2026

RUNYAN LAKE

LIMNOLOGICAL EVALUATION

PREPARED FOR:
RUNYAN LAKE, INC.
LIVINGSTON COUNTY, MI

PROGRESSIVE COMPANIES

INTRODUCTION

Runyan Lake is located in Tyrone Township, Livingston County, Michigan. The lake is 172 acres in surface area with a maximum depth of 55 feet and a mean (average) depth of 31.5 feet. Runyan Lake has 3.6 miles of shoreline and an approximate volume of 5,425 acre-feet or 1.8 billion gallons. In 2025, Runyan Lake, Inc. retained Progressive Companies for the purposes of studying water quality, assessing the current plant community, and providing recommendations for future management of Runyan Lake's ecosystem. Current management is overseen by Runyan Lake, Inc. with assistance from the licensed pesticide applicator to perform plant control work on the lake. This report includes information on the 2025 Runyan Lake limnological evaluation.

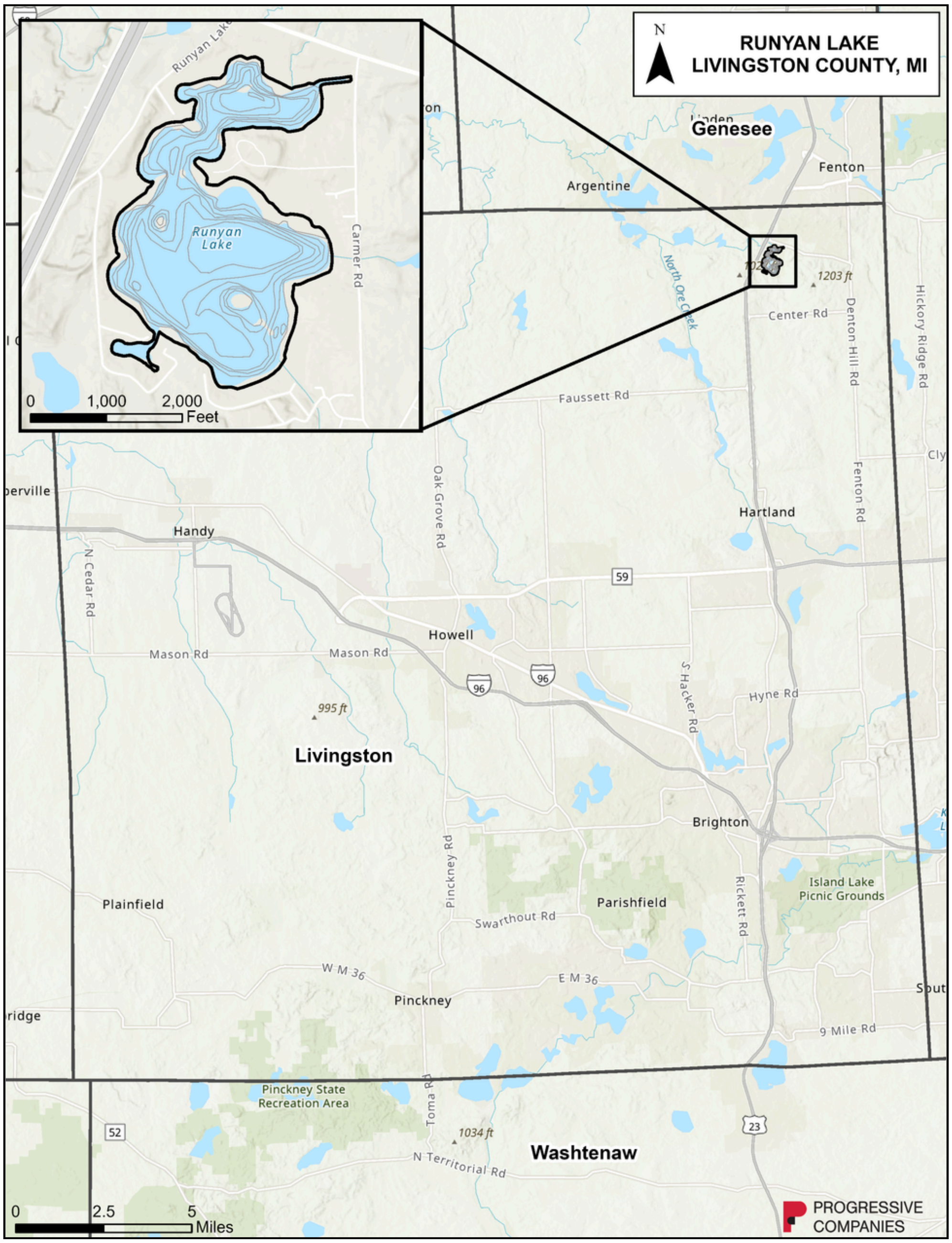


Figure 1. Runyan Lake location map

LAKE WATER QUALITY

Lake water quality is determined by a unique combination of processes that occur both within and outside of the lake. In order to make sound management decisions, it is necessary to have an understanding of the current physical, chemical, and biological condition of the lake, and the potential impact of drainage from the surrounding watershed.

Lakes are commonly classified as oligotrophic, mesotrophic, or eutrophic. Oligotrophic lakes are generally deep and clear with little aquatic plant growth. These lakes maintain sufficient dissolved oxygen in the cool, deep bottom waters during late summer to support cold-water fish such as trout and whitefish. By contrast, eutrophic lakes are generally shallow, turbid, and support abundant aquatic plant growth. In deep eutrophic lakes, the cool bottom waters usually contain little or no dissolved oxygen. Therefore, these lakes can only support warmwater fish such as bass and pike. Lakes that fall between these two extremes are called mesotrophic lakes.

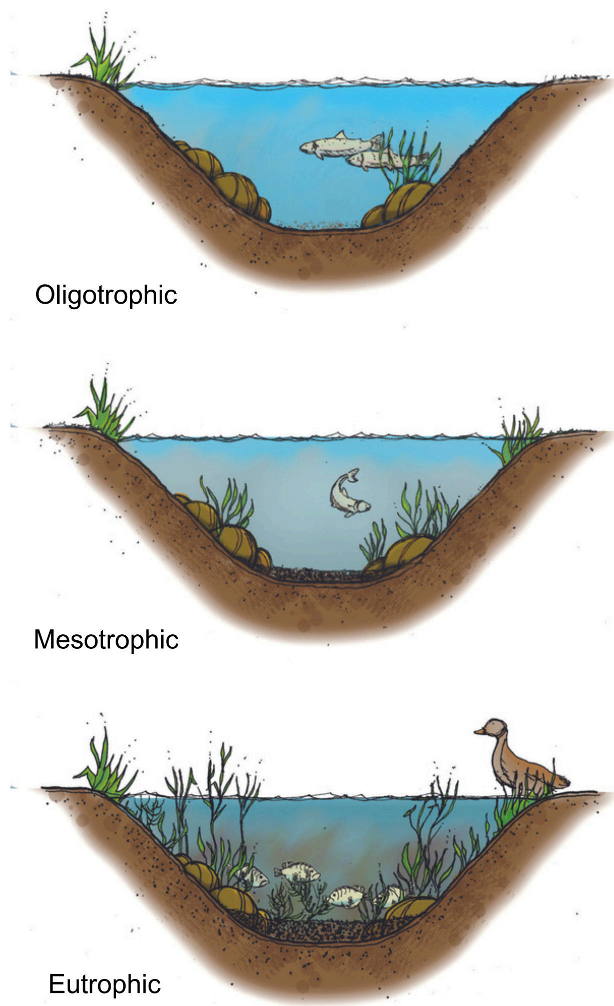


Figure 2. Lake classification.

Under natural conditions, most lakes will ultimately evolve to a eutrophic state as they gradually fill with sediment and organic matter transported to the lake from the surrounding watershed. As the lake becomes shallower, the process accelerates. When aquatic plants become abundant, the lake slowly begins to fill in as sediment and decaying plant matter accumulate on the lake bottom. Eventually, terrestrial plants become established and the lake is transformed to a marshland. The aging process in lakes is called "eutrophication" and may take anywhere from a few hundred to several thousand years, generally depending on the size of the lake and its watershed. The natural lake aging process can be greatly accelerated if excessive amounts of sediment and nutrients (which stimulate aquatic plant growth) enter the lake from the surrounding watershed. Because these added inputs are usually associated with human activity, this accelerated lake aging process is often referred to as "cultural eutrophication." The problem of cultural eutrophication can be managed by identifying sources of sediment and nutrient loading (i.e., inputs) to the lake and developing strategies to halt or slow the inputs. Key parameters used to evaluate a lake's productivity or trophic state include total phosphorus, chlorophyll-*a*, and Secchi transparency.

PHOSPHORUS

Phosphorus is the nutrient that most often controls aquatic plant growth and the rate at which a lake ages and becomes more eutrophic. In the presence of oxygen, lake sediments act as a phosphorus trap, making it unavailable for aquatic plant and algae growth. If bottom-water oxygen is depleted, phosphorus will be released from the sediments and may be available to promote aquatic plant and algae growth. In some lakes, the internal release of phosphorus from the bottom sediments is the primary source of phosphorus loading.

By reducing the amount of phosphorus in a lake, it may be possible to limit the amount of aquatic plant and algae growth. In general, lakes with a phosphorus concentration greater than 20 µg/L (micrograms per liter, or parts per billion) are able to support abundant growth and are classified as nutrient-enriched or eutrophic.

CHLOROPHYLL-*a*

Chlorophyll-*a* is a pigment that imparts the green color to plants and algae. A rough estimate of the quantity of algae present in lake water can be made by measuring the amount of chlorophyll-*a* in the water column. A chlorophyll-*a* concentration greater than 6 µg/L is considered characteristic of a eutrophic condition.

SECCHI TRANSPARENCY

A Secchi disk is often used to estimate water clarity. The measurement is made by fastening a round, black and white, 8-inch disk to a calibrated line. The disk is lowered over the deepest point of the lake until it is no longer visible, and the depth is noted. The disk is then raised until it reappears. The average between these two depths is the Secchi transparency. Generally, it has been found that aquatic plants can grow at a depth of approximately twice the Secchi transparency measurement. In eutrophic lakes, water clarity is often reduced by algae growth in the water column, and Secchi disk readings of 7.5 feet or less are common.

Generally, as phosphorus inputs (both internal and external) to a lake increase, the amount of algae the lake can support will also increase. Thus, the lake will exhibit increased chlorophyll-*a* levels and decreased transparency. A summary of lake classification criteria is shown in Table 1.

TABLE 1 - LAKE CLASSIFICATION CRITERIA

Lake Classification	Total Phosphorus (µg/L)*	Chlorophyll-*a* (µg/L)*	Secchi Transparency (feet)
Oligotrophic	Less than 10	Less than 2.2	Greater than 15.0
Mesotrophic	10 to 20	2.2 to 6.0	7.5 to 15.0
Eutrophic	Greater than 20	Greater than 6.0	Less than 7.5

* µg/L = micrograms per liter = parts per billion

pH and TOTAL ALKALINITY

pH is a measure of the amount of acid or base in the water. The pH scale ranges from 0 (acidic) to 14 (alkaline or basic) with neutrality at 7. The pH of most lakes in the Upper Midwest ranges from 6.5 to 9.0 (Michigan Department of Environmental Quality (MDEQ)* 2012; Table 2). In addition, according to the Michigan Department of Environment, Great Lakes, and Energy (EGLE 2021):

While there are natural variations in pH, many pH variations are due to human influences. Fossil fuel combustion products, especially automobile and coal-fired power plant emissions, contain nitrogen oxides and sulfur dioxide, which are converted to nitric acid and sulfuric acid in the atmosphere. When these acids combine with moisture in the atmosphere, they fall to earth as acid rain or acid snow. In some parts of the United States, especially the Northeast, acid rain has resulted in lakes and streams becoming acidic, resulting in conditions which are harmful to aquatic life. The problems associated with acid rain are lessened if limestone is present, since it is alkaline and neutralizes the acidity of the water.

Most aquatic plants and animals are adapted to a specific pH range, and natural populations may be harmed by water that is too acidic or alkaline. Immature stages of aquatic insects and young fish are extremely sensitive to pH values below 5. Even microorganisms which live in the bottom sediment and decompose organic debris cannot live in conditions which are too acidic. In very acidic waters, metals which are normally bound to organic matter and sediment are released into the water. Many of these metals can be toxic to fish and humans. Below a pH of about 4.5, fish are unable to survive. The Michigan Water Quality Standard (Part 4 of Act 451) states that pH shall be maintained within the range of 6.5 to 9.0 in all waters of the state.

Alkalinity, also known as acid-neutralizing capacity or ANC, is the measure of the pH-buffering capacity of water in that it is the quantitative capacity of water to neutralize an acid. pH and alkalinity are closely linked and are greatly impacted by the geology and soil types that underlie a lake and its watershed. According to MDEQ (2012):

Michigan's dominant limestone geology in the Lower Peninsula and the eastern Upper Peninsula contributes to the vast majority of Michigan lakes being carbonate-bicarbonate dominant [which increases alkalinity and moderates pH] and lakes in the western Upper Peninsula having lower alkalinity and thus lesser buffering capacity.

The alkalinity of most lakes in the Upper Midwest is within the range of 23 to 148 milligrams per liter, or parts per million, as calcium carbonate (MDEQ 2012; Table 2).

TABLE 2 - pH AND ALKALINITY OF UPPER MIDWEST LAKES

Measurement	Low	Moderate	High
pH (in standard units) Total Alkalinity or ANC (in mg/L as CaCO3)*	Less than 6.5 Less than 23	6.5 to 9.0 23 to 148	Greater than 9.0 Greater than 148

* MDEQ now the Michigan Department of Environment, Great Lakes, and Energy
* mg/L as CaCO3 = milligrams per liter as calcium carbonate

CHLORIDE

Normally, chloride is a very minor component of freshwater systems and background concentrations are generally less than about 10 milligrams per liter (Wetzel 2001; Fuller and Taricska 2012, Figure 5). However, chloride pollution from sources such as road salting, industrial or municipal wastewater, water softeners, and septic systems can increase chloride levels in lakes. Increased chloride levels can reduce biological diversity and, because chloride increases the density of water, elevated chloride levels can prevent a lake from completely mixing during spring and fall. The U.S. Environmental Protection Agency's acute and chronic standards for protection of freshwater aquatic life are 860 and 230 milligrams per liter of chloride, respectively (USEPA 2021). EPA states that "[a]quatic life criteria for toxic chemicals are the highest concentration of specific pollutants or parameters in water that are not expected to pose a significant risk to the majority of species in a given environment or a narrative description of the desired conditions of a water body being 'free from' certain negative conditions."

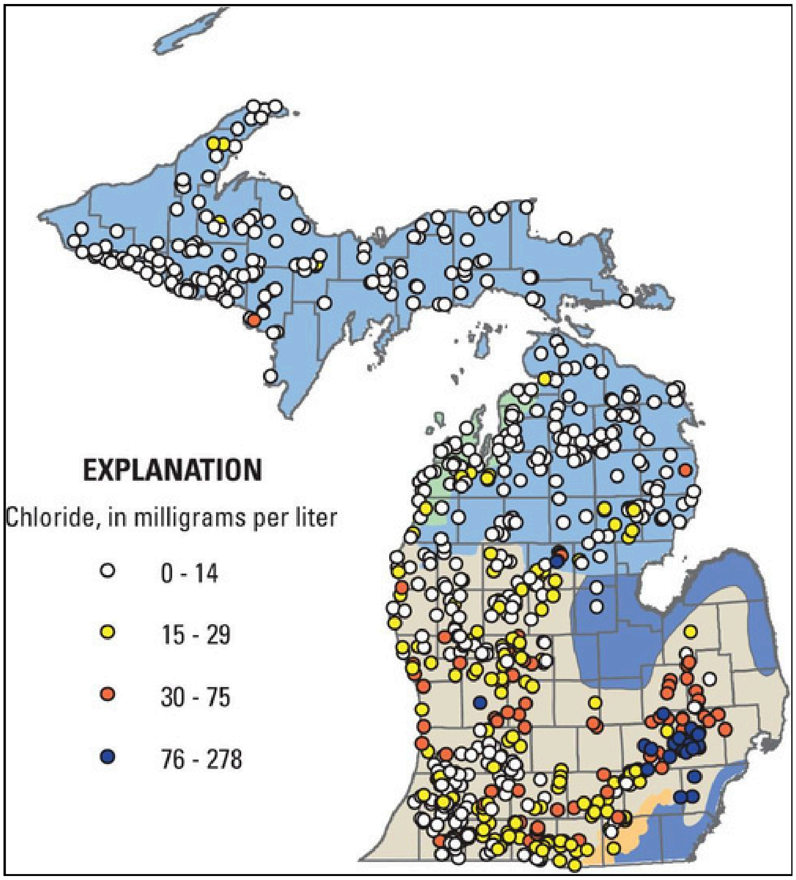


Figure 3. Lake chloride levels (2001–10) in USEPA ecoregions. Fuller and Taricska 2012.

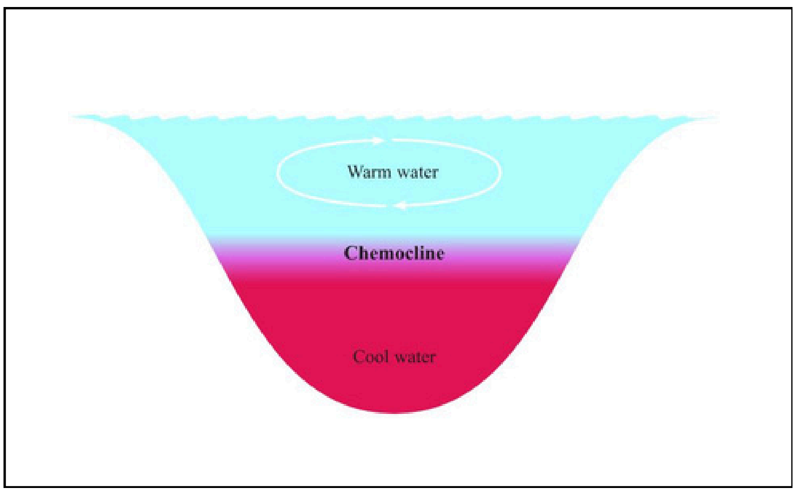


Figure 4. High chloride inputs can result in a chemocline, preventing lake mixing.

TEMPERATURE

Temperature is important in determining the type of organisms which may live in a lake. For example, trout prefer temperatures below 68°F. Temperature also determines how water mixes in a lake. As the ice cover breaks up on a lake in the spring, the water temperature becomes uniform from the surface to the bottom. This period is referred to as "spring turnover" because water mixes throughout the entire water column. As the surface waters warm, they are underlain by a colder, more dense strata of water. This process is called thermal stratification. Once thermal stratification occurs, there is little mixing of the warm surface waters with the cooler bottom waters. The transition layer that separates these layers is referred to as the "thermocline." The thermocline is characterized as the zone where temperature drops rapidly with depth. As fall approaches, the warm surface waters begin to cool and become more dense. Eventually, the surface temperature drops to a point that allows the lake to undergo complete mixing. This period is referred to as "fall turnover." As the season progresses and ice begins to form on the lake, the lake may stratify again. However, during winter stratification, the surface waters (at or near 32°F) are underlain by slightly warmer water (about 39°F). This is sometimes referred to as "inverse stratification" and occurs because water is most dense at a temperature of about 39°F. As the lake ice melts in the spring, these stratification cycles are repeated.

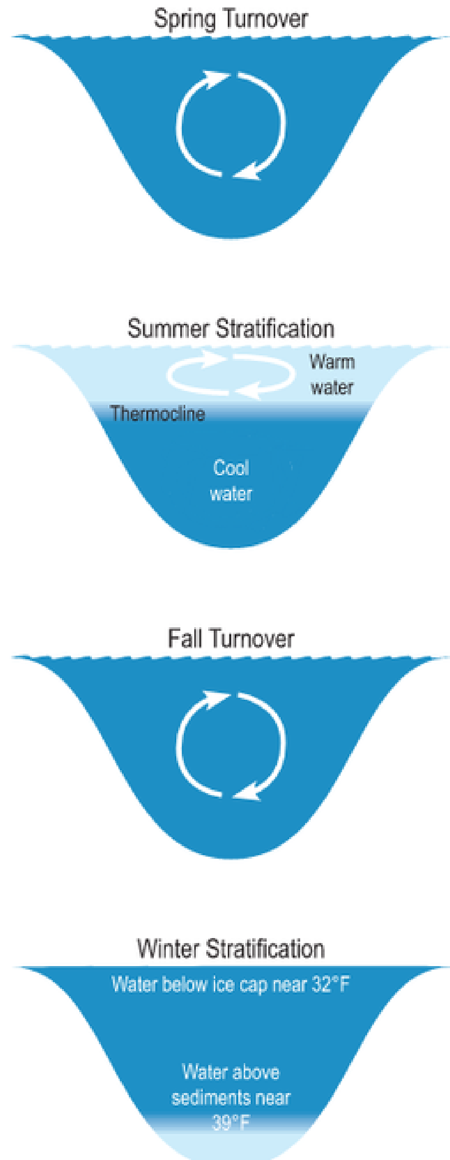


Figure 5. Seasonal thermal stratification cycles.

DISSOLVED OXYGEN

An important factor influencing lake water quality is the quantity of dissolved oxygen in the water column. The major inputs of dissolved oxygen to lakes are the atmosphere and photosynthetic activity by aquatic plants. An oxygen level of about 5 mg/L (milligrams per liter, or parts per million) is required to support warmwater fish. In lakes deep enough to exhibit thermal stratification, oxygen levels are often reduced or depleted below the thermocline once the lake has stratified. This is because the oxygen has been consumed, in large part, by bacteria that use oxygen as they decompose organic matter (plant and animal remains) at the bottom of the lake. Bottom-water oxygen depletion is a common occurrence in eutrophic and some mesotrophic lakes. Thus, eutrophic and most mesotrophic lakes cannot support coldwater fish because the cool, deep water (that the fish require to live) does not contain sufficient oxygen.

SAMPLING METHODS

Water quality sampling was conducted in the summer of 2025 and spring of 2026 at the two deep basins within Runyan Lake and at 4 tributary inlets. Temperature and dissolved oxygen were measured using a YSI Prosolo ODO/T probe. Samples in the deep basins were collected at five foot depth intervals in summer and ten foot intervals in spring with a Van Dorn bottle to be analyzed for pH, total alkalinity, and total phosphorus, and chloride. Tributary samples were collected by hand to be analyzed for total phosphorus, total suspended solids, and *E. coli* bacteria. pH was measured in the field using a Hach Pocket Pro pH meter. Total alkalinity samples were placed on ice and transported to Progressive Companies and for analysis. Total phosphorus and chloride samples were placed on ice and transported to Summit Laboratories and Paragon Laboratories for analysis. Total alkalinity was titrated at Progressive Companies using Standard Methods procedure 2320 B. Total phosphorus, chloride, and total suspended solids were analyzed at Summit Laboratories and Paragon Laboratories using Standard Methods procedures 4500-PE, 4500-Cl, and and SM4110B, respectively. In addition to the depth-interval samples at each deep basin, Secchi transparency was measured and composite chlorophyll-*a* samples were collected from the surface to a depth equal to twice the Secchi transparency. Chlorophyll-*a* samples were analyzed by Prein and Newhof Laboratories* using Standard Methods procedure 10200 H. Tributary samples were analyzed for *E. coli* bacteria at Summit Laboratories and Paragon Laboratories.

SAMPLING RESULTS AND DISCUSSION

Sampling results are provided in Tables 3 to 5. In September 2025, Runyan Lake was thermally stratified. Total phosphorus concentrations were low and pH was within the moderate range for Upper Midwest lakes. Chloride levels were well below the EPA's acute and chronic standards for freshwater life. Oxygen depletion occurred below 20-feet at both deep basins, showing that the lake supports a warm water fishery, where species such as bass and panfish will thrive within the lake. Since there are no areas of cool oxygenated water during the summer months, cool water species such as pike and walleye most likely cannot thrive within the lake. While pike have been known to occupy warm-water fisheries within the mid-west, they typically will have stunted growth and may require stocking over time to sustain populations.

In May 2026, Runyan Lake was showing signs of thermal stratification. Total phosphorus concentrations were low at deep basin 1 and moderate at the bottom of deep basin 2. pH was within the moderate range for Upper Midwest lakes. Chloride levels were well below the EPA's acute and chronic standards for freshwater life. Oxygen depletion was beginning to occur below 20-feet at both deep basins.

Spring tributary sampling showed higher phosphorus inputs than in summer. Suspended solids inputs were generally low in spring and summer, except for Tributary 4 in summer. *E. coli* levels were somewhat elevated at most tributaries, but only reached concentrations above the safe recreational threshold of 300 colonies/mL at Tributary 2 in spring.

SAMPLING RESULTS AND DISCUSSION CONTINUED

Water column and tributary phosphorus levels were elevated in spring of 2026 compared to fall of 2025. Heavy precipitation events throughout spring of 2026, which resulted in widespread flooding including in and around Runyan Lake, may have contributed to this observation.

In comparison to a 2004-2005 water quality study on Runyan Lake, phosphorus levels have declined significantly, from an average of 20.7 µg/L per sample in 2004-2005, to an average of <11.1 µg/L in 2025-2026. Meanwhile, secchi transparency was drastically reduced, from an average of 18.5 ft in 2004-2005 to an average of 8.5 ft in 2025-2026. Chlorophyll-*a* levels remained stable. The opposite trends in phosphorus and secchi transparency water quality parameters suggest an obfuscating factor. The 2005 study noted that the recent filter-feeding zebra mussel invasion in Runyan Lake may have resulted in an apparent increase in water quality compared to an earlier 1995 study. Zebra and quagga mussels have both shown boom-and-bust-cycle population characteristics over the course of their invasion of the Great Lakes ecosystem. Although a mussel survey was beyond the scope of this limnological report, it is likely that invasive mussel populations in Runyan Lake have at this point boomed, busted, and/or stabilized, resulting in a return to lower overall water clarity despite long-term improvement in phosphorus levels.

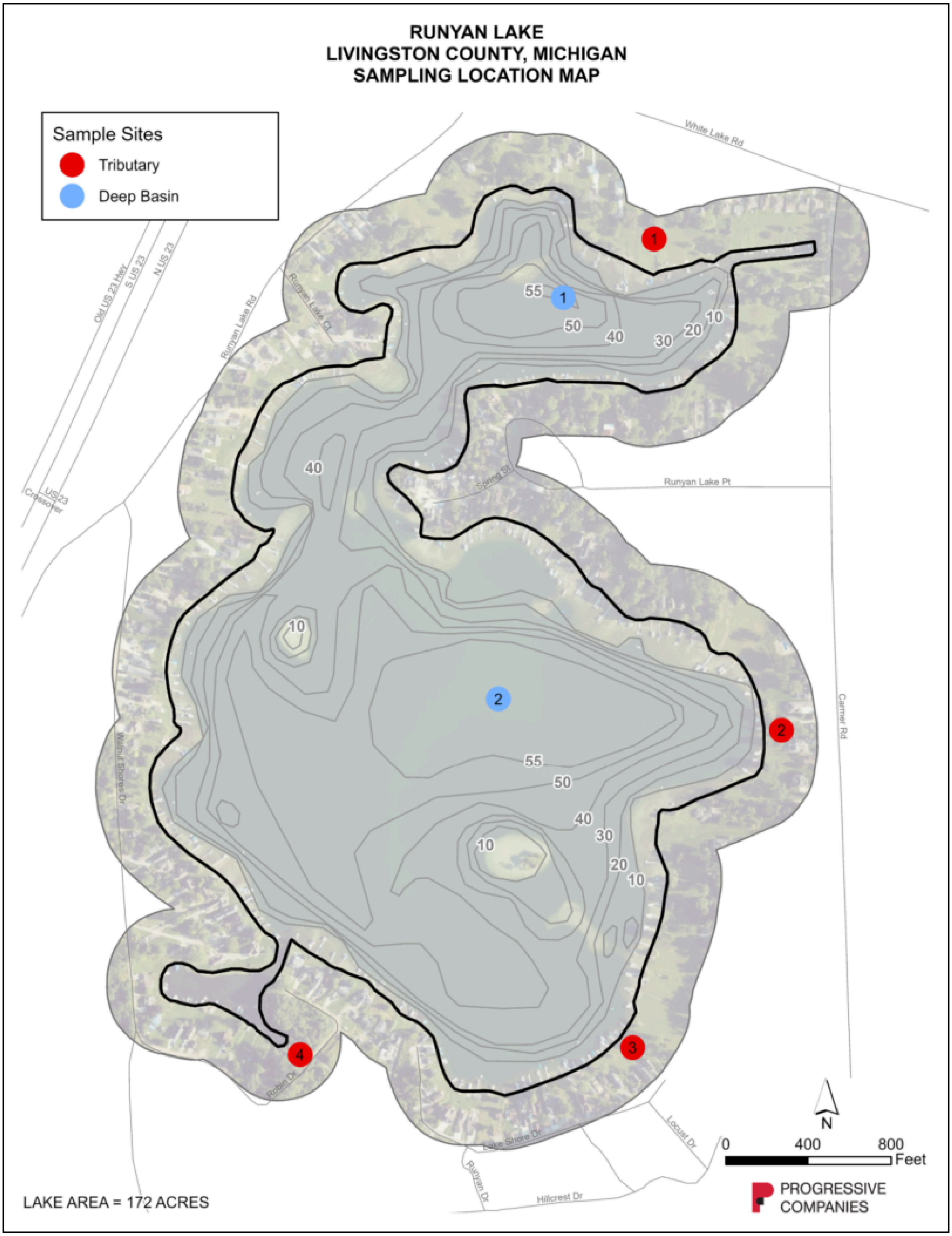


Figure 6. Runyan Lake sampling location map

TABLE 3 - RUNYAN LAKE SUMMER 2025 DEEP BASIN WATER QUALITY DATA

Date	Site	Depth (feet)	Temp (F)	Dissolved Oxygen (mg/L)*	Total Phosphorus (µg/L)*	pH (S.U.)*
3-Sept-25	1	1	72	10.4	< 10	8.5
3-Sept-25	1	10	72	10.2	< 10	8.5
3-Sept-25	1	20	69	8.6	< 10	8.1
3-Sept-25	1	30	49	0.3	< 10	7.7
3-Sept-25	1	40	46	0.4	< 10	7.8
3-Sept-25	1	50	44	0.6	< 10	7.9
3-Sept-25	2	1	72	10.4	< 10	8.5
3-Sept-25	2	10	72	10.3	< 10	8.5
3-Sept-25	2	20	66	5.5	< 10	7.9
3-Sept-25	2	30	50	1.9	< 10	7.8
3-Sept-25	2	40	46	0.5	< 10	7.8
3-Sept-25	2	50	45	0.6	< 10	7.9

TABLE 4 - RUNYAN LAKE 2025 SURFACE WATER QUALITY DATA

Date	Station	Secchi Transparency (feet)	Chlorophyll-*a* (µg/L)*	Chloride (mg/L)*
3-Sept-25	1	6.5	2	46
3-Sept-25	2	6.5	1	46

TABLE 5 - RUNYAN LAKE 2025 TRIBUTARY DATA

Date	Site	Total Phosphorus (µg/L)*	Total Suspended Solids (mg/L)*	*E. coli* (colonies / 100 mL)*
3-Sept-25	Trib 1	< 10	1	166
3-Sept-25	Trib 2	< 10	1	33
3-Sept-25	Trib 3	< 10	1	117
3-Sept-25	Trib 4	< 10	8	285

* mg/L = milligrams per liter = parts per million
* µg/L = micrograms per liter = parts per billion
* colonies / 100 mL = colonies of *E. coli* per 100 milliliters

TABLE 3 - RUNYAN LAKE SPRING 2026 DEEP BASIN WATER QUALITY DATA

Date	Site	Depth (feet)	Temp (F)	Dissolved Oxygen (mg/L)*	Total Phosphorus (µg/L)*	pH (S.U.)*
19-May-26	1	1	67	9.1	< 10	9.0
19-May-26	1	10	65	9.1	< 10	9.0
19-May-26	1	20	54	8.6	< 10	8.9
19-May-26	1	30	46	7.6	< 10	8.8
19-May-26	1	40	45	7.1	11	8.6
19-May-26	1	50	43	4.3	< 10	8.4
19-May-26	2	1	65	9.4	< 10	8.5
19-May-26	2	10	64	9.4	11	8.5
19-May-26	2	20	53	9.1	15	8.4
19-May-26	2	30	45	8.3	15	8.4
19-May-26	2	40	44	7.6	20	8.4
19-May-26	2	50	44	5.4	15	8.4

TABLE 4 - RUNYAN LAKE SPRING 2026 SURFACE WATER QUALITY DATA

Date	Station	Secchi Transparency (feet)	Chlorophyll-*a* (µg/L)*	Chloride (mg/L)*
19-May-26	1	12	ND*	65
19-May-26	2	9	ND*	44

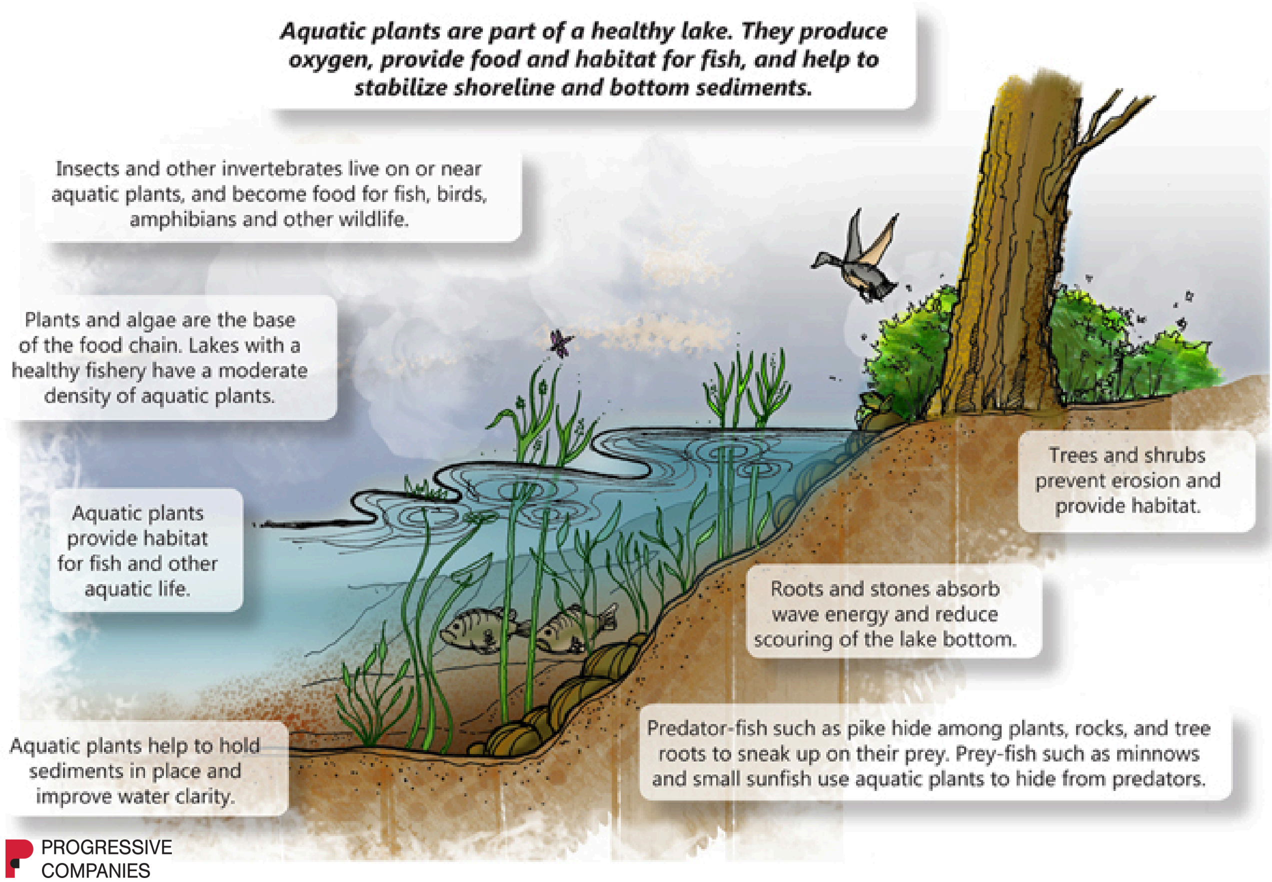
TABLE 5 - RUNYAN LAKE SPRING 2026 TRIBUTARY DATA

Date	Site	Total Phosphorus (µg/L)*	Total Suspended Solids (mg/L)*	*E. coli* (colonies / 100 mL)*
19-May-26	Trib 1	22	<3.3	63
19-May-26	Trib 2	13	<3.3	365
19-May-26	Trib 3	24	<3.3	82
19-May-26	Trib 4	15	<3.3	192

* mg/L = milligrams per liter = parts per million
* µg/L = micrograms per liter = parts per billion
* colonies / 100 mL = colonies of *E. coli* per 100 milliliters
* ND = none detected

PLANT COMMUNITY ASSESSMENT

Aquatic plants are an important component of lakes. They produce oxygen during photosynthesis, provide food, habitat and cover for fish, and help stabilize shoreline and bottom sediments. There are four main aquatic plant groups: submersed, floating-leaved, free-floating, and emergent. Each plant group provides important ecological functions. Maintaining a diversity of native aquatic plants is important to sustaining a healthy fishery and a healthy lake. Invasive aquatic plant species have negative impacts on the lake's ecosystem. It is important to maintain an active plant control program to reduce the establishment and spread of invasive species within Runyan Lake.



Aquatic nuisance plant control programs typically rely on the use of aquatic herbicides. In Michigan, the application of these herbicides require a permit issued by the Department of Environment, Great Lakes, and Energy (EGLE). Licensed pesticide applicators are authorized to carry out treatments across waterbodies under a lake wide issued permit. Aquatic weed management on Runyan Lake is currently achieved through Aqua-Weed Control Inc. Eurasian milfoil is actively managed in addition to monthly treatment for starry stonewort during the months of May – October. To ensure that aquatic plant management is conducted in an environmentally responsible and cost-effective manner, it is often advantageous for communities to engage professional lake management consultants. These consultants can provide oversight, develop comprehensive management strategies, and coordinate treatment plans tailored to the specific needs of the lake.

PLANT INVENTORY SURVEY

A detailed vegetation survey of Runyan Lake was conducted on September 3 to evaluate the type and abundance of all plants in the lake. The table below lists each plant species observed during the survey and the relative abundance of each. At the time of the September 3 survey, 11 submersed species, 2 floating-leaved species, and 8 emergent species were found in the lake. Runyan Lake maintains a good diversity of beneficial native plant species. Non-native milfoil was found at nearly half of the survey sites and should be controlled to prevent the formation of a monoculture.

TABLE 6 - RUNYAN LAKE SEPTEMBER 3, 2025 PLANT INVENTORY DATA

Common Name	Scientific Name	Group	Percentage of sites where present
Chara	*Chara* sp.	Submersed	54
Eurasian milfoil	*Myriophyllum spicatum*	Submersed	46
Illinois pondweed	*Potamogeton illinoensis*	Submersed	44
Large-leaf pondweed	*Potamogeton amplifolius*	Submersed	33
Slender naiad	*Najas flexilis*	Submersed	17
Wild celery	*Vallisneria americana*	Submersed	6
Variable-leaf milfoil	*Myriophyllum heterophyllum*	Submersed	5
Variable pondweed	*Potamogeton gramineus*	Submersed	3
Flat-stem pondweed	*Potamogeton zosteriformis*	Submersed	2
Thin-leaf pondweed	*Potamogeton* sp.	Submersed	1
Starry stonewort	*Nitellopsis obtusa*	Submersed	1
White waterlily	*Nymphaea odorata*	Floating-leaved	36
Yellow waterlily	*Nuphar* sp.	Floating-leaved	10
Cattail	*Typha* sp.	Emergent	10
Bulrush	*Schoenoplectus* sp.	Emergent	10
Pickerelweed	*Pontederia cordata*	Emergent	4
Purple loosestrife	*Lythrum salicaria*	Emergent	4
Water smartweed	*Persicaria amphibia var. emersa*	Emergent	4
Lake sedge	*Carex lacustris*	Emergent	3
Swamp loosestrife	*Decodon verticillatus*	Emergent	2
Phragmites	*Phragmites australis*	Emergent	2

Exotic invasive species

A map outlining the areas of Eurasian watermilfoil observed during the September 3, 2025 survey can be found at the end of the report.

RECOMMENDATIONS

Aquatic vegetation management on Runyan Lake should continue to improve lake quality and maintain ecosystem stability. The use of systemic herbicides is advised for the targeted control of Eurasian milfoil, as these products offer extended, selective control while minimizing adverse impacts on native plant species. Starry stonewort should be closely monitored and aggressively targeted with contact herbicide and chelated copper to prevent expansion of invasive macroalga across the lake. Preservation of native aquatic vegetation should remain a priority throughout the growing season, with active management limited to areas where plant growth significantly interferes with navigation or recreational use. In addition, implementing a select, small-scale, late-season mechanical harvest may help reduce biomass accumulation at the end of the season, thereby slowing the development of organic muck and contributing to improved sediment and nutrient management over time. Consistent vegetation control efforts should be maintained to prevent the resurgence of invasive species and to support the overall ecological health and water quality of the lake.

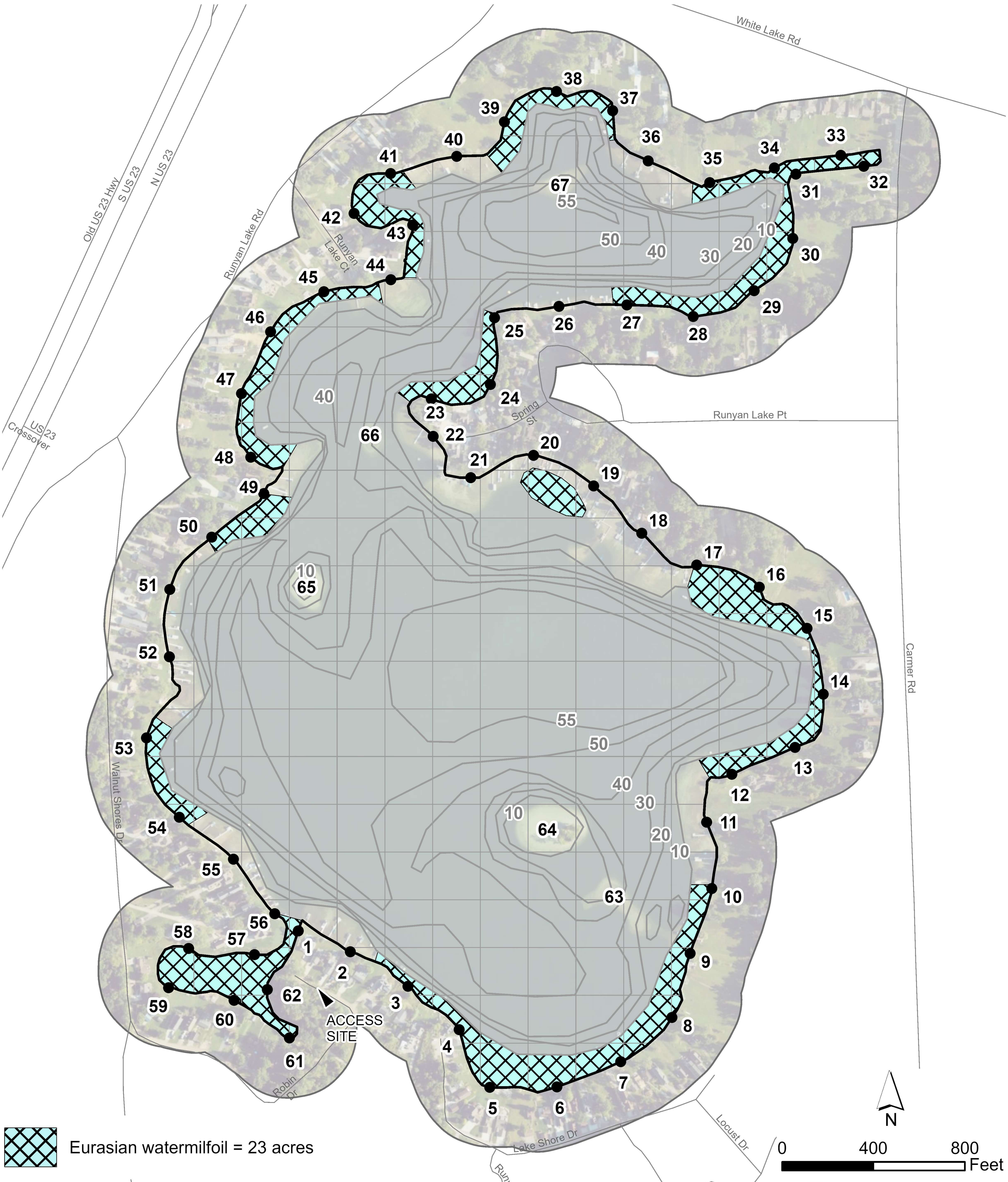
Residents should utilize and implement shoreland best management practices where possible, to reduce nutrient loading within Runyan Lake. A shoreland best practice guide can be found at the end of the report.

Finally, it is strongly recommended that a qualified environmental consultant be engaged to oversee plant control and lake improvement activities. Professional oversight will help ensure that management practices are conducted in an environmentally responsible and cost-effective manner and provide annual reports to monitor lake status and trends. Limnological studies conducted every 5-10 years will only capture a snapshot of lake conditions, which can vary widely from year-to-year due to weather, climate, and human factors. Regular lake monitoring allows for both adaptive management and better understanding of long-term trends.

TABLE 7 - RUNYAN LAKE 2027 PROPOSED MANAGEMENT ACTIVITIES

Proposed Management Activity	Projected Cost
Lake Management Oversight • Aquatic plant surveys + monitoring • Contractor coordination • Treatment plans • Information and education	$12,900
Aquatic Herbicide Applications	
• Permitting	$1,000
• Eurasian watermilfoil control (systemics)	$20,000
• Curly-leaf pondweed control (contacts)	$5,000
• Algae + Starry stonewort control (copper products)	$2,500
Total	$41,400

RUNYAN LAKE
LIVINGSTON COUNTY, MICHIGAN
EURASIAN WATERMILFOIL MAP
SURVEY DATE: SEPTEMBER 3, 2025



Eurasian watermilfoil = 23 acres

LAKE AREA = 172 ACRES
The applicator shall make adjustments, if needed, to comply with EGLE permit requirements.

PROGRESSIVE COMPANIES