Northeast Aquatic Research

North and South Riga Ponds 2023 Monitoring Report

Prepared for the Riga Environmental Stewardship Committee

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INTRODUCTION AND SYNOPSIS OF 2023 RESULTS

Volunteers from Mount Riga Inc. (MRI) continued to make water quality monitoring visits to the deep-water collection sites in North & South Riga lakes during 2023. This is the 6th year that the monitoring program has been successfully collecting critical data from both lakes. North Riga Lake was visited on seven occasions, and South Riga Lake on six occasions between late April and late October. The monitoring data is collected at the site of deepest water in both lakes. During these visits, water temperature and dissolved oxygen are measured in profile, the water clarity is measured, and water samples are collected for laboratory analysis of nutrient levels.

In early September, MRI purchased and deployed HOBO temperature data loggers at the deep station in both lakes. One logger was placed at each meter from the surface to the bottom. The loggers were removed in mid-November. The data retrieved from the HOBOs allowed for the construction of highly detailed heat maps of water temperatures in each lake. The distribution of heat in lakes is central to the functioning of lake ecosystems. Although each continuous recorder data set starts in early September, the information collected is extremely valuable. When the data is collected for the entire season, it will be a tremendous addition to the program.

NEAR conducted aquatic plant surveys of the two lakes on September 1st. No invasive species were observed at either lake. No new native species were found. Purple bladderwort, one of the most common species in both lakes, was found uncharacteristically piled up along shorelines in both lakes.

General Findings

Water Clarity: Both lakes' water clarity continues to show signs of long-term decline. The clarity in both lakes in 2023 was the worst clarity recorded to date. However, 2023 was the wettest year on record in Connecticut, suggesting that abnormal summer rainfall caused abnormal water clarity. Unfortunately, wet rainy summers could be here to stay as climate change is causing higher rates of evaporation from the ocean, thus causing more frequent and intense summer storms.

Dissolved Oxygen and Temperature: Both lakes reached a maximum temperature in July. Temperature logger data showed mixing events in both lakes during the period, and a very brief warming period for a few days at the end of September. Dissolved oxygen conditions were good in May and again in September and October, but poor at the bottom of the lakes in summer months.

Nutrients: Total nitrogen and total phosphorus were elevated above their respective oligotrophic thresholds in select samples in both lakes. Inlet concentrations were elevated on multiple occasions.

Aquatic Plants: Both lakes contained a good variety of native aquatic plant species. North Riga contained the Connecticut Endangered species *Potamogeton confervoides* (Tuckerman's Pondweed). No Endangered species were documented in South Riga. No invasive species were found in either of the lakes.

MONITORING RESULTS

The lake data is assessed using the CT DEEP categorization of lakes, which is primarily based on the amount of phosphorus present in surface waters during summer conditions (**Table 1**). A trophic category is a means to classify the degree of plant and algae growth that occurs in a lake, which increases with overall water quality decline. Very clear water with no weeds or algae results from very low nitrogen and phosphorus conditions. These clear-water and low-nutrient lakes are considered oligotrophic. Lakes with excessive amounts of weeds and very green water resulting from high nutrient concentrations are eutrophic. **Table 1** shows lake Trophic Status. Target criteria are highlighted in blue: TP <10ppb, TN <200ppb, and Secchi >6m.

Table 1 - Lake trophic categories and ranges of indicator parameters.

Category	T. Phosphorus	T. Nitrogen	Secchi Depth	Chlorophyll *a*
	(ppb)	(ppb)	(m)	(ppb)
Oligotrophic	0 – 10	0 – 200	6+	0 – 2
Oligo-mesotrophic	10 – 15	200- 300	4 – 6	2 – 5
Mesotrophic	15 – 25	300 - 500	3 – 4	5 – 10
Meso-eutrophic	25 – 30	500 - 600	2 – 3	10 – 15
Eutrophic	30 – 50	600 - 1000	1 – 2	15 – 30
Highly Eutrophic	50 +	1000 +	0 – 1	30 +

**Source = CT DEP 1982*

**Chlorophyll-a not included in testing because samples are very time-sensitive.*

Water Clarity / Secchi Disk Depth

The clarity in North Riga (**Figure 1**) and South Riga (**Figure 2**) in 2023 was generally very poor, with the worst seasonal clarity recorded since monitoring began. The best clarity in North Riga, 5.33 meters, was observed on May 28th (**Table 2**), after which the clarity was never better than 2.8 meters. The worst clarity, 1.4 meters, was recorded on October 2nd. During the survey on September 1st, NEAR staff noted North Riga Lake was experiencing a bloom of the Green algae Staurastrum, where the algae had reached approximately 20,000 cells/mL and had colored the lake water green.

In South Riga, the best clarity, 5.7 meters, was observed on April 22nd. On this date, the Secchi disk was visible on the lake bottom. The worst clarity, 1.7 meters, was observed on August 20th. The clarity in South Riga deteriorated from May to August, improved to early October and then declined slightly.

The poor clarity in both lakes and the overall historical trend of decreased clarity is disturbing. Residents told NEAR staff that during numerous monitoring visits, the water was brown/yellow, which typically indicates sediments and/or diatoms in the lake. Excessive rainfall may have contributed to poor clarity in both lakes during 2023.

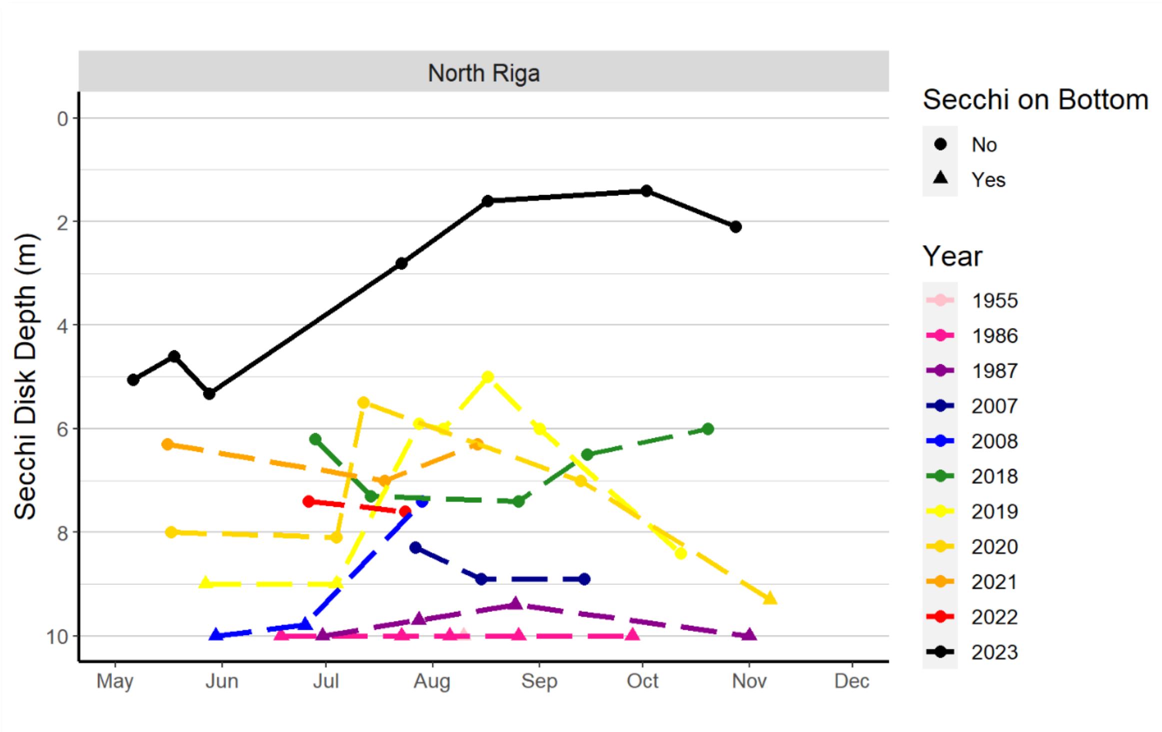


Figure 1. Historical Secchi disk depth measurements at North Riga.

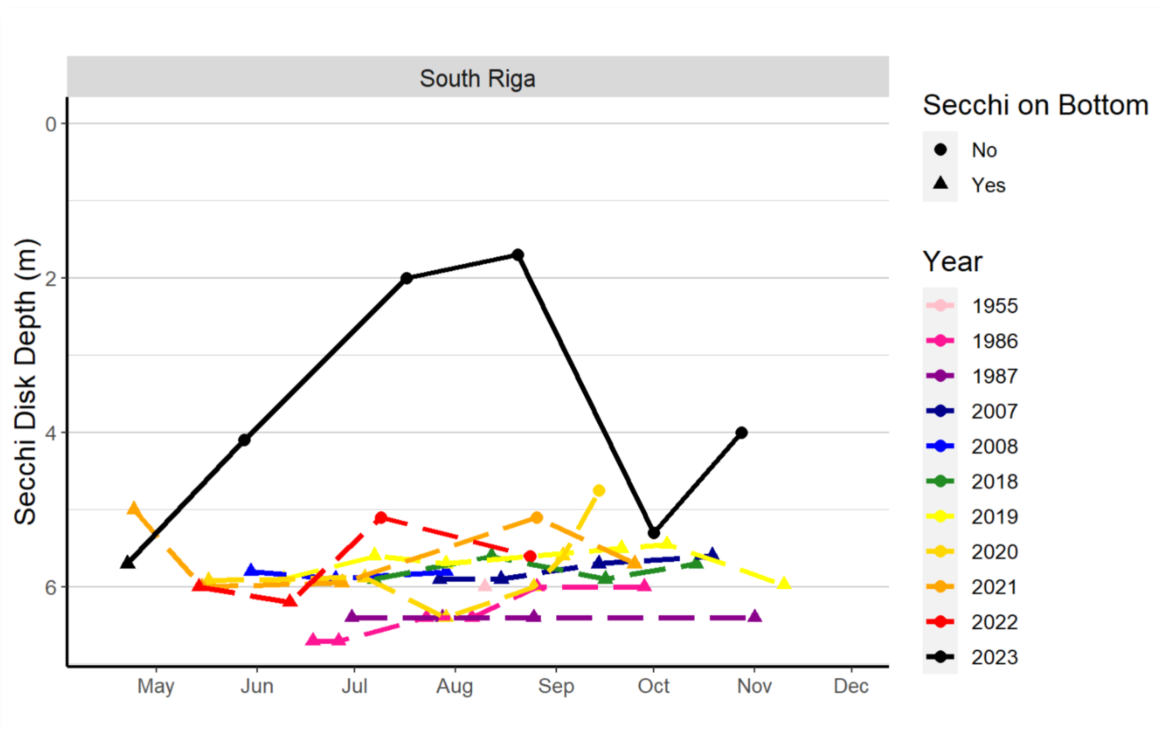


Figure 2. Historical Secchi disk depth measurements at South Riga.

Table 2. North Riga and South Riga Secchi disk depth measurements, 2023.

North Riga							
	May 6th	May 18th	May 28th	Jul 23rd	Aug 17th	Oct 2nd	Oct 28th
	5.05	4.6	5.33	2.8	1.6	1.4	2.1
South Riga							
Apr 22nd			May 28th	Jul 17th	Aug 20th	Oct 1st	Oct 28th
5.7			4.1	2	1.7	5.3	4

Water Temperature

Volunteer residents collected water temperature profiles on seven occasions at North Riga, and six occasions at South Riga, in 2023 (**Figure 3**). There was a large increase in temperature from May 6th to May 18th, where the temperature increased approximately 9°C lake wide. The warmest surface temperature, 25.6°C, was recorded on July 23rd. More frequent temperature data was recorded from September to November using HOBO data loggers.

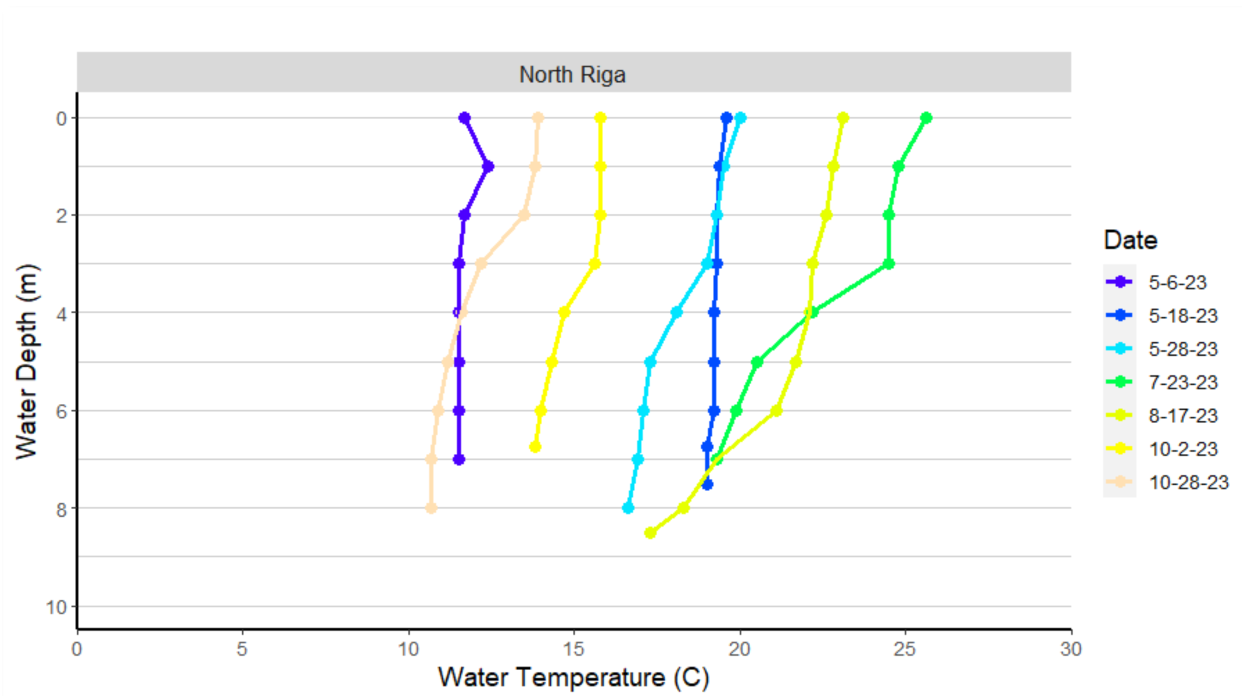


Figure 3. Water Temperature profiles in North Riga in 2023.

Volunteers collected six temperature profiles in South Riga in 2023 (**Figure 4**). The lake was isothermal (similar temperature from surface to bottom) in April, after which the lake warmed until July. The May 28th profile was incomplete and missing data at select depths. By October 28th, the surface waters were warmer than the bottom and the lake was isothermal from 3 meters to the bottom. Data loggers were also deployed in South Riga from early September to mid-November.

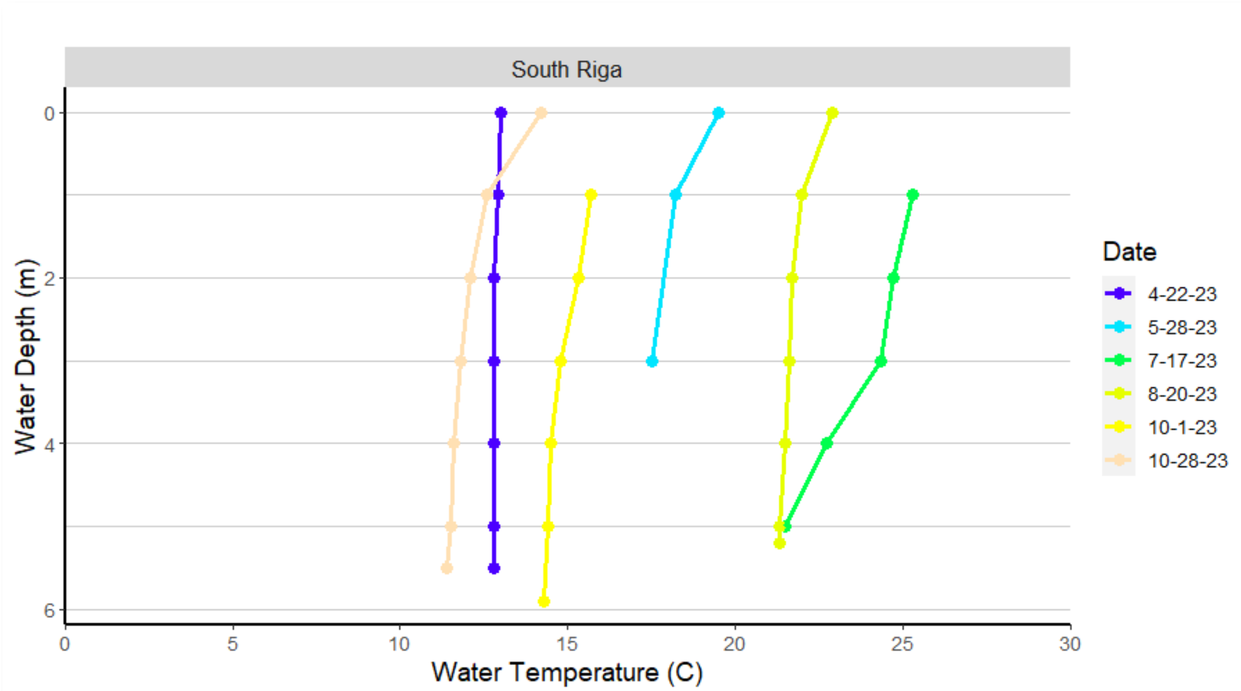


Figure 4. Temperature profiles at South Riga in 2023.

Temperature Data Loggers

The Riga Environmental Stewardship Committee purchased HOBO data loggers and deployed them at both lakes in early September. The loggers were installed at each meter from the surface to the bottom of the lake at the deepest location in each lake. The loggers recorded temperature every 30 minutes and were removed in early/mid-November. High frequency temperature data allows us to see small fluctuations and brief weather events that help us understand the duration of stratification and the seasonal warming and cooling of the lakes.

effectively display high frequency temperature data, NEAR staff created temperature isopleths for North and South Riga. North Riga was isothermal (same temperature from surface to bottom) by mid- to late-September (**Figure 5**). In early October, a brief warm-up occurred but the lake was isothermal by mid-October and continued to cool. All of the data loggers in North Riga, except for the bottom, did not record temperature beginning in late October. We have observed this with other data loggers in the past, but it is unknown at this time why the loggers stopped recording. For the isopleth at North Riga, we removed the bottom data from October 25th-November 10th to keep the data consistent.

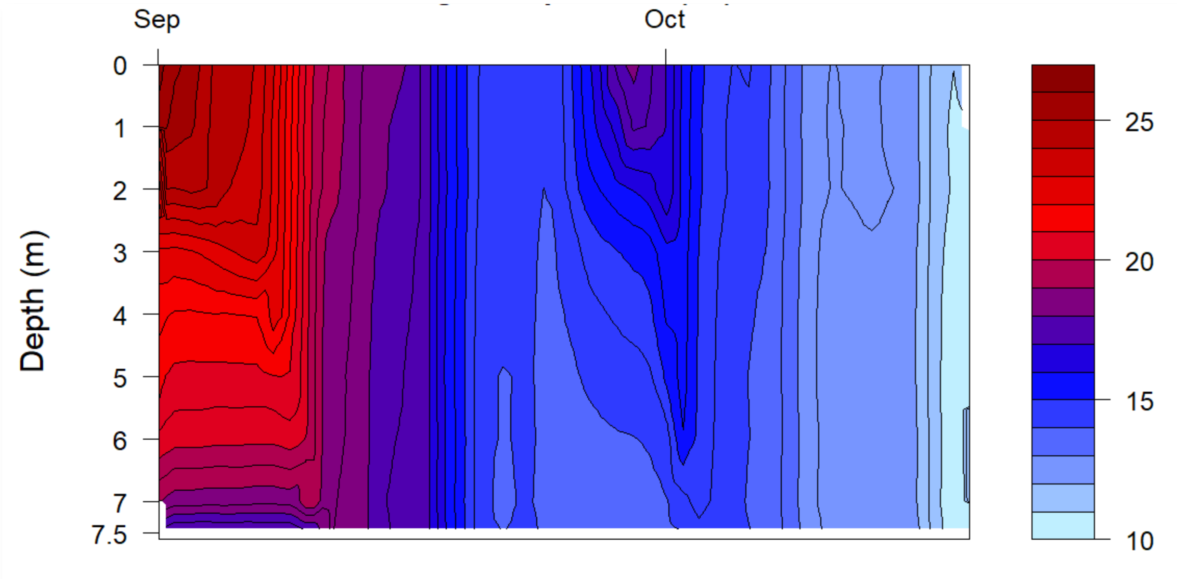


Figure 5. Water temperature isopleth for North Riga, September 7th-October 25th,, 2023.

The water temperature regime in South Riga followed a similar pattern to North Riga. By mid-to late-September, the lake was isothermal (**Figure 6**). In early October, the lake warmed up briefly and was isothermal in mid-October. The surface waters warmed up again at the end of October (as captured in the temperature profiles in **Figure 4**), after which the lake mixed and continued to cool until the loggers were removed.

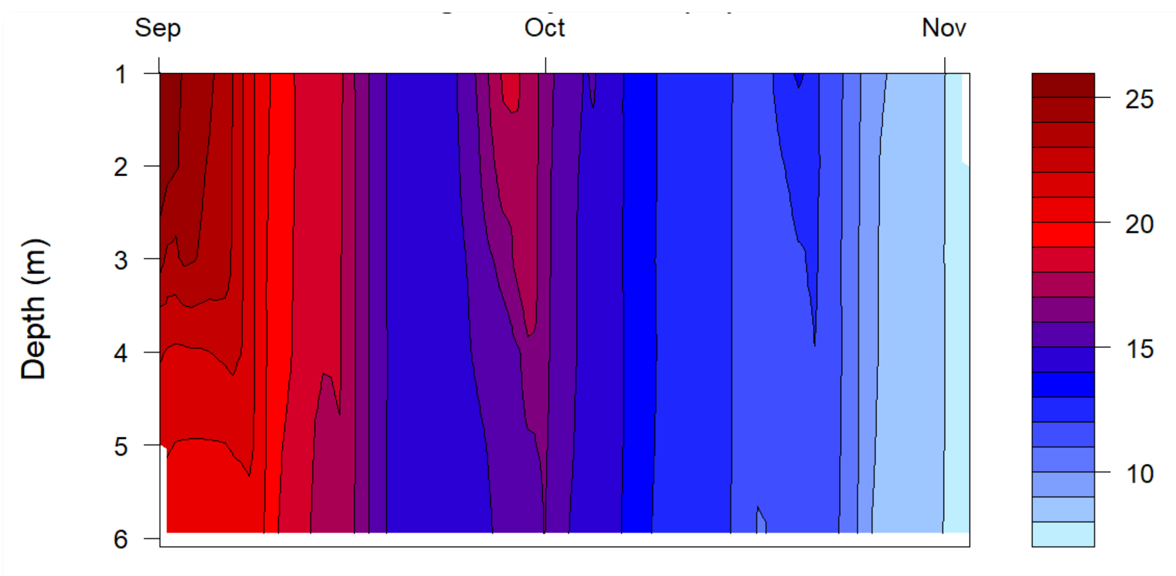


Figure 6. Temperature isopleth for South Riga, September 8th-November 10th, 2023.

Dissolved Oxygen

Dissolved oxygen (DO) in a lake is essential to aquatic organisms and to keep the world oxidized. At the surface of the lake, the water is in contact with the air, and atmospheric oxygen is dissolved into the water as a result of diffusion and wind mixing. As water mixing takes place, the dissolved oxygen is circulated throughout the water column. The decomposition of rooted aquatic plants and algae by bacteria requires dissolved oxygen (Biological Oxygen Demand) and can deplete the oxygen levels in the bottom waters below the thermocline. This phenomenon can lead to anoxic (<1 mg/l of DO) conditions in the deeper waters. Water that is anoxic (devoid of oxygen) is not suitable for fish and other aerobic aquatic organisms. When the water at the bottom of a lake is anoxic, nutrients trapped in the sediment at the lake bottom are released into the water through a process known as internal loading.

Dissolved oxygen (DO) concentrations in North Riga in May remained fairly consistent from the surface to the bottom of the lake (**Figure 7**). By May 28th, the very bottom water at 8 meters was anoxic. By July 23rd, there was a sharp decrease in DO from 4 meters to the bottom. In October, DO was replenished in the lake.

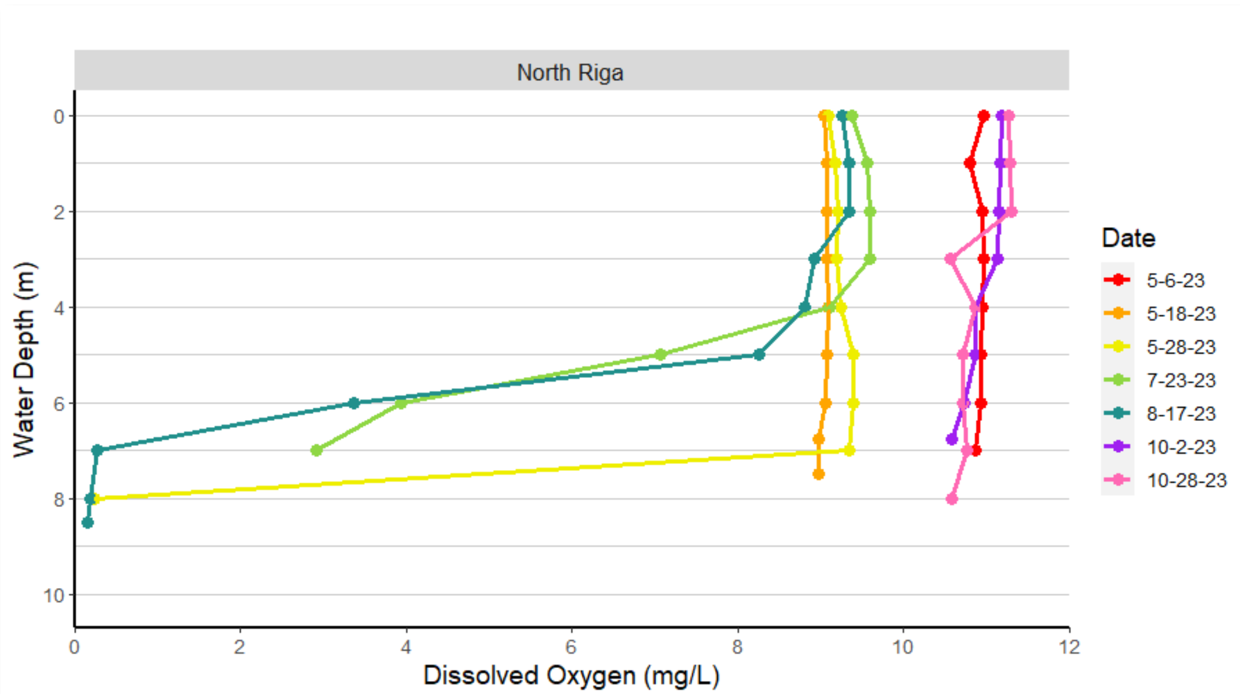


Figure 7. Dissolved oxygen profiles at North Riga in 2023.

DO followed a similar pattern in South Riga (**Figure 8**). In April, May, and October, DO was fairly consistent from surface to bottom and there was no anoxic water. In July, there was a sharp decline in DO from 4 meters to the bottom at 5 meters. In August, DO was replenished and approximately 6 mg/L at the bottom of the lake.

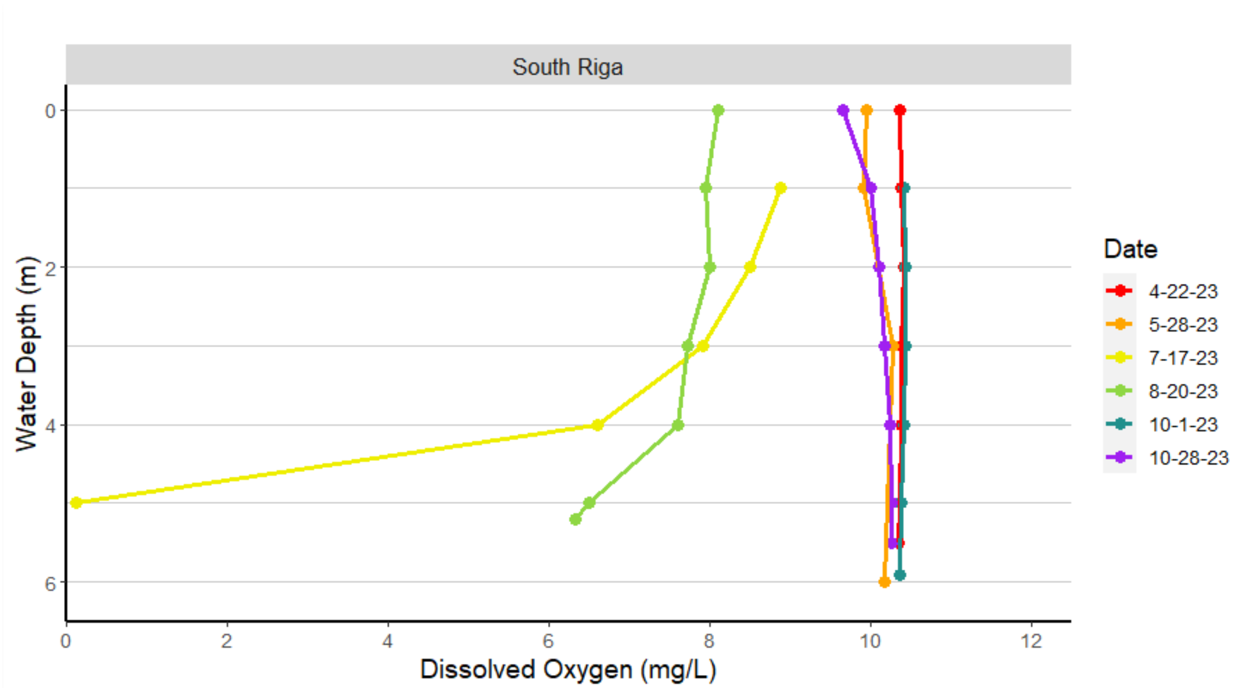


Figure 8. Dissolved oxygen profiles at South Riga in 2023.

Total Phosphorus

Ideally, total phosphorus (TP) concentrations should remain below 10ppb in North Riga and South Riga, placing the lake in the oligotrophic category.

TP remained at or below 10ppb in the top and middle waters in North Riga in 2023. However, phosphorus appeared to be depleted by early May, only to return by July, possibly due to internal loading, because bottom concentrations were highest in this month (**Figure 9**). The bottom waters peaked at 19ppb in July, after which concentrations did not exceed 12ppb.

The TP concentrations in South Riga followed the same pattern as North Riga, with low TP early in the season and highest TP in July. TP then returned to lower values, although not as low as April, and the surface water retained higher phosphorus concentrations than deeper water (**Figure 10**).

The phosphorus concentrations in the upper waters of both lakes tends to be between 5 and 10 ppb, with few readings below 5 ppb. North Riga bottom water phosphorus concentration exceeded 10ppb each summer, with occasional values as high as 20ppb. South Riga bottom water phosphorus concentrations have been erratic with some very high values, but most were near or below 10ppb (**Figure 11**). Having a full season of HOBO data will help understand the fluctuations in phosphorus and nitrogen concentration.

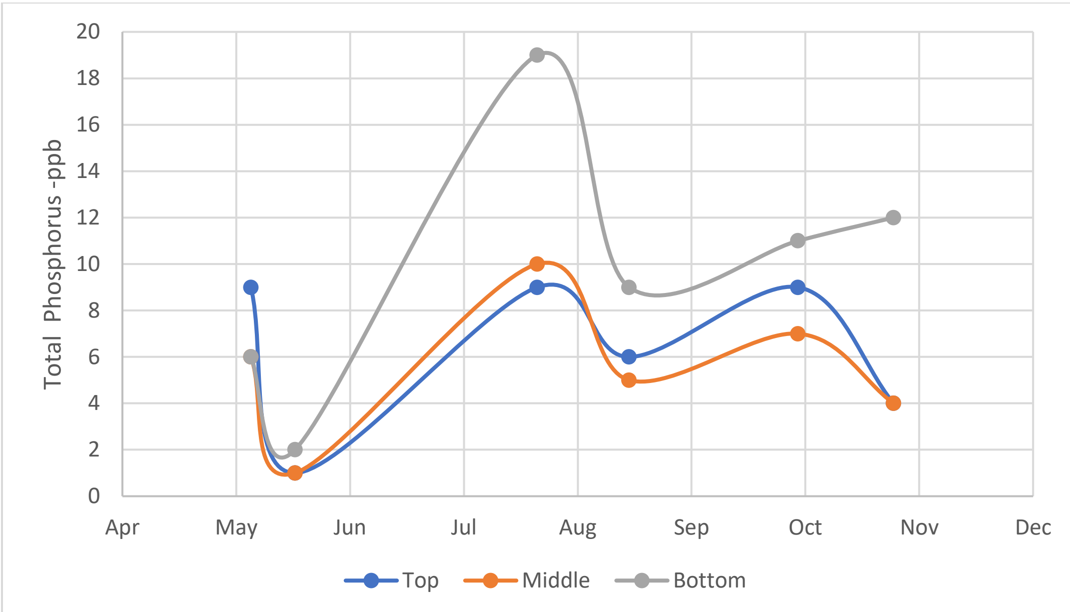


Figure 9. Total phosphorus concentration at 3 depths in North Riga in 2023.

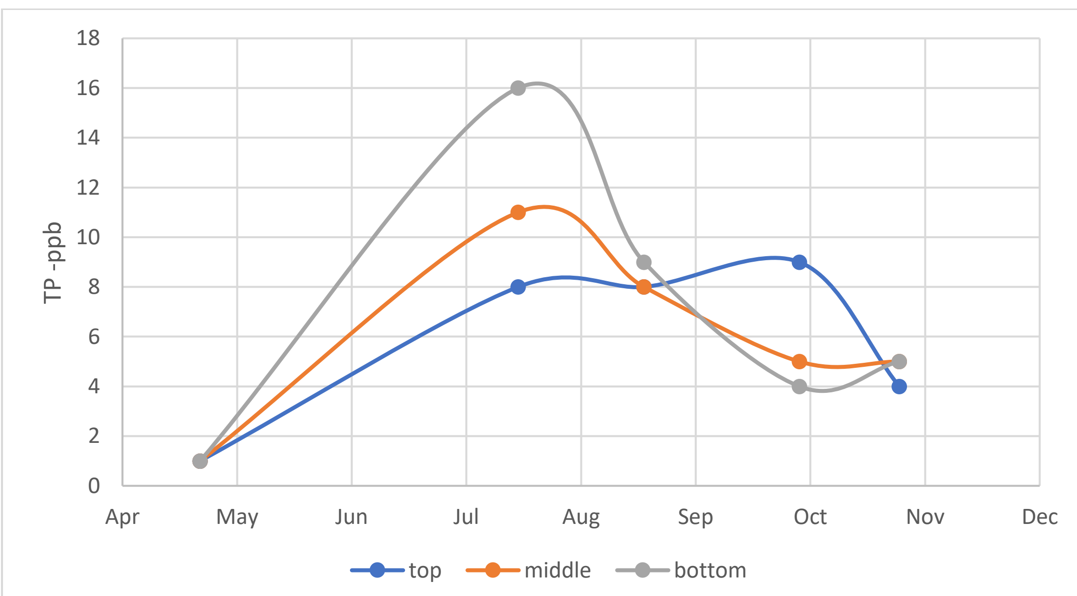


Figure 10. Total phosphorus concentrations at 3 depths in South Riga in 2023.

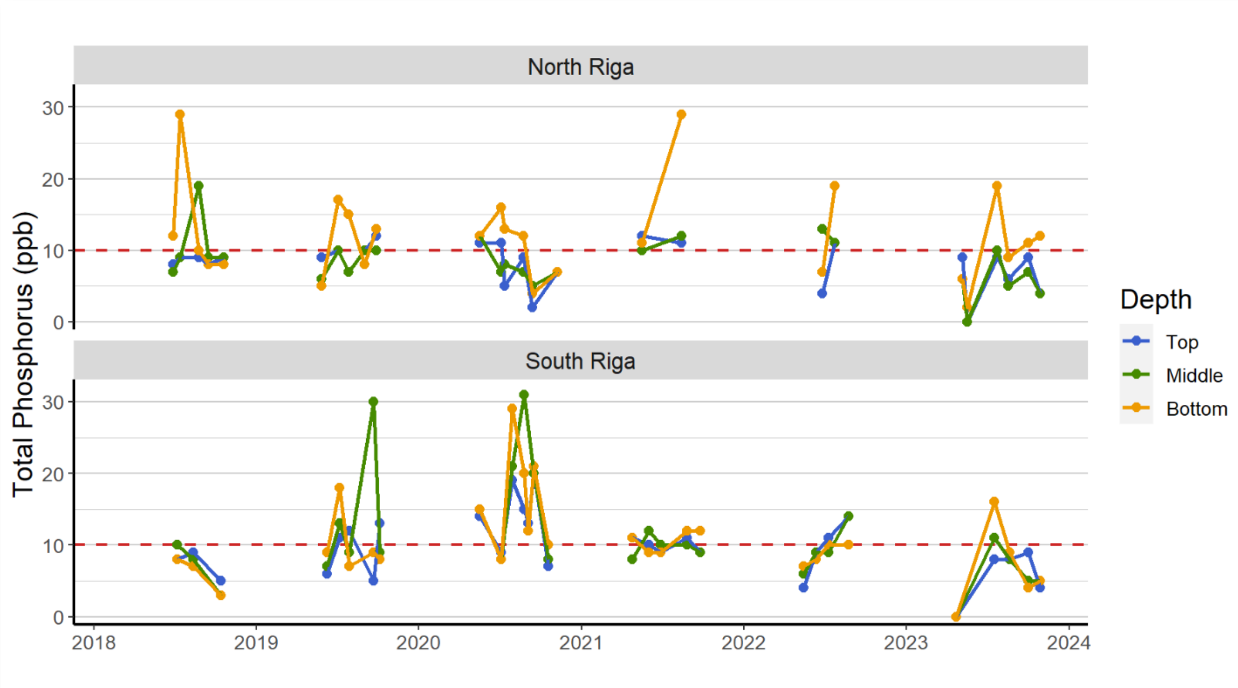


Figure 11. Total phosphorus concentrations (ppb) in North and South Riga, 2018-2023.

Table 3. Total phosphorus (ppb) concentrations at the top, middle and bottom depths at North Riga and South Riga, 2023. ND=Not Detected, sample below detection limit (1ppb).

North Riga						
	May 6th	**May 18th**	**Jul 23rd**	**Aug 17th**	**Oct 2nd**	**Oct 28th**
Top	9	ND	9	6	9	4
Middle	6	ND	10	5	7	4
Bottom	6	2	19	9	11	12
South Riga						
	Apr 22nd	**Jul 17th**	**Aug 20th**	**Oct 1st**	**Oct 28th**	
Top	ND	8	8	9	4	
Middle	ND	11	8	5	5	
Bottom	ND	16	9	4	5	

Total Nitrogen

Total nitrogen (TN) includes fractions of nitrate, ammonia, and organic components. Ideally, TN should remain below 200ppb, placing the lakes in the 'oligotrophic' category.

TN concentrations in North Riga in the top and middle waters remained low (<150ppb) in April, May, and July, but rapidly increased to nearly 200ppb in August and remained at that level for the remainder of the season (**Figure 10**). This is unprecedented in the history of the monitoring program. TN in all prior years has remained near 150ppb for the season (except for one aberrant sample from 2022). The lake must have received a large amount of nitrogen in a relatively short period of time, maybe 3 weeks, for the concentration of nitrogen to increase by 33% lake wide.

TN in the bottom waters exceeded 200ppb on 3 occasions (**Table 4**), reaching a maximum of 318ppb in August.

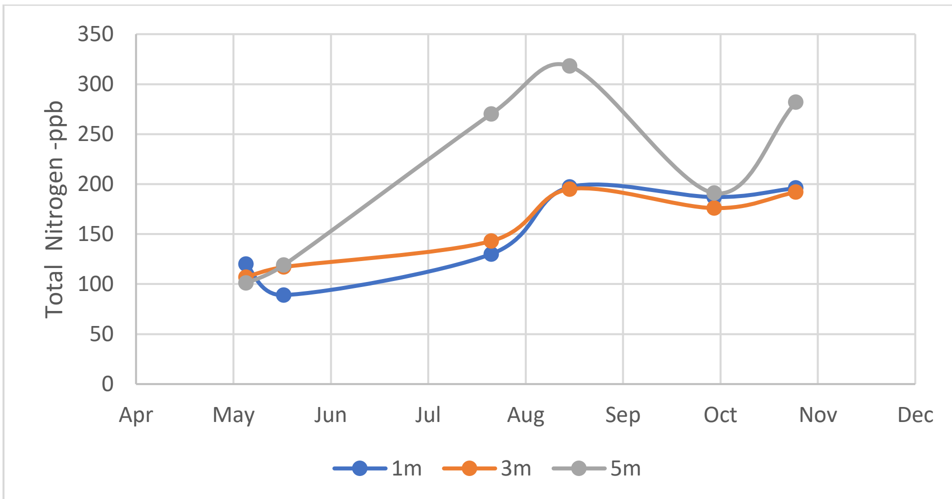


Figure 12. Total nitrogen in North Riga during 2023

In South Riga, TN concentrations exceeded 200ppb on multiple occasions. In July and August, TN concentrations at all sampling depths were above 200ppb, or just slightly below (**Figure 11**, **Table 4**). Concentrations were generally high during all months except for April. The maximum concentration was 429ppb at the bottom of the lake in July.

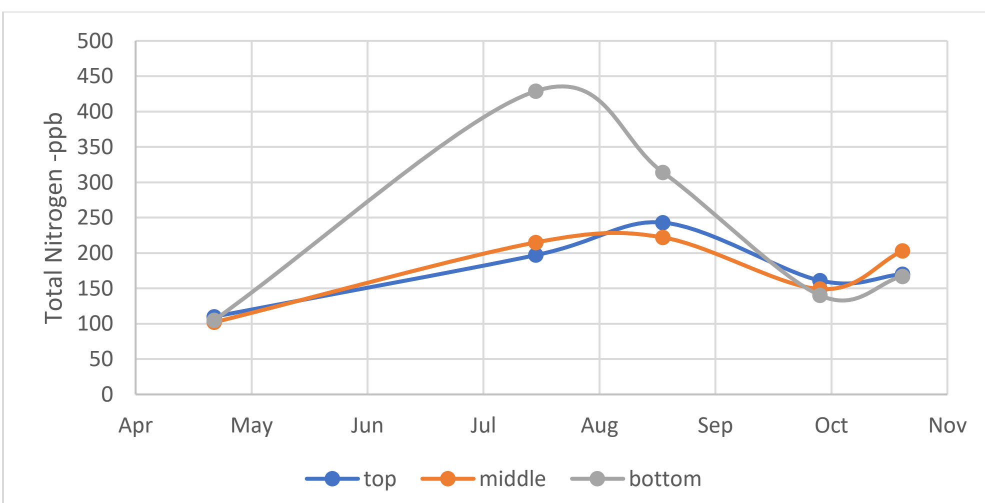


Figure 13. Total nitrogen in South Riga during 2023

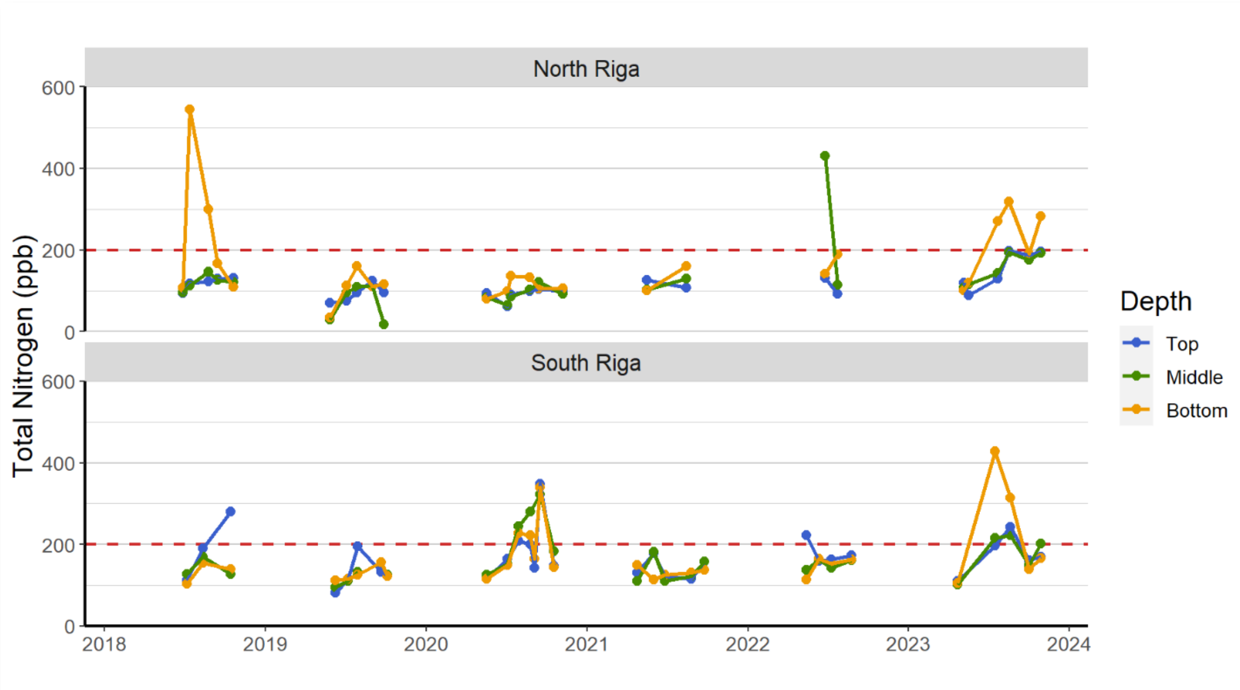


Figure 14. Total nitrogen concentrations in North and South Riga, 2018-2023.

Table 4. Total nitrogen concentrations at the top, middle and bottom depths at North Riga and South Riga, 2023.

North Riga						
	May 6th	**May 18th**	**Jul 23rd**	**Aug 17th**	**Oct 2nd**	**Oct 28th**
Top	120	89	130	197	187	196
Middle	107	117	143	195	176	192
Bottom	101	119	270	318	191	282
South Riga						
	Apr 22nd	**Jul 17th**	**Aug 20th**	**Oct 1st**	**Oct 28th**	
Top	110	197	243	161	170	
Middle	102	215	222	149	203	
Bottom	105	429	314	140	167	

Special Sampling

Water samples for nutrient analysis (TN & TP) were collected from four unique locations during 2023 to learn more about the distribution of TN and TP in the north lake. The four locations were: the northern bay where Monument Brook enters the lake (Inlet), nearshore water on the south side of the lake between the mainland and the largest island (McCabe), the forebay of North Riga dam (Dam), and the mouth of North Riga Brook where it enters South Riga Lake (Riga Brook). Each site was sampled several times during the year (**Figure 15**).

All lake stations showed an increase in phosphorus between May and July. The Dam site tended to have higher P concentrations than other sites until September and October when P was lowest at the Dam. The McCabe site tended to be similar to the center lake station but had the highest lake concentration in November.

All lake stations showed a dramatic increase in TN between July and August, similar to the trend noted for the center station total nitrogen. The inlet stations always had higher nitrogen concentration than the lake stations, with very high concentration in October (**Figure 16**).

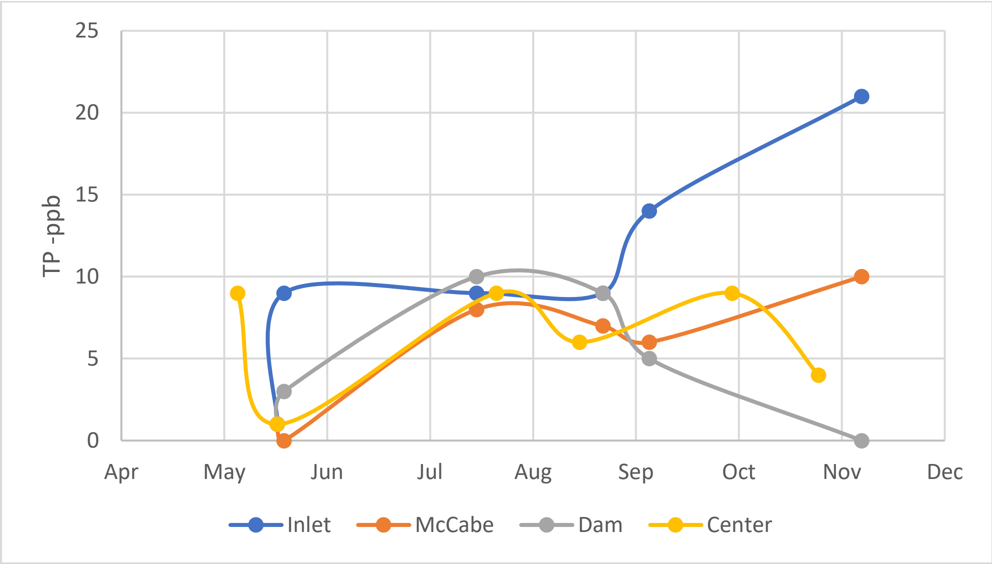


Figure 15. Total phosphorus concentration (ppb) at four unique sampling sites and the lake monitoring station (center) in 2023

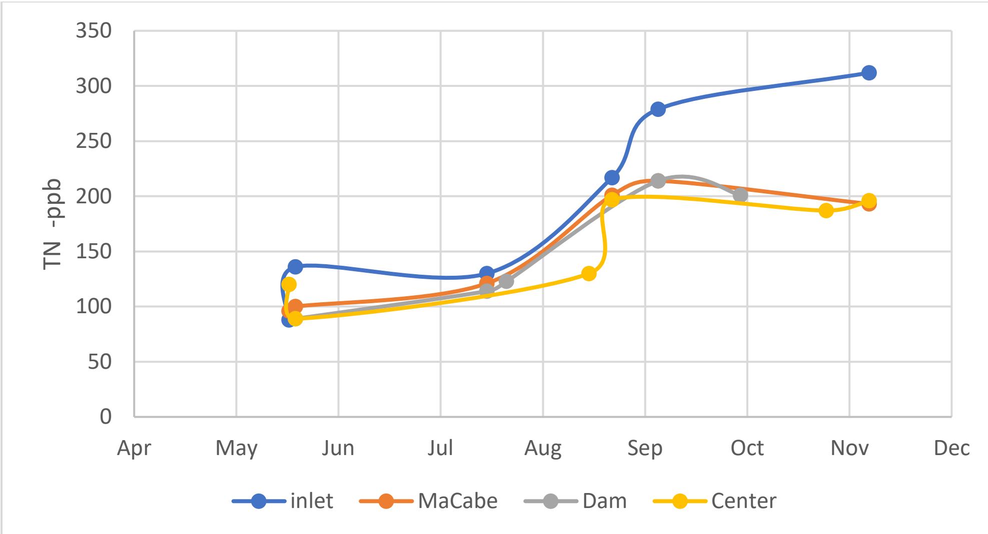


Figure 16. Total nitrogen at four unique sampling sites and the lake monitoring station (center) in 2023.

Table 5. Total phosphorus concentrations (ppb) in the North Riga inlet, McCabe Narrows, forebay of North Riga Dam and at the mouth of the North Riga Brook with South Riga.

Date	Inlet	McCabe	Dam	Riga Brook
5/18/2023	<1	<1	<1	~
5/20/2023	9	~	3	6
7/17/2023	9	8	10	~
8/24/2023	9	7	9	7
9/7/2023	14	6	5	6
11/10/2023	21	10	<1	9

Table 6. Total nitrogen concentrations (ppb), at brook inlet to North Riga, McCabe narrows, forebay of North Riga dam, and mouth of North Riga Brook with South Riga Lake.

Date	Inlet	McCabe	Dam	Riga Brook
5/18/2023	88	96	89	144
5/20/2023	136	100	114	~
7/17/2023	130	121	123	~
8/24/2023	217	201	214	219
9/7/2023	279	214	201	213
11/10/2023	312	193	189	177

Table 7. Total nitrogen and total phosphorus (ppb) concentrations at South Riga Dam.

Date	TN		TP	
	Dam	Center	Dam	Center
7/17/2023	141	130	12	8
10/2/2023 Surface	149	147	4	9
10/2/2023 2m	155		6	
10/2/2023 3m	145		5	

TN concentrations in South Riga inlet exceeded 200ppb on August 20th and September 7th (**Table 6**). TP remained equivalent to or below 9ppb, which is slightly elevated for inlet concentrations in Riga.

Table 8. Total nitrogen and total phosphorus (ppb) concentrations in South Riga inlet.

Date	TN	TP
5/20/2023	144	6
8/20/2023	219	7
9/7/2023	213	6
10/28/2023	170	3
11/10/2023	177	9

Aquatic Plants

NEAR staff surveyed North and South Riga Lakes on September 1st, 2023. No invasive aquatic plant species were found in either of the lakes in 2023.

A total of 18 aquatic plant species were documented in North Riga (**Table 6**). The most dominant species (present at >20% frequency) were Dortmann's Cardinalflower (*Lobelia dortmanna*) (**Map 1**), Eastern Purple Bladderwort (*Utricularia purpurea*) (**Map 2**), Yellow Water Lily (*Nuphar variegata*) (**Map 3**), Bur-Reed sp. (*Sparganium sp.*) (**Map 4**), Needle Spikerush (*Eleocharis acicularis*) (**Map 5**) and emergent Bur-reed (*Sparganium sp.*) (**Map 6**). One Connecticut State-Listed Endangered Species was documented: Tuckerman's Pondweed (*Potamogeton confervoides*) (**Map 7**).

A total of 19 aquatic plant species, along with Filamentous Algae and Benthic Cyanobacteria (*Lyngbya sp.*) were documented in South Riga. The most dominant species in South Riga were Purple Bladderwort (*Utricularia purpurea*) (**Map 8**), Stonewort (*Nitella sp.*) (**Map 9**), Emergent Bur-reed (*Sparganium sp.*) (**Map 10**) and Small Pondweed (*Potamogeton bicupulatus*) (**Map 11**).

Eastern Purple Bladderwort was very abundant and found throughout the majority of South Riga. Eastern Purple Bladderwort is free-floating, so it is subject to wind and water currents. During the South Riga survey, NEAR staff noted multiple instances of Eastern Purple Bladderwort swaths accumulated along the shoreline and in wind-swept coves. NEAR staff noted similar occurrence of rafts of Purple bladderwort piled up along eastern shorelines.

The CT Endangered species Tuckerman's Pondweed was not documented in South Riga in 2023. In previous years, NEAR staff have documented this species in South Riga.

Maps of dominant and rare species in each lake are included below, with two additional species of interest for South Riga: Dortmann's Cardinalflower (**Map 12**) and Filamentous Algae (**Map 13**).

Table 9. Aquatic plants in North Riga and South Riga Lakes, September 1st, 2023 in order of decreasing frequency. Blue lettering indicates Connecticut State-Endangered Species.

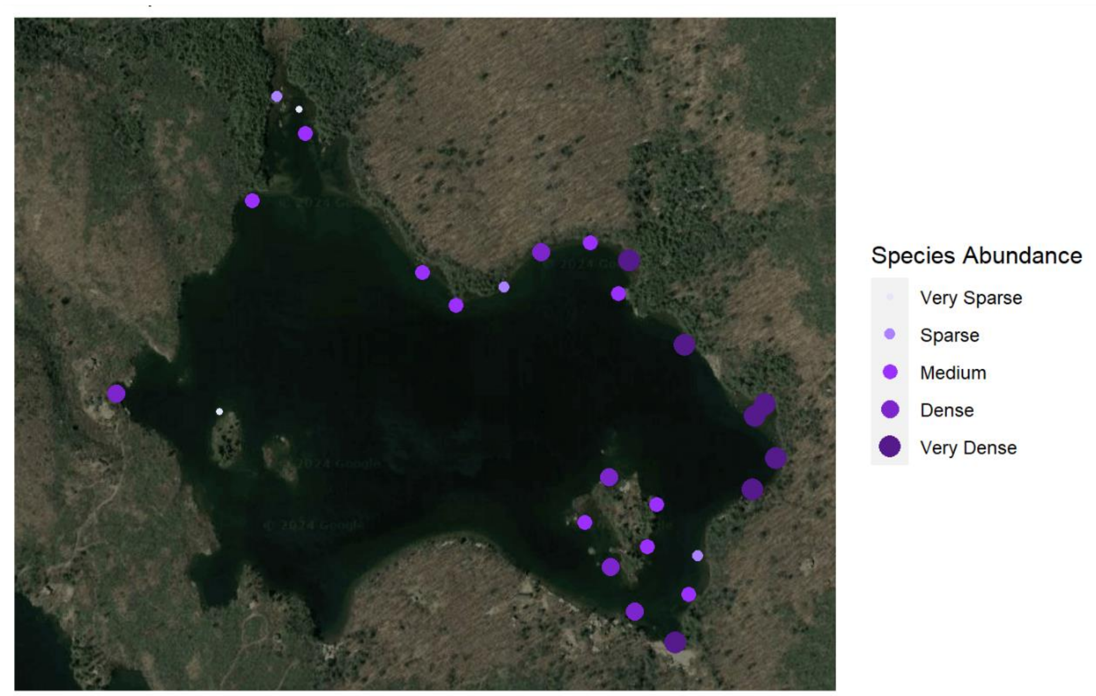
North Riga		
Species	**% Frequency**	**Avg. Density**
Lobelia dortmanna	73	28
Utricularia purpurea	46	50
Nuphar variegata	32	19
Sparganium sp.	27	24
Eleocharis acicularis	25	30
Sparganium emergent	22	29
Eriocaulon sp.	10	38
Nymphaea odorata	10	39

South Riga		
Species	**% Frequency**	**Avg. Density**
Utricularia purpurea	70	24
Nitella sp.	52	12
Sparganium emergent	43	16
Potamogeton bicupulatus	25	12
Lobelia dortmanna	19	9
Eleocharis robbinsii	18	32
Nuphar variegate	16	10
Eriocaulon sp.	15	9

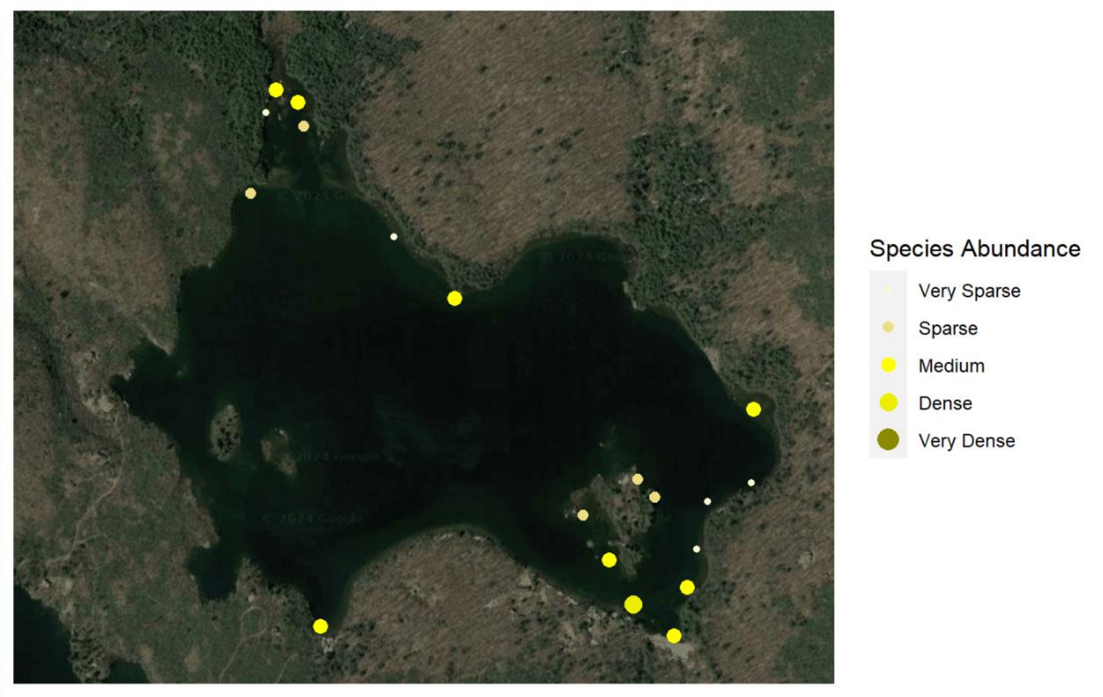
Schoenoplectus sp.	10	24
Isoetes sp.	7	18
Myriophyllum humile	7	54
Elatine sp.	5	45
Eleocharis robbinsii	2	10
Eleocharis emergent	2	85
Fontinalis sp.	2	10
Potamogeton confervoides	2	70
Potamogeton oakesianus	2	50
Sagittaria latifolia	2	5

Myriophyllum humile	11	24
Nymphaea odorata	9	8
Eleocharis acicularis	6	11
Potamogeton epihydrus	6	35
Sparganium angustifolium	6	11
Potamogeton natans	6	28
Isoetes sp.	4	16
Benthic cyanobacteria	3	5
Filamentous algae	3	10
Fontinalis sp.	2	18
Elatine sp.	1	5
Typha sp.	<1	5
Utricularia minor	<1	5

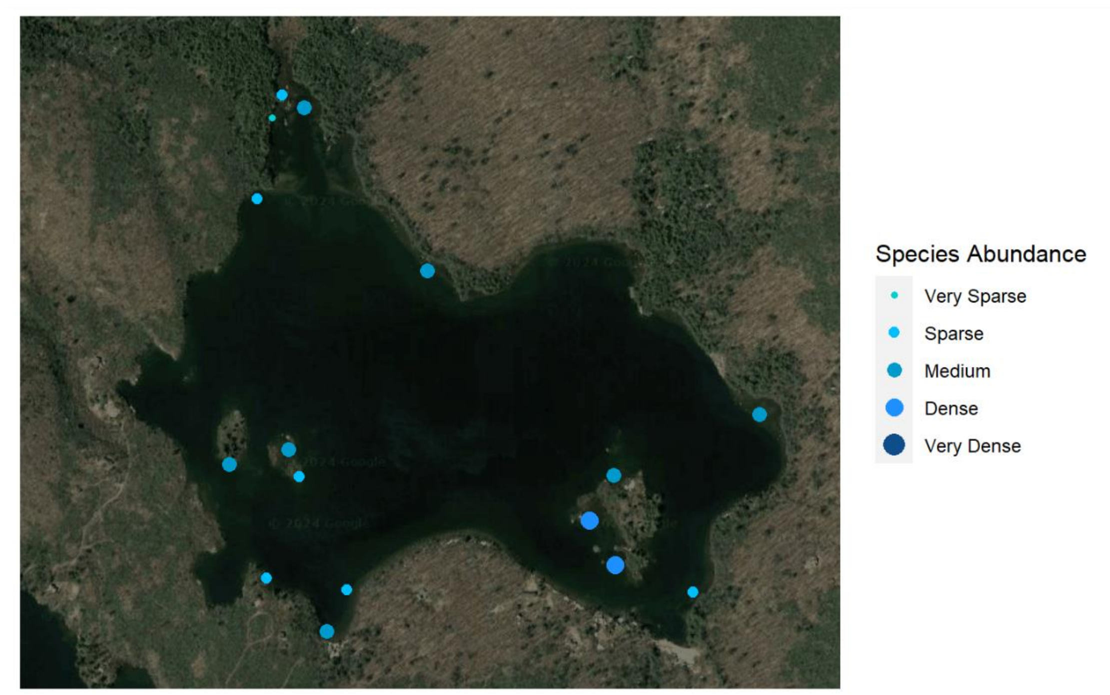
Map 1. Dormann's Cardinalflower (*Lobelia dortmanna*) in North Riga on 9-1-2023.



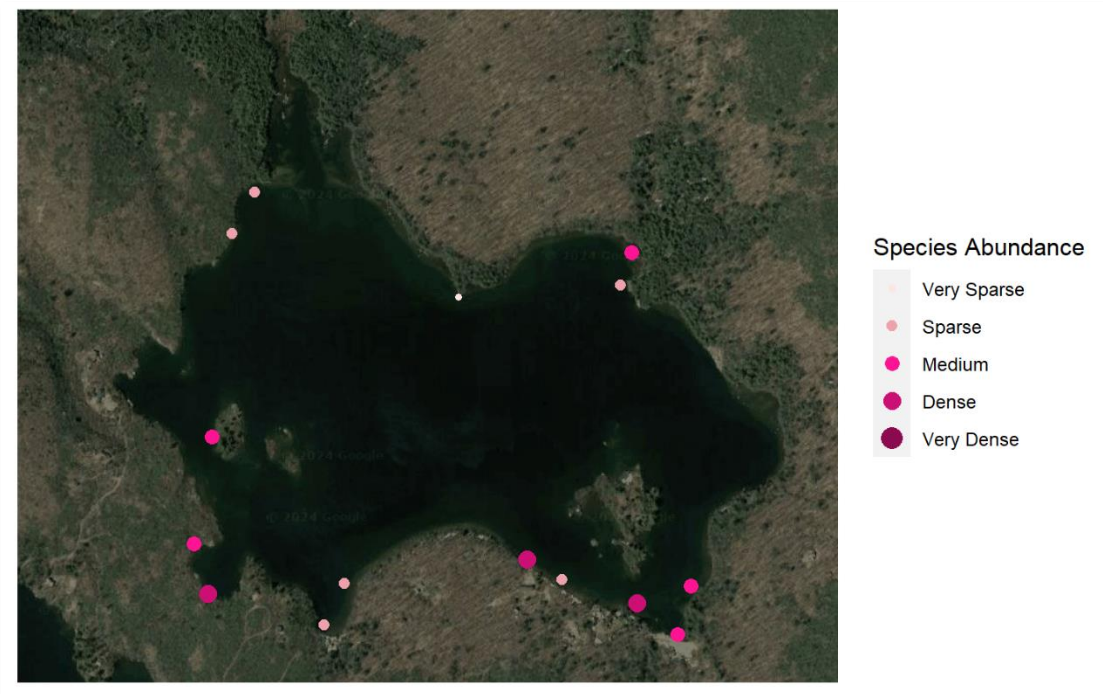
Map 2. Eastern Purple Bladderwort (*Utricularia purpurea*) in North Riga on 9-1-2023.



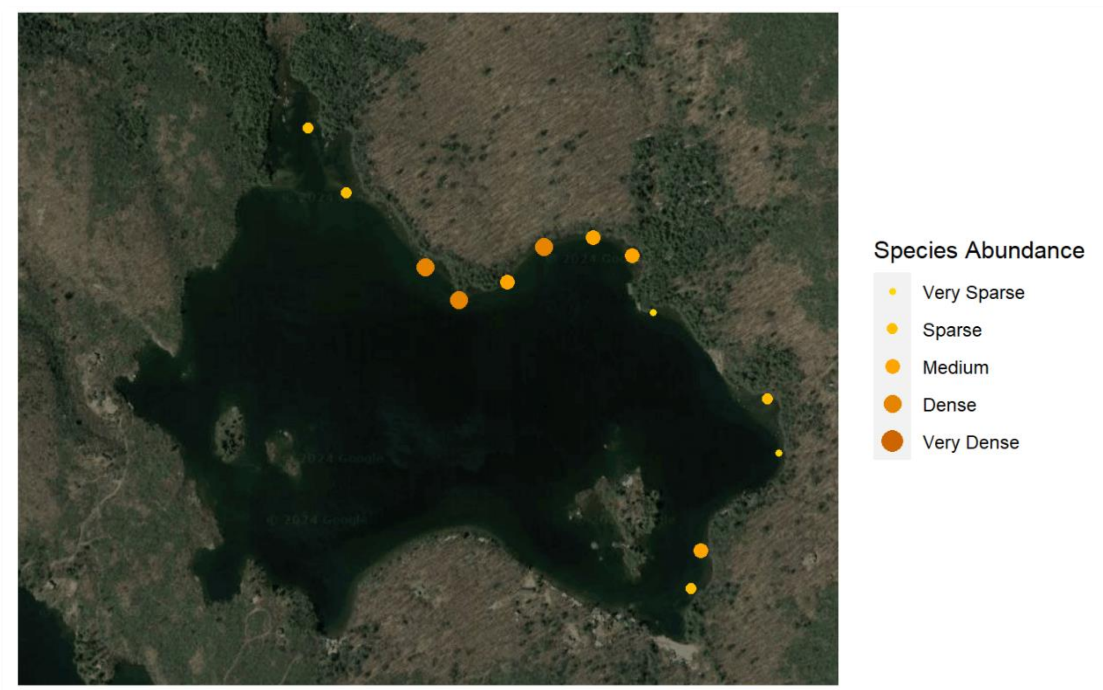
Map 3. Yellow Water Lily (*Nuphar variegata*) in North Riga on 9-1-2023.



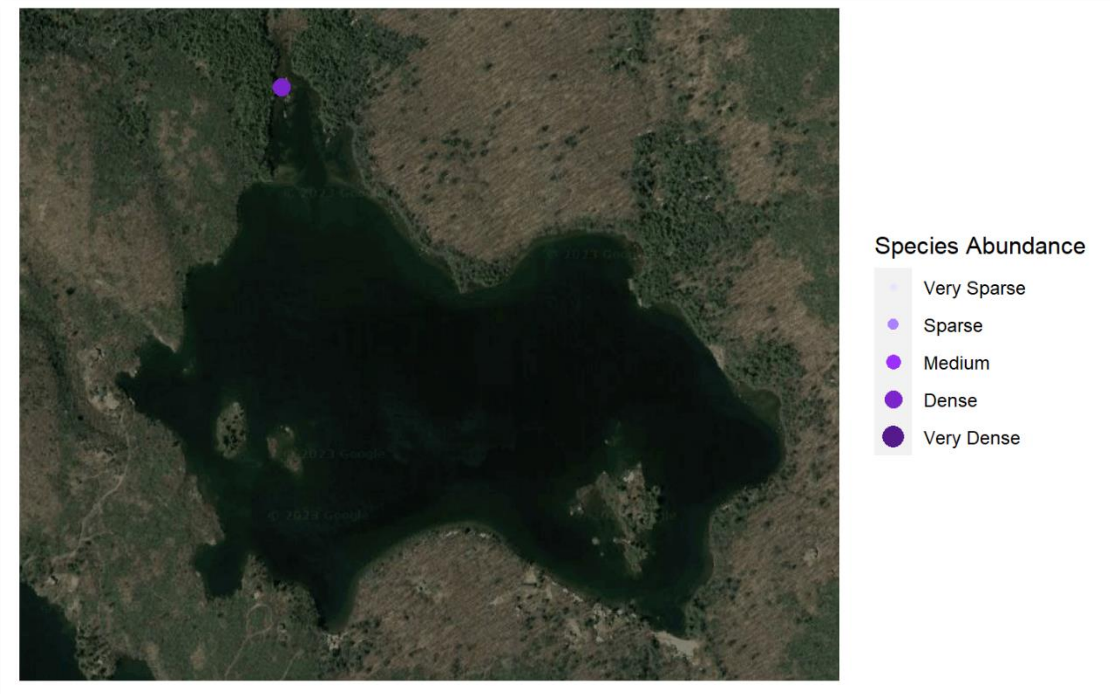
Map 4. Bur-reed sp. (*Sparganium sp.*) in North Riga on 9-1-2023.



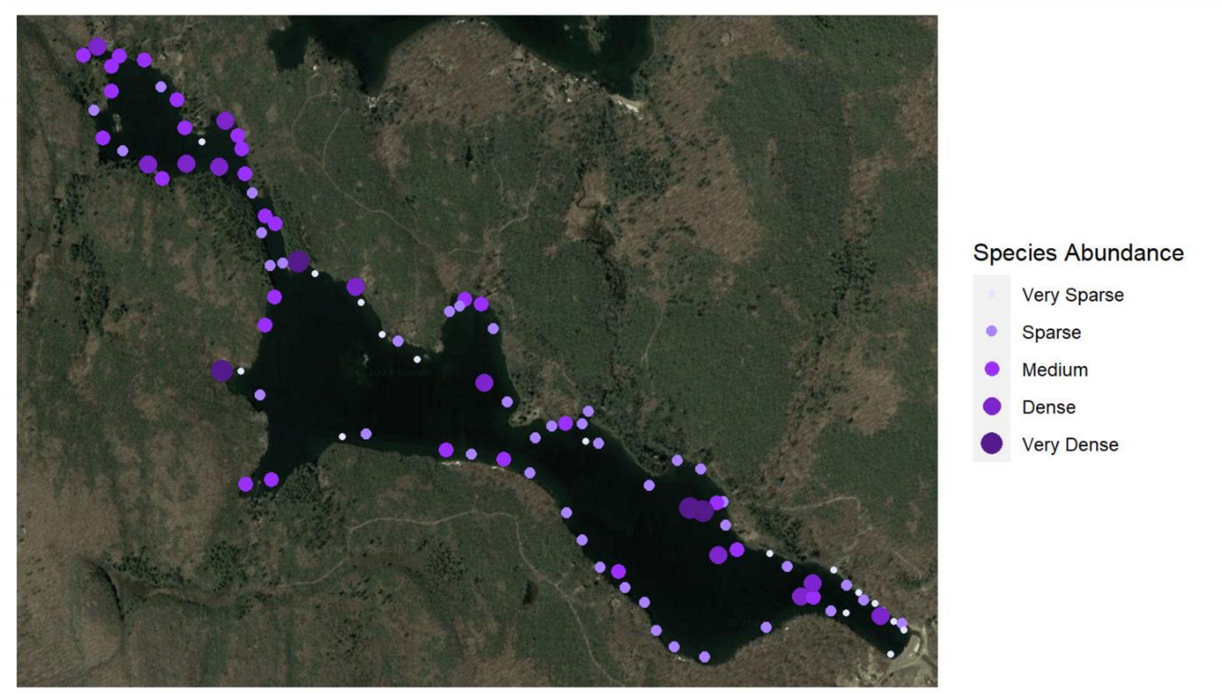
Map 5. Needle Spikerush (*Eleocharis acicularis*) in North Riga on 9-1-2023.



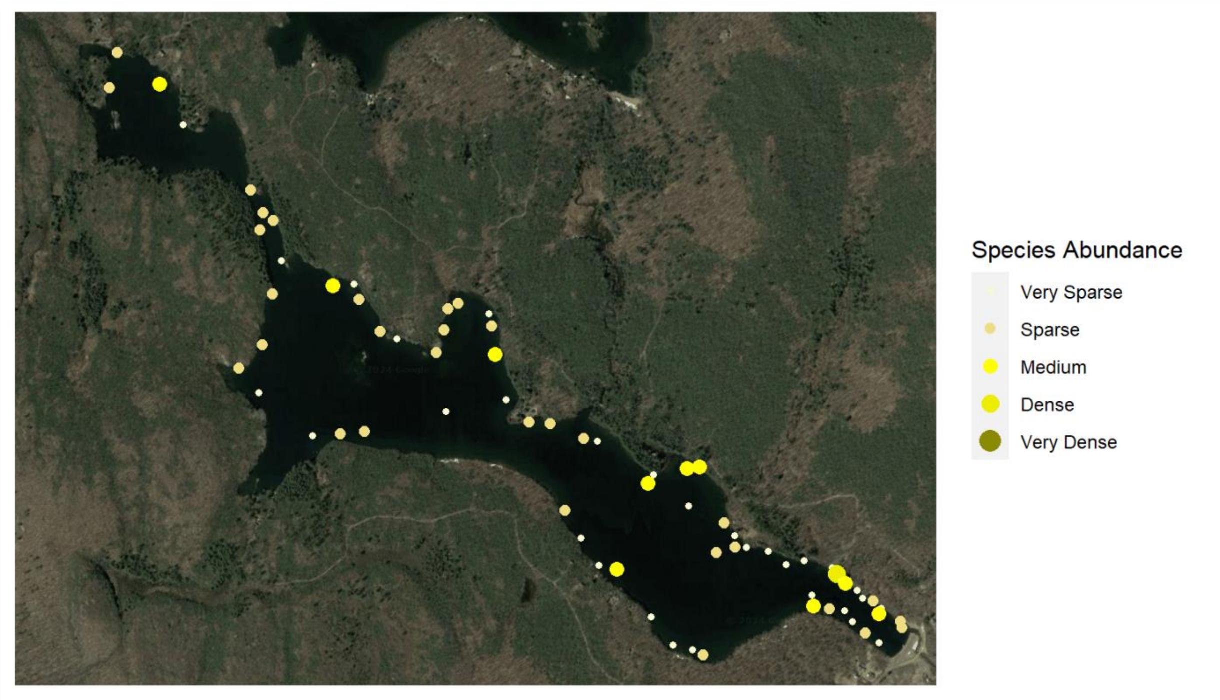
Map 6. Emergent Bur-reed (*Sparganium sp.*) in North Riga on 9-1-2023.



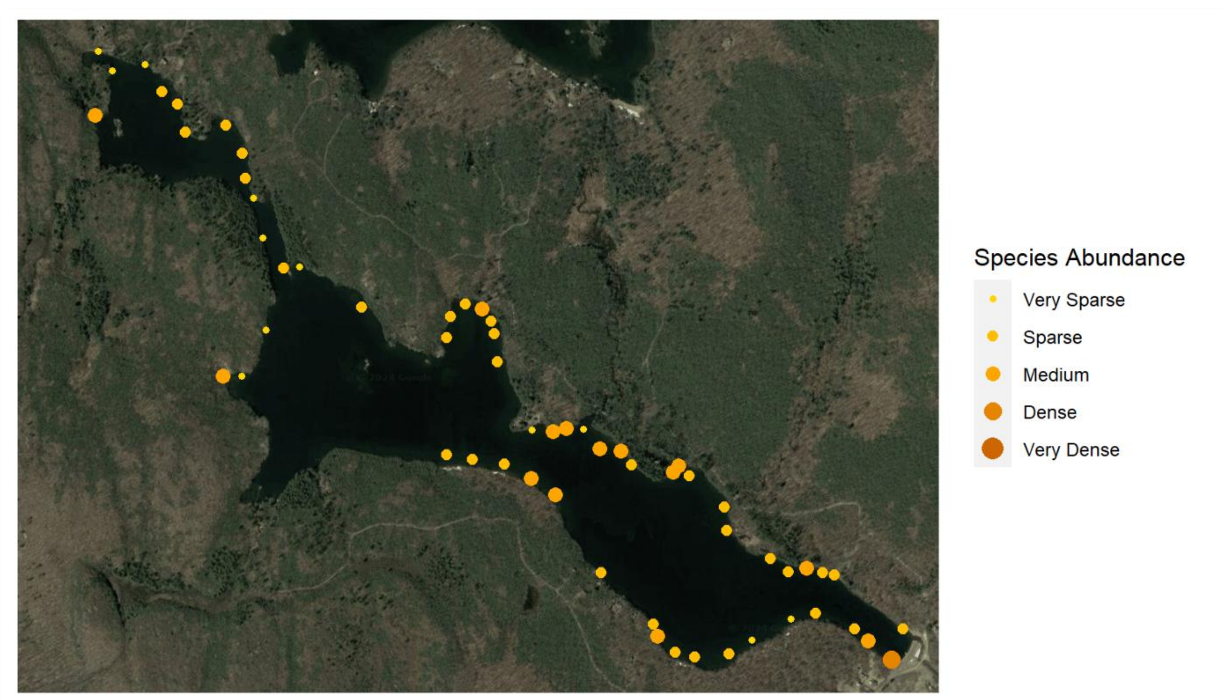
Map 7. Tuckerman's Pondweed (*Potamogeton confervoides)* in North Riga on 9-1-2023.



Map 8. Eastern Purple Bladderwort (*Utricularia purpurea*) in South Riga on 9-1-2023.



Map 9. Stonewort (*Nitella sp.*) in South Riga on 9-1-2023.



Map 10. Emergent Bur-reed (*Sparganium sp.*) in South Riga on 9-1-2023.

Map 11. Small Pondweed (*Potamogeton bicupulatus*) in South Riga on 9-1-2023.

Map 12. Dortmann's Cardinalflower (*Lobelia dortmanna*) in South Riga on 9-1-2023.

Map 13. Filamentous Algae in South Riga on 9-1-2023.

Conclusions from 2023 Monitoring and Suggested 2024 Actions

- We encourage MRI volunteers to continue to collect monitoring data from the deep-water sampling stations in both lakes and from the Monument Brook station. Every attempt should be made to collect actual brook water prior to entering the lake. The McCabe unique station can be discontinued because of its similarity with the deep-water station. The Dam station showed higher phosphorus concentrations than other lake stations earlier in the season and lower values later in the season but followed the same general trend. It would be useful to determine if the differences noted at the Dam site are real or just due to the level of detection by the laboratory. Perhaps one more season of collecting samples from this site is warranted. The mouth of Riga Brook with South Riga Lake showed some slight differences compared to North Riga Lake water but to be able to discern real differences, the water flow would also need to be measured.

    a. Identifying the location of deepest water has been difficult in recent years, indicating that buoys are not a satisfactory method for locating the deepest water. NEAR suggests that a depth sounder be used to find 10.5 meters of water depth (~35 feet) in North Riga, and 6 meters (20 feet) in South Riga. A weighted line can also be used instead of the depth sounder. The weight used should only be heavy enough to sink the line, anything heavier will sink into the sediment and give a false depth reading. Once finding the deepest water, geo reference each site with a GPS unit and save the waypoints for future visits.

- Deploy the HOBO data loggers at the deepest depth in each lake (10.5 meters in North Riga, 6 meters in South Riga) from April to November. Consider purchasing dissolved oxygen sensors to be deployed with the water temperature HOBOs.

- Inventory both lakes for tributaries that feed water into the lakes. These may need to be found by inspecting the shoreline from the lake. Collect inlet samples from <u>all</u> flowing inlets once per month from April through November to assess watershed nutrient loading. The samples should be tested for total phosphorus, total nitrogen, and nitrate nitrogen.

- Consider conducting a perimeter survey during the early winter. A perimeter survey entails lowering the lake level by a few to several feet for a period of time in the winter. The exposed shoreline is examined for groundwater seeps, which are sampled for nutrients. The water level is returned to normal after completion of the survey.

- Conduct late-summer full-lake aquatic plant surveys at the two lakes to document the presence and abundance of aquatic plant species in the lakes and to search for invasive and protected species.

- Develop a comprehensive and meticulously detailed land use map of the watershed of both lakes. A basic land-use map depicts the general cover type as wooded, wet, urban etc. The map or series of maps that is needed here will be of much greater resolution. This map should include all disturbances no matter how small and insignificant they seem. The features to be mapped include all roads, trails, paths, lawn, landscaping, all buildings, houses, outhouses, outbuildings, docks, boathouses, etc. The locations of all on-site domestic waste-water systems, both past and present. A list should be prepared for all on-site domestic wastewater systems that details the number of users, length of time the systems are in use, any maintenance applied, and the approximate length of time the system has been functioning in place. The MRI should strongly consider keeping track of the number of people that are present during the summer months.

- The rampant invasive aquatic plant *Hydrilla verticillata* is actively being transported to lakes in CT from the CT River. NEAR found an infestation of Hydrilla in nearby East Twin Lake in 2023. We strongly recommend that MRI institute a boat sticker program where all vessels that use the lakes are inspected and given a prominent sticker that marks the vessel as clean. No vessels or fishing gear should be allowed near the lake until inspected.
    a. More information can be found on Hydrilla at the Connecticut Agricultural Experiment Station website: https://portal.ct.gov/CAES/OAIS/Connecticut-River-Project

Hydrilla from East Twin Lake, July 2023