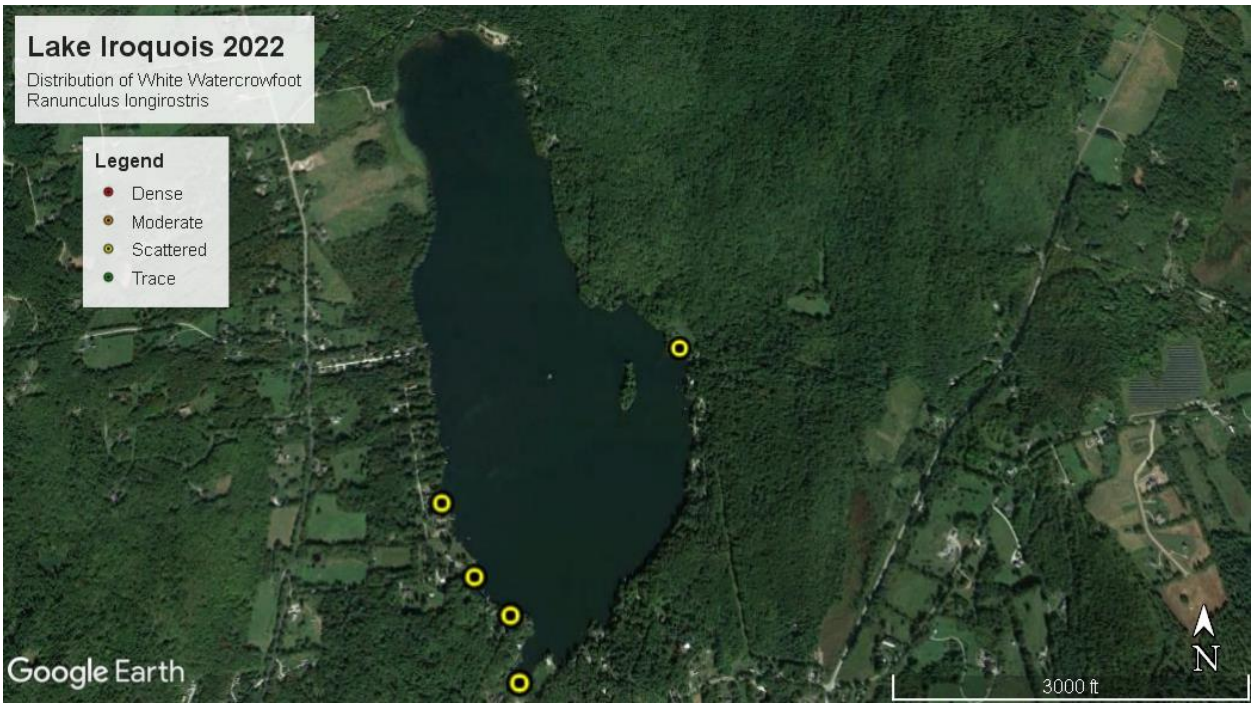
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Distribution of White Watercrowfoot
Ranunculus longirostris
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Dense
Moderate
Scattered
Trace
Google Earth
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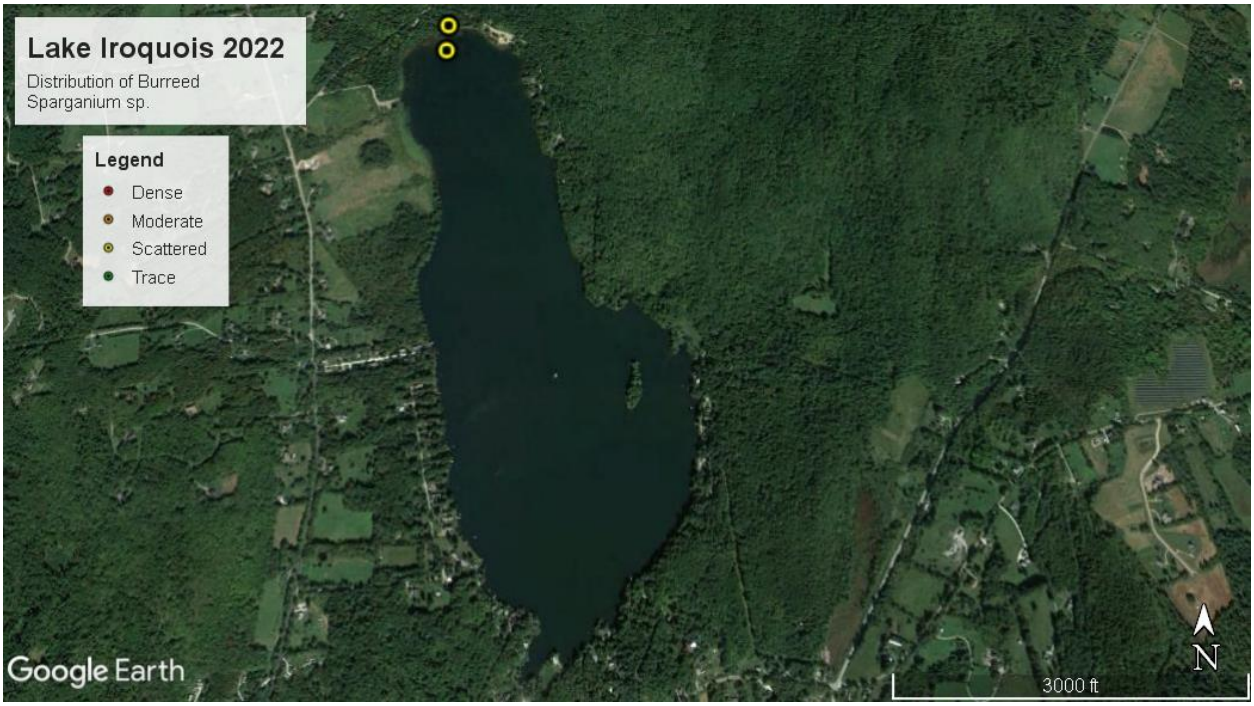
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Distribution of Burreed
Sparganium sp.
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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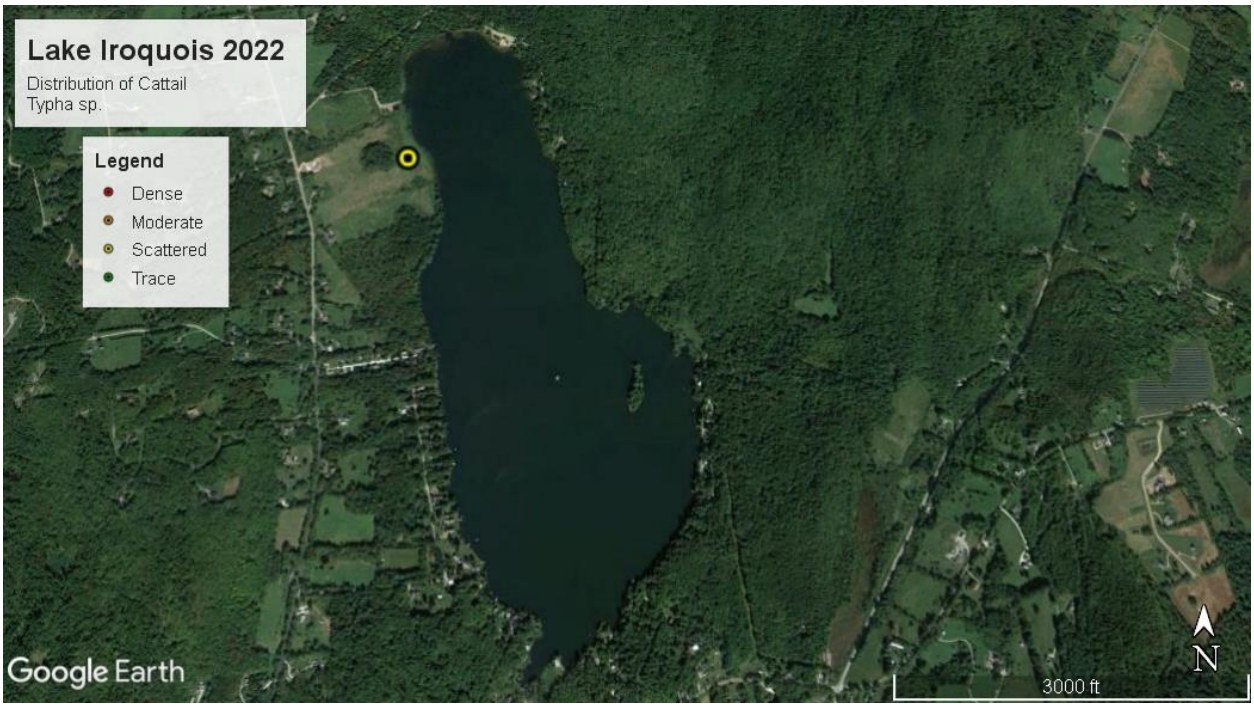
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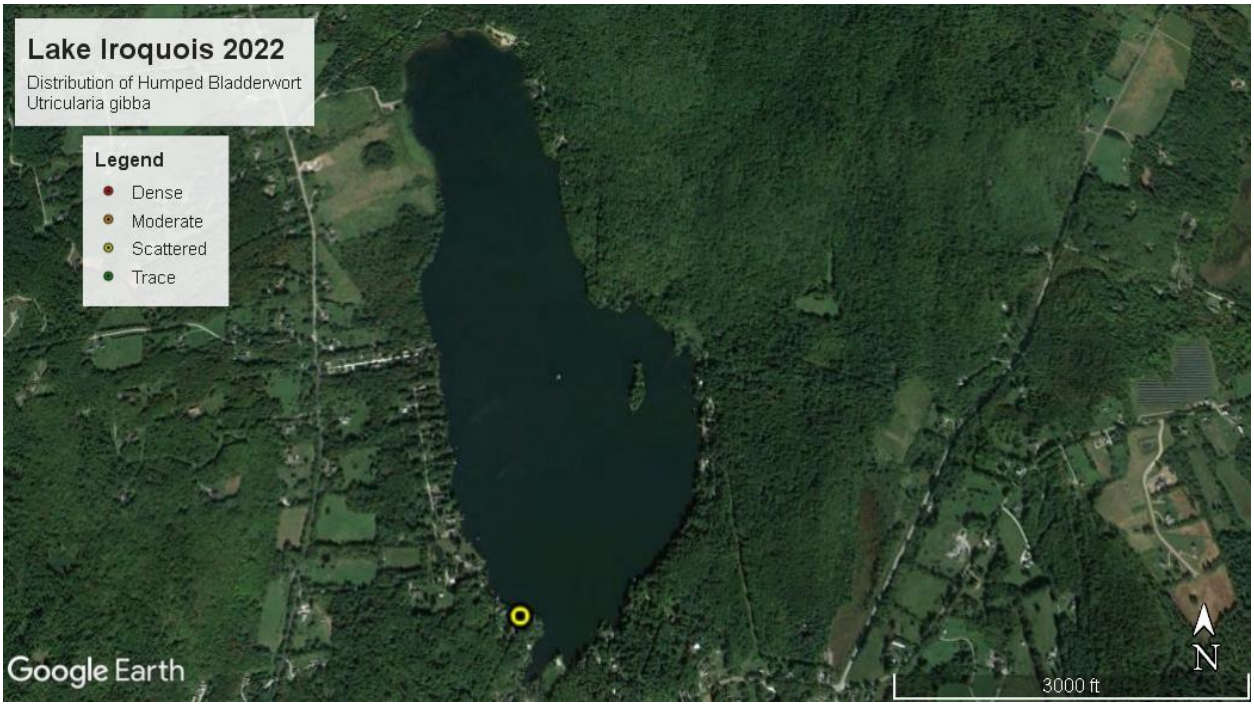
Distribution of Cattail
Typha sp.
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N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Distribution of Humped Bladderwort
Utricularia gibba
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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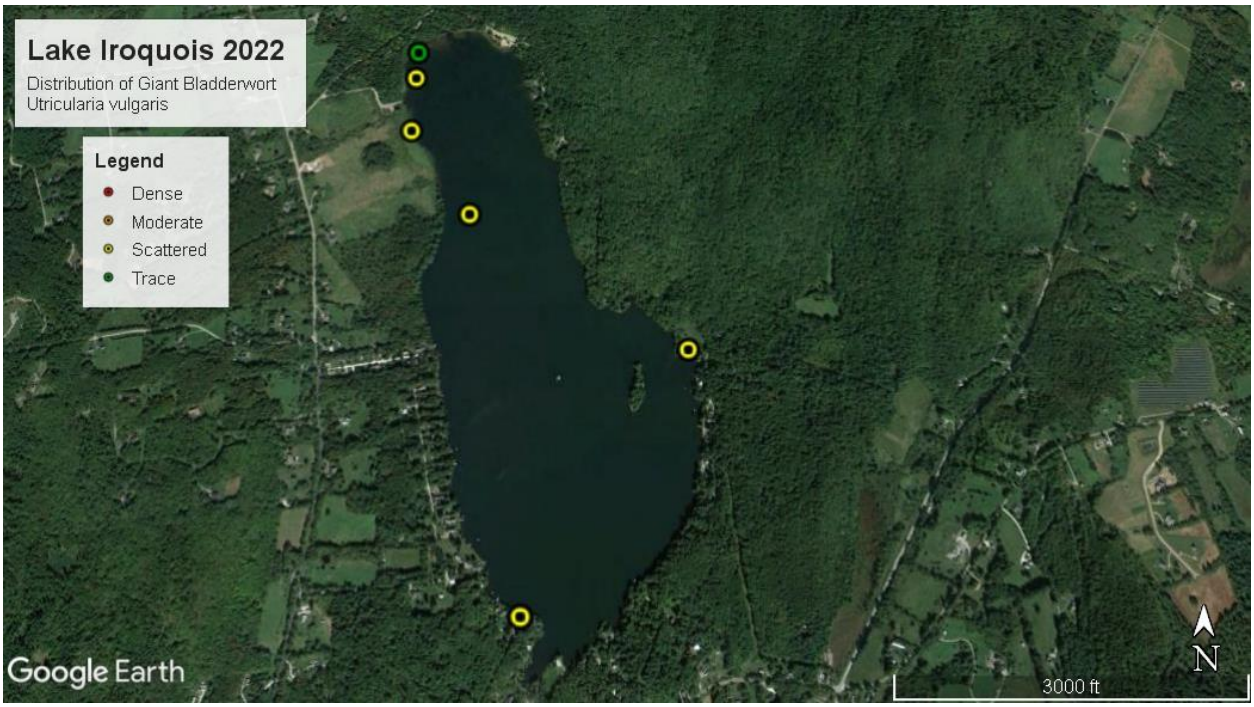
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Distribution of Giant Bladderwort
Utricularia vulgaris
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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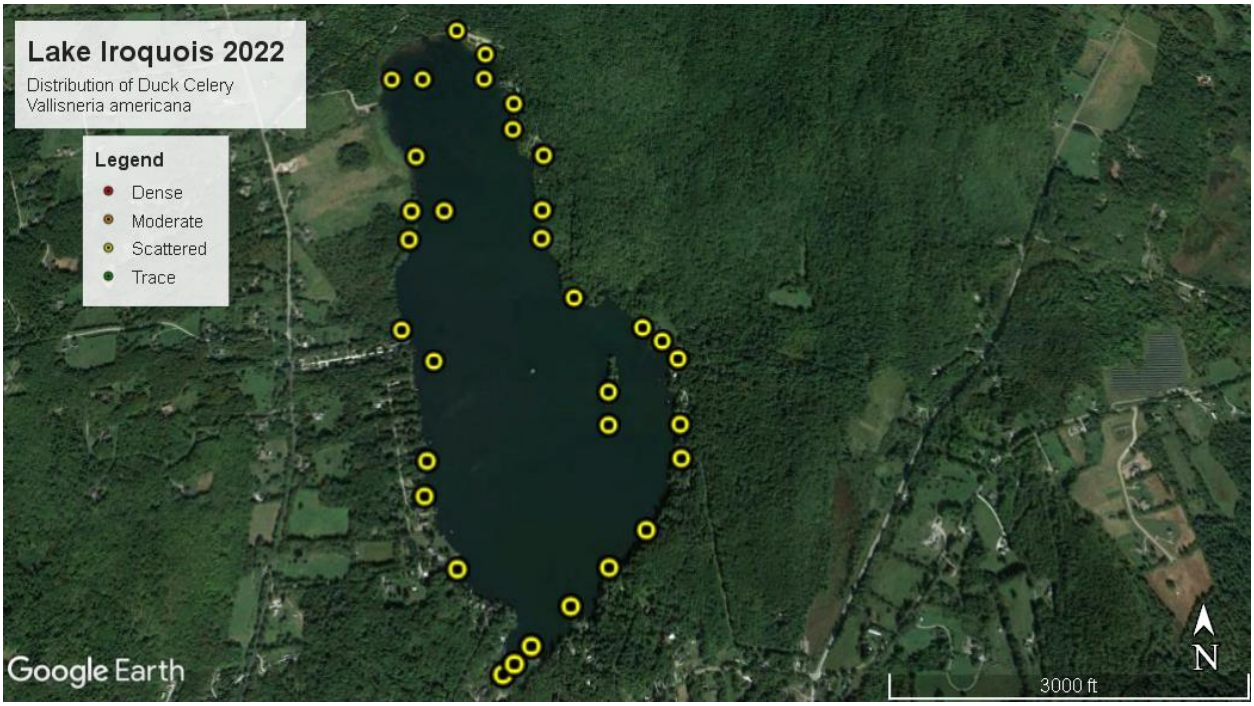
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Distribution of Duck Celery
Vallisneria americana
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
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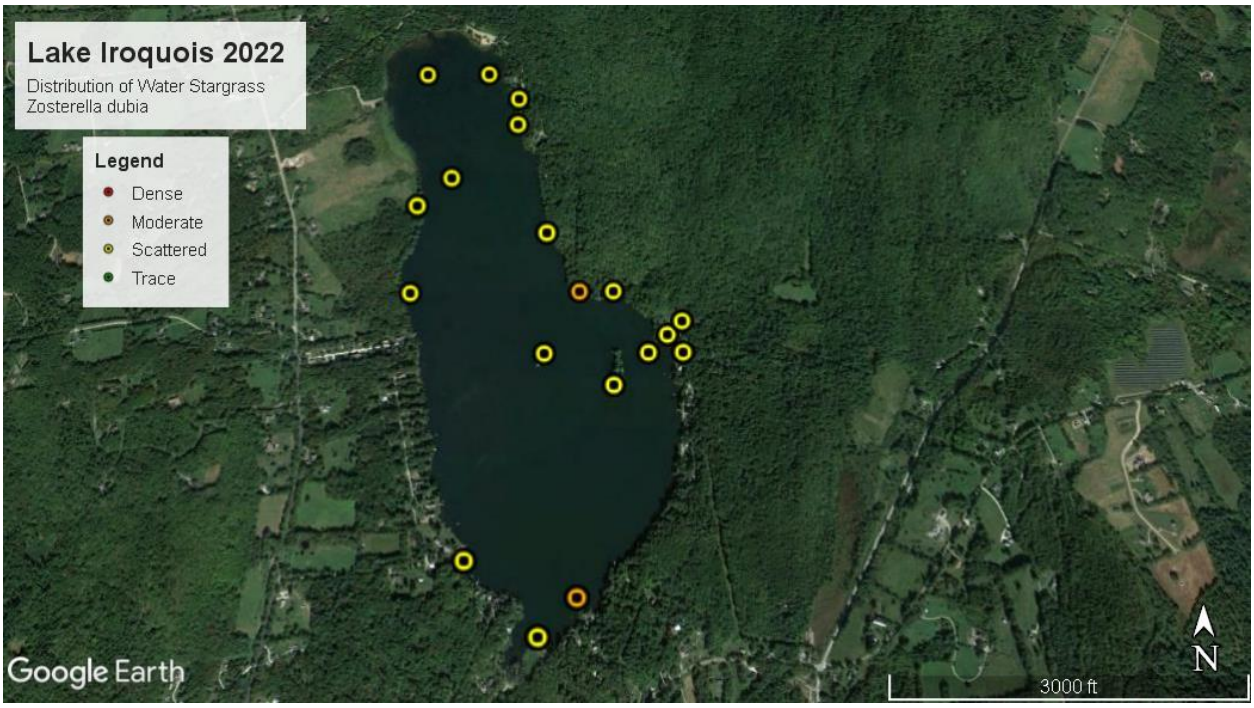
Lake Iroquois 2022
Distribution of Water Stargrass
Zosterella dubia
Legend
Dense
Moderate
Scattered
Trace
Google Earth
3000 ft
N