

Stonewater Lakes

Lake Management Plan 2025 Update

Holden Elsner

PLM Lake & Land Management Corp.

10785 Bennet Dr · Morrice, Michigan 48857
phone 800.382.4434 · fax 517.913.6233
www.plmcorp.net



Lake Management Plan Update

Introduction

Purpose of the Update

This management plan includes updates on the bathymetric survey, vegetation survey, water quality monitoring, and document management activities to date during the 2025 season. This data helps us to better examine the current conditions in the lake and provide management recommendations for future years. The plan will detail an integrated approach to lake management activities including, but not limited to exotic weed control, water quality monitoring, and aquatic vegetation surveying.

Characteristics of the lake

Stonewater Lakes consists of 6 lakes totaling an area of 112 acres located in Wayne County, Northville Township, Michigan. There is no public access site on the lake, but the Association provides a launch site for residents. The area the lakes now encompass was originally established as a sand and gravel mining area following World War 2 by the Starkweather Family. In 1999, mining operations transferred to Stonewater L.L.C., and the development of the subdivision was started. In the early stages of development, the lake bottom was comprised of fine sand and small filtered gravel. As the lake has aged, the accumulation of organic sediment and the effects of residential development have contributed to increased aquatic plant growth. Currently, rooted vegetation is moderately dense in areas of the shoreline with a fair amount of diversity of submerged aquatic plants. Aquatic vegetation is also found at a medium density along drop-off areas and shallow flats. The lake continues to experience changes in aquatic plant species and density as conditions for aquatic plant growth change.

Limnology

Limnology is the study of freshwater lake ecosystems. This is affected by a variety of factors including chemical, biological, physical, and geological properties. The main goal of any Limnologist is to understand these factors to help better evaluate the aquatic environment.

Management Goals for Stonewater Lakes

- The primary goal of aquatic plant management in Stonewater Lakes is the control of exotic aquatic plants. The exotic plant species, Curly Leaf Pondweed and Starry Stonewort, should be controlled throughout Teal, Spring Hill, and Parkshore Lakes. The abundance of these species should be reduced to the maximum extent possible, and efforts should be made to reduce their recovery after treatment.
- Aquatic plant management should preserve species diversity and cover of native plants sufficient to provide habitat for fish and other aquatic organisms. Native plants should be managed to encourage plant growth that supports the Stonewater Lake fishery (by creating structure and habitat) provided that they do not excessively interfere with recreational uses of the lake (e.g., swimming and fishing) in high-use areas. Where they must be managed, management techniques that reduce the stature of native plants without killing them (e.g., harvesting, contact herbicides) should be used whenever possible. Specific areas should be set aside where native plants will not be managed, to provide habitat for fish and other aquatic organisms. Muskgrass (*Chara*) should be allowed to grow throughout the lake, except where it grows so tall as to interfere with boating and swimming.

- The species Starry stonewort, should be actively controlled and managed. Starry stonewort is in the same family as Muskgrass (Chara) but is considered to be an exotic invasive species. Starry stonewort, which looks very similar to the beneficial species Chara, is appearing in more and more lakes. Chara is a highly desired plant because it is typically low growing, keeps the water clear, and can slow down the invasion of exotic weed species. Starry stonewort also forms dense mats, but unlike Chara, it can grow from 5 to 7 feet tall. Starry stonewort can be very detrimental to a lake's ecosystem and has the ability to kill off native plants and have a negative impact on a lake's fisheries.
- The differences between Muskgrass (Chara) and Starry Stonewort are very subtle. In the photos below the two can also be differentiated by noticing the rough edges of the Muskgrass (Chara) as compared the the relatively smooth large mass of Starry. In addition, Starry tends to prefer cooler water temperatures and will tend to grow in deeper areas or along the 5 -10 ft contour, whereas Chara tends to grow near shore in waters 0-5 feet. Another way to differentiate between the two is referred to as the pop test. This is done by holding a sample in your palm and making a fist. If the material in your hand pops it is more than likely Starry Stonewort and if not it is Muskgrass. During this test, you can also notice a very distinct musky smell if the material is Muskgrass.



Muskgrass (Chara)



Starry Stonewort

- The invasive terrestrial plants, Purple loosestrife, and Phragmites should be controlled along the shoreline and adjacent wetlands where present. Both species are exotic and have the ability to displace beneficial native vegetation.



Phragmites

Purple loosestrife grows 2 -4 feet tall and is a vibrant magenta color. It is very aggressive and can quickly become the dominant wetland vegetation. Phragmites (common reed) is a wetland grass that ranges in height from 6 to 15 feet tall. "Phrag" quickly becomes the dominant feature in aquatic ecosystems, aggressively invading shorelines, wetlands, and ditches. This plant creates dense "stands" - walls of weeds crowding out beneficial native wetland vegetation and indigenous waterfowl habitats. Spreading by fragmentation and an extensive root system, Phragmites ultimately out-compete native plant life for

sun, water, and nutrients.

- Phragmites presence has been noted in the vicinity of Mystic Lake, Parkshore Lake, and Heather Pond. Use of a systemic herbicides is designed to be absorbed into the tuber structure of the Phragmites. Generally, successful containment of Phragmites and prevention of further spread can be achieved with 1-2 years of treatment.
- Conditions in Stonewater Lakes should not be allowed to deteriorate below present levels. Expansion of exotic aquatic plant problems should trigger an adjustment in the aquatic vegetation management strategy. To support such responses, an annual record of vegetation and management should be maintained.
- Preventative measures that protect the lake from further nutrient enrichment should be identified and implemented.

Lake Management Activities Conducted in 2025

Water Quality

Water quality in the lake was evaluated on April 11th & October 1st, 2025. A depth profile of water temperature and dissolved oxygen concentrations was measured at one-meter intervals and the Secchi disk depth was measured in the deepest part of the lake (Deep Hole Site). Lake Check analysis was collected from the deep part of the lake. Spring samples are pulled from the top layer of the lake whereas fall samples are pulled from the bottom meter of each sampling location. Lake Check measures conductivity, total dissolved solids, pH, alkalinity, total phosphorus, soluble reactive phosphorus, nitrates, and ammonia. A complete water quality report is attached to the back of this report for each separate sampling period.

Planning/Evaluation

A complete survey of the aquatic vegetation of the lake was conducted on October 1st, 2025. Several brief checks of the lake were also made throughout the summer. Vegetation surveys determine the locations of target and non-target plant species. The results of the surveys are used to determine the most appropriate management strategy. The vegetation surveys also document the success of the prescribed management program. An AVAS survey is the State of Michigan's method for conducting a complete aquatic vegetation survey.

The Aquatic Vegetation Assessment Site (AVAS) survey divides the parts of the lake capable of growing plants (littoral zone) into subareas and records the cover of each aquatic plant found in each "site". This method of surveying considers not only the types of plant species present in the lake but also the densities of those species. AVAS surveys are also an excellent way to track plant species trends over time. A goal of invasive plant management is to have native plants increase while exotic plants decrease over time. The success of this goal can be illustrated through the use of the AVAS data collected over several years. Since different native plants grow at varying times throughout the season, it is important to evaluate the lake multiple times to account for *all* species in the lake. The first evaluation is typically conducted in the spring and is used to determine areas that will require treatment or management. Attached to this report is the AVAS data for all 6 waterbodies. The cumulative cover score on each report indicates the total cover of each plant species for each water body.

Aquatic Vegetation & Aquatic Plant Control

The 2025 treatment season proved highly successful in meeting our management objectives. Initial treatments began in late April, followed by a series of follow-up treatments throughout the summer. Early use of contact herbicides effectively suppressed invasive species such as Curly Leaf Pondweed and Eurasian Watermilfoil, while mid-summer efforts targeted native pondweeds in problematic shoreline areas. Limited treatment of native plants in Heather Pond was continued this year as part of our ongoing strategy to mitigate *Oscillatoria*, which has remained a persistent challenge. The continued application of EutroSORB in Heather Pond also supported phosphorus reduction, helping to limit algal blooms. Throughout the season, blooms were addressed promptly in all lakes as they developed. In response to recurring late-season blooms in prior years, the 2025 schedule was modified to include a mid-September algae treatment. This adjustment provided improved control, particularly as rising late-summer temperatures have increasingly contributed to bloom activity.

Native Plant Species

The images below highlight the two primary native plants found in Stonewater Lakes. During the 2025 season, populations of both species stabilized, with Illinois pondweed showing the most notable leveling off. Although Illinois pondweed can occasionally hinder boating and swimming, it serves as a valuable indicator of a balanced, healthy ecosystem and provides essential habitat for aquatic invertebrates and fish. Chara, often mistaken for a typical submerged aquatic plant, is actually classified as a macrophyte. As a form of macroalgae, it plays a critical role in filtering lake water and reducing sediment disturbance, thereby enhancing water quality and clarity. While Chara may sometimes be perceived as a nuisance, it can be easily removed from swimming areas by raking and contributes significantly to the overall health of the lake. Management efforts will continue in shoreline areas where these plants interfere with recreational use, but treatments will remain limited to ensure the delicate ecological balance is preserved.



Illinois Pondweed



Chara

Invasive Aquatic Plant Species

The year-end AVAS results for the 2025 season indicate a modest resurgence of Curly Leaf Pondweed in Mystic, Parkshore, Springhill, and Heather. A localized occurrence of Eurasian Watermilfoil was also documented in Stoneridge. Established colonies of Starry Stonewort remain present in Parkshore; however, year-to-year data show no evidence of spread and, in fact, reflect reduced overall coverage compared to previous seasons. Looking ahead to the 2026 treatment season, management strategies will mirror past approaches, with the addition of a late-season treatment specifically designed to address resurgent populations of Curly Leaf Pondweed and Eurasian Watermilfoil.



Eurasian watermilfoil (EWM)



Curly leaf pondweed



Starry stonewort

AVAS Data & Explanation

Each lake map is divided into the parts of the lake capable of growing aquatic plants into subareas and records the cover of each aquatic plant species found in each area. The attached map shows the breakdown of each waterbody and its corresponding AVAS site. Vegetation summary sheets summarize the information from the maps in the table that tracks plant trends from year to year. Species are numbered according to a standardized numbering system with a Code Number. The cover codes A, B, C, and D are used to describe the approximate coverage of each plant within the map area, where 1-2% is A, 3-20% is B, 21-60% is C, and 61-100% is D. The example “3B” refers to Chara (Muskgrass) covering between 3 and 20 percent of the area of the lake in which this code appears. Notations on the map are interpreted as follows: Number (= plant species) Letter (=approximate cover of this plant). For example: “3B” indicates plant species #3 at a density of B. Notations of each species are recorded in the AVAS map site location (see Appendix A fig. 1). The sum of the total number of species and density is quantified as “Total cumulative cover” with a lower number indicating both lower diversity and density. Often smaller waterbodies will have a lower diversity due to limited area of growth opportunity referred to as the “littoral zone.” Yellow-coded cells indicate an invasive species. The below table list all common plant species observed within each waterbody during the 2025 AVAS. An ideal cumulative cover range for healthy fisheries ranges between 40-60. In this range, it provides enough habitat for the recruitment of fish larvae, and cover for other invertebrates and fish while still not being so dense to reduce predation. Moreover, this range still provides critical nutrient absorption from runoff and substrate, thus improving overall water quality.

Mystic Lake

Plant Name	Percent Cover
Curly Leaf Pondweed	0.04
Chara	3.65
Illinois Pondweed	17.48
Large Leaf Pondweed	3.68
Sago Pondweed	4.13
Wild Celery	3.09
Bladderwort	0.04
Naiad	0.65
Bulrush	0.61
Phragmites	0.61

Total Cumulative Cover

33.96

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Parkshore

Plant Name	Percent Cover
Curly Leaf Pondweed	0.05
Starry Stonewort	0.95
Chara	7.90
Illinois Pondweed	6.10
Wild Celery	6.19
Coontail	8.71
Sago Pondweed	2.95
Water Lily	1.90
Water Shield	0.48
Phragmites	0.05

Total Cumulative Cover 35.29

Spring Hill Lake

Plant Name	Percent Cover
Curly leaf Pondweed	0.06
Chara	4.59
Illinois Pondweed	11.41
Wild Celery	4.24
Coontail	0.94
Naiad	1.59
Sago Pondweed	1.94

Total Cumulative Cover 24.76

Stoneridge Lake

Plant Name	Percent Cover
Eurasian Watermilfoil	2.59
Chara	9.70
Illinois Pondweed	10.59
Wild Celery	19.3
Coontail	0.07
Naiad	0.11

Total Cumulative Cover 42.37

Teal Lake

Plant Name	Percent Cover
Chara	5.82
Illinois Pondweed	3.41
Wild Celery	7.41
Coontail	0.59
Bladderwort	0.09
Naiad	0.14
Water Lily	4.55

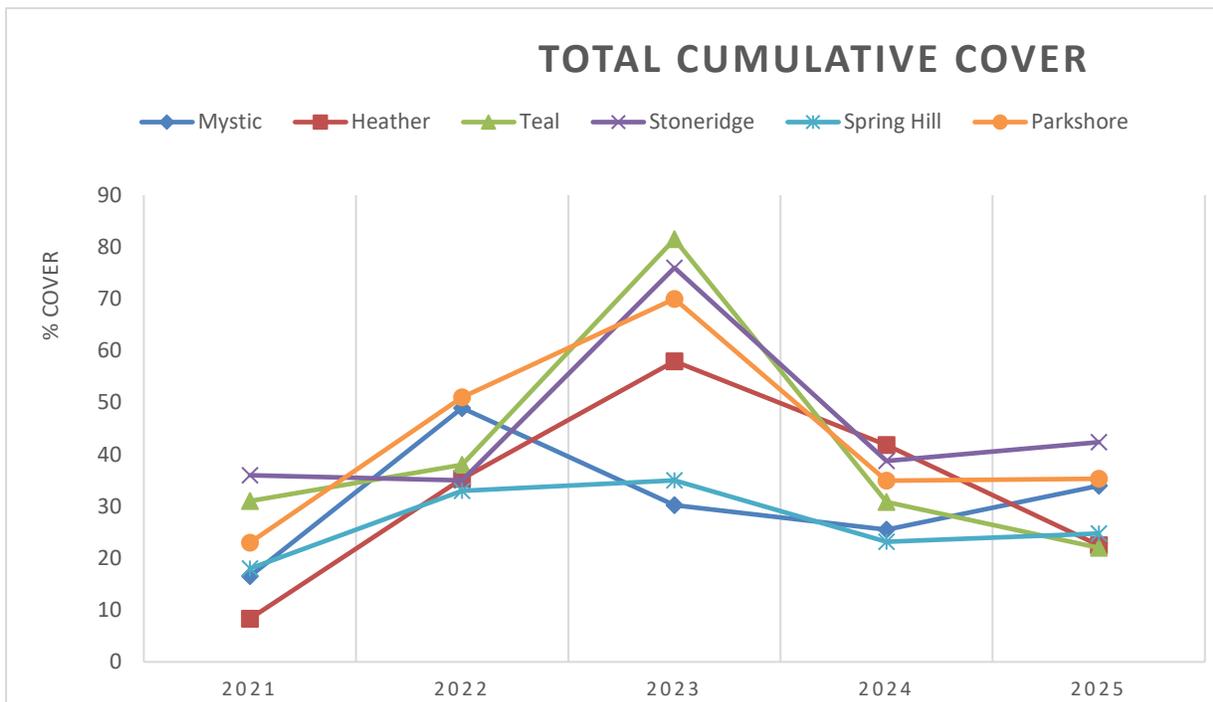
Total Cumulative Cover 22.00

Heather Pond

Plant Name	Percent Cover
Chara	1.00
Curly Leaf Pondweed	0.17
Illinois Pondweed	2.17
Large Leaf Pondweed	3.50
Naiad	8.33
Sago Pondweed	6.83
Bulrush	0.33
Phragmites	0.17

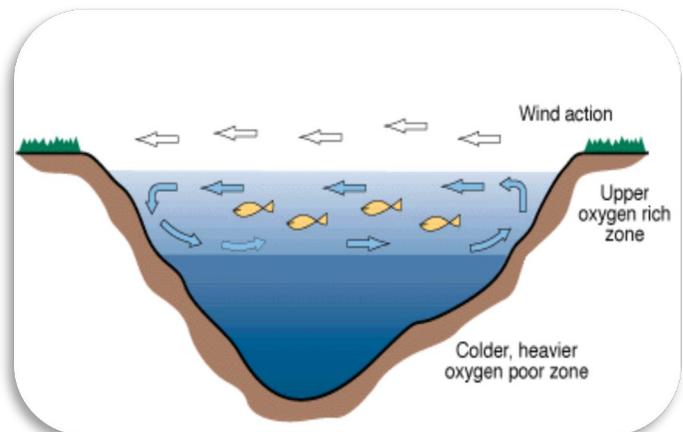
Total Cumulative Cover

22.50



Water Quality Monitoring

Water quality monitoring is a critical part of lake management. Water quality monitoring provides an ongoing record of conditions in a water body. Changes in water quality can indicate threats from sources such as agricultural and lawn runoff, burgeoning development, and erosion from construction sites. Prompt identification of threats to water quality makes it possible to remedy them before irreversible harm has been done. Riparian's enjoyment of the water resource and the value of their property depends on maintaining water quality. For water sampling locations on each water body (see Appendix Fig 2).



Conductivity Total Dissolved Solids, pH and Alkalinity

Conductivity and Total Dissolved Solids (TDS) measure the total concentration of dissolved salts in the water from a variety of factors including but not limited to local runoff from both surface & groundwater penetration. Values for Stonewater Lake indicate moderate to high concentrations of dissolved materials. Alkalinity and pH measure the number of dissolved bases and the balance of acids and bases in the water. Alkalinity and pH values were within normal ranges for hardwater lakes.

Temperature and Dissolved Oxygen Profiles

Depth profiles of temperature and dissolved oxygen indicate that the lakes were well oxygenated, with surface oxygen concentrations within acceptable ranges for the Fall sampling period conducted on October 1st, 2025. (see Table 1).

Table 1.

Site Name:	Temp (Celsius)	D.O. (mg/L)	D.O. (%)
Teal	21.9	9.4	96
Stoneridge	22.2	8.7	86
Parkshore	21.9	8.9	92
Heather	21.4	8.9	77
Mystic	21.6	9.1	89
Spring Hill	22.2	8.5	73

Secchi Disk Depths

The Secchi disk depth is a measure of water clarity, determined by measuring the depth to which a black and white disk can be seen from the surface (see Table 2). The larger numbers represent greater water clarity.



Evaluation of Trophic Status

Carlson's Trophic State Index (TSI) (see appendix A Figure 3.) calculated from Secchi disk depth and total phosphorus measurements made in September yielded values between 33 and 54 (see Table 2). Stonewater Lakes values range with Heather Pond, Teal, Stoneridge, & Parkshore lakes falling under meso-oligotrophic to mesotrophic with Spring Hill & Mystic Lakes falling in the Mesotrophic to Eutrophic range with more sampling is required to track trends. Lakes with this characterization usually have low to medium nutrient levels and productivity, clear water with beds of submerged aquatic plants. Trophic levels vary based on a variety of factors including climate and nutrient load.



Total Phosphorus

Total Phosphorus reflects the overall concentration of phosphorus present in the water. As a critical plant nutrient, phosphorus functions much like fertilizer and is the element most likely to limit algal growth. Elevated levels, often driven by human activity, are a leading cause of cultural eutrophication. The recommended target concentration is less than 10 µg/L, as outlined in Table 2. Spring water quality testing across all Stonewater Lakes showed slightly elevated phosphorus levels, likely influenced by a rainfall event prior to sampling that increased nutrient runoff into the water column. This rise in springtime phosphorus likely contributed to the early algal blooms observed across the lakes this year. These findings highlight the importance of runoff mitigation practices, such as establishing shoreline buffer strips or reducing the use of phosphorus-rich fertilizers on adjacent lawns.

Heather Pond continues to show improvement, with phosphorus levels reduced through the ongoing application of EutroSORB G. This treatment binds bioavailable phosphorus and sequesters it in the sediment, thereby limiting its impact on water quality. Fall sampling at Mystic Lake indicated a slight decrease in phosphorus levels; however, it remained the only Stonewater lake with concentrations above 10 µg/L. Elevated phosphorus in Mystic Lake likely contributed to the persistent algal blooms observed throughout the summer. Monitoring will continue, and future remediation efforts—similar to those implemented in Heather Pond—will be discussed if phosphorus levels remain high.

Nitrates

Nitrates measure the total amount of inorganic nitrogen in the water. Nitrogen is an important plant nutrient (i.e., fertilizer) and the nutrient most likely to limit the growth of rooted plants. Overall, nitrate concentrations in the lake were moderate to low. In both spring and fall samples, the nitrate concentrations were all <230 mg N/L at the surface. Nitrate values observed during the 2025 season continue to indicate low levels in the lakes (see Table 2.) US EPA guidelines level of concern for Nitrogen is routine samples above 300 ug/L with 300 ug/L failing into the Mesotrophic range. Samples between 500 ug/L – 1,500 ug/L fail under the Eutrophic scale and all samples above 1,500 ug/L under Hypereutrophic.

Table 2.

Site Name: Spring (S) Fall (F)	Total Phosphorus ug/L	Total Nitrogen ug/L	Seechi Depth (m)	TSI from Secchi Disk	TSI from Total Phosphorus
Teal – S	23	<230	3.5	42	45
Teal – F	<10	<230	3.0	44	33
Parkshore - S	22	<230	2.5	47	44
Parkshore – F	<10	<230	3.0	44	33
Mystic – S	17	<230	3.0	44	41
Mystic – F	16	<230	2.0	50	40
Stoneridge – S	14	<230	4.0	40	38
Stoneridge – F	<10	<230	4.0	40	33
Heather – S	13	<230	2.5	47	37
Heather – F	<10	<230	1.5	54	33
Spring Hill – S	14	<230	2.0	50	38
Spring Hill – F	<10	<230	2.0	50	33

E-Coli Sampling

Throughout the summer E. coli samples were taken. The below table shows the values for each sampling period. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) standard is “Daily Maximum Geometric Mean: 300 *E. coli* per 100 milliliters (ml)” which is affected by a number of factors including sampling locations, time of day, and recent rain events. From day to day and even location sampled within a water body samples can greatly vary. During the 2024 season, no samples were flagged as a level of concern with the highest Geometric Mean sample.

Lake Name	June	July	Aug
Mystic Lake	<4 cfu/100mL	<4 cfu/100mL	<4 cfu/100mL
Teal Lake	<4 cfu/100mL	<4 cfu/100mL	<4 cfu/100mL
Stoneridge Lake	<4 cfu/100mL	<4 cfu/100mL	<4 cfu/100mL
Heather Pond	<4 cfu/100mL	<4 cfu/100mL	<4 cfu/100mL
Parkshore Lake	<4 cfu/100mL	<4 cfu/100mL	<4 cfu/100mL
Spring Hill Lake	<4 cfu/100mL	<4 cfu/100ml	<4 cfu/100mL

Future Management Recommendations

Management options are dependent on many factors, including but not limited to, species abundance (density), species richness, species location, and many lake characteristics. Whenever an exotic species is found within an aquatic environment, immediate action needs to be taken to prevent long-term ecological damage as well as the recreational and aesthetic loss that will take place.

Submersed Aquatic Plants

Conventional Herbicide treatments

Future aquatic plant management programs should prioritize targeted treatments in areas where invasive species are detected. The recent identification of Eurasian Watermilfoil in Stoneridge underscores the need for renewed efforts to prevent the spread of this exotic species, with aggressive management initiatives scheduled for early 2026 to ensure containment.

To sustain low abundance and minimize interference with recreational activities, continued treatments for Curlyleaf Pondweed remain essential. This strategy not only supports recreational use but also helps reduce the broader ecological impacts of Curlyleaf Pondweed within the lakes.

In addition, native plant management will continue to be incorporated into lake management programs through the use of conventional herbicide treatments where necessary. Treatments in shoreline residential areas will be limited to contact herbicides, maintaining a balanced and comprehensive approach to effective lake management.

Recommended Management Schedule for 2026:

- Vegetation survey and water quality monitoring (to evaluate conditions in the lake and direct management efforts)
- Herbicide treatments to control any Eurasian watermilfoil and/or curly leaf pondweed areas that are found with Diquat Dibromide to address both species when possible. Early detection is key so routine treatments of the lakes will aid in any unchecked introduction.
- Starry stonewort should be monitored and treated as needed to keep it from spreading and creating recreational and ecological issues. These treatments will be conducted with contact chelated copper products starting in May & June. Follow up treatments will be done with copper sulfate later in the summer to offer more effective control of both Chara & Starry Stonewort.
- During summer months, nuisance native species around docks and swim areas, particularly in Teal and Stoneridge lakes, will be treated with contact herbicides such as Aqua strike and Aquathol, with follow-ups as needed. It's important to note that the treatment of native plants is limited to within 100 feet from the shore along developed shoreline areas. These native plants play a vital role in maintaining the overall health of the lake, providing essential habitat and nutrient abatement, which helps create a balanced and healthy ecosystem. While we may want to reduce their presence from a human perspective, it's essential to maintain their presence for the sake of the lake's overall well-being.
- Continued limited treatment of native plants in Heather Pond to help encourage competition with the problematic Oscillatoria. Furthermore, to best manage Heather Pond continued use of EutroSORB in the treatment program is recommended to abate the legacy phosphorus within the water body.
- Aggressive management efforts will be implemented during May and June to address the substantial biomass of Illinois Pondweed. These treatments are strategically scheduled early in the growing season, when the plant is most vulnerable, to maximize effectiveness and reduce its spread. By curtailing excessive growth, the program aims to alleviate resident concerns regarding recreational interference, such as boating, swimming, and shoreline access.
- Spring and Fall water quality sampling and Fall vegetation survey

Appendix A: Figures 1-3

Figure 1: AVAS Map locations

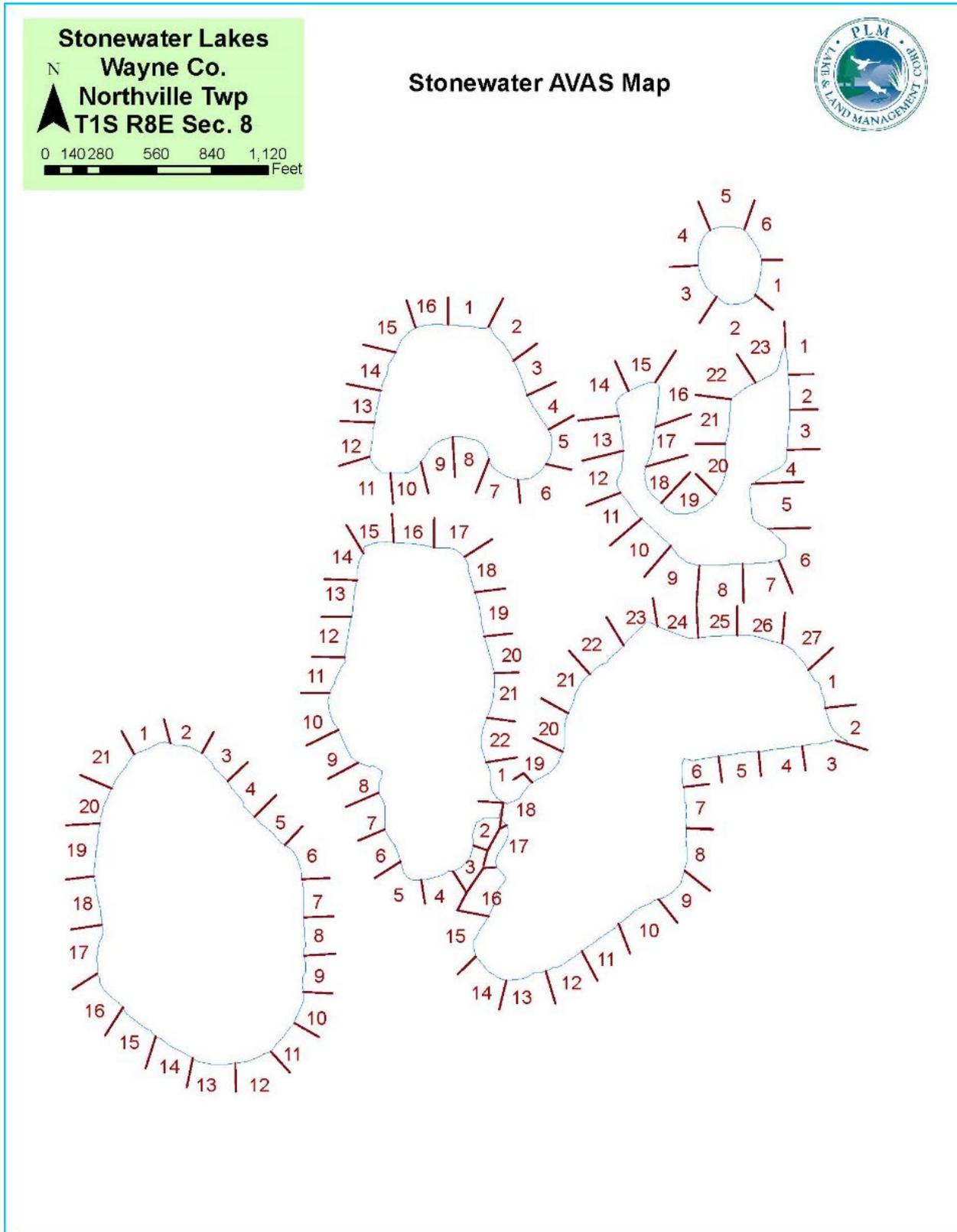


Figure 2: Water Quality Locations

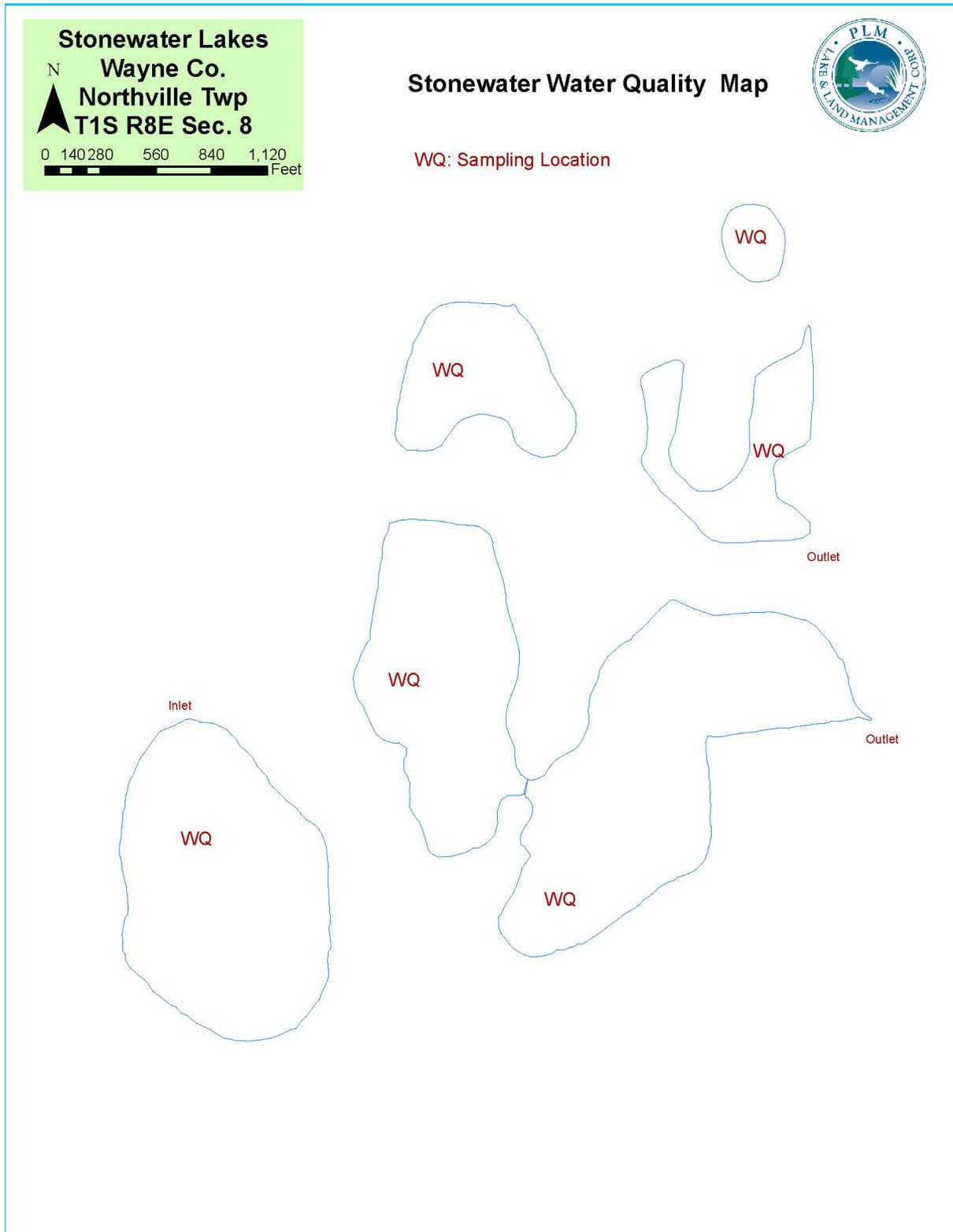
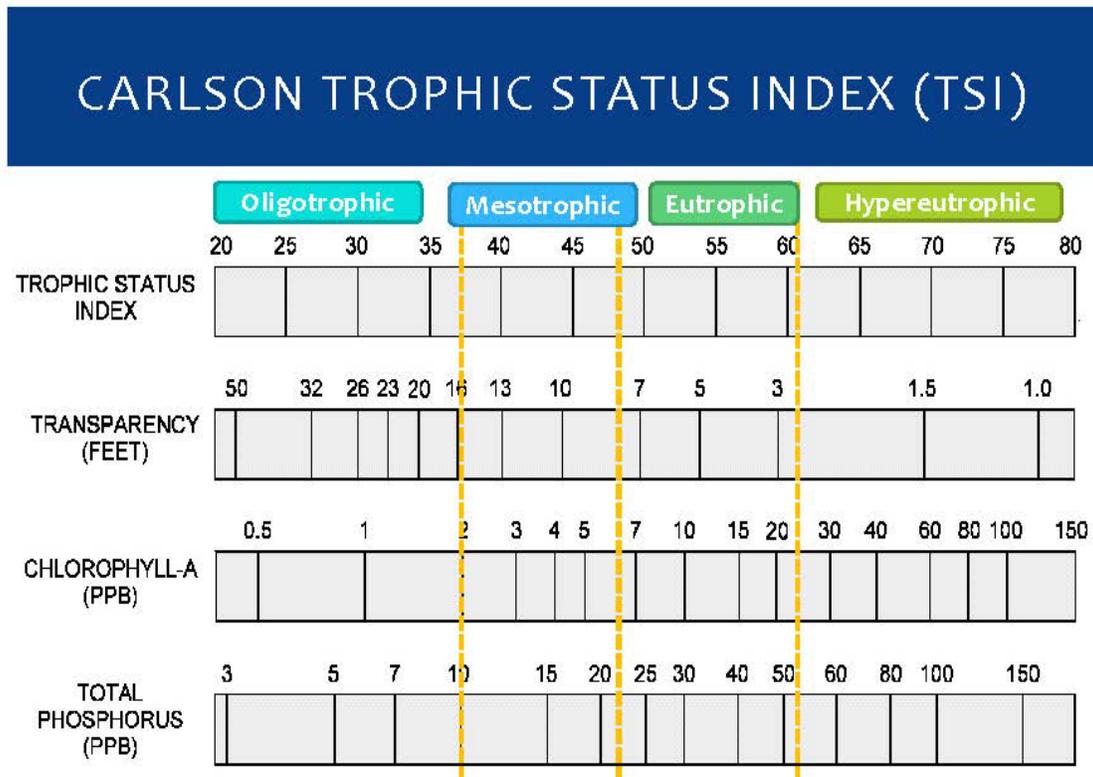


Figure 3: Carlson Trophic Status Index (TSI)



- Oligotrophic - low nutrient level, cooler climate, low plant diversity, good water quality
- Mesotrophic - medium-moderate nutrient levels, high plant diversity, fair water quality
- Eutrophic - excessive nutrient levels, abundance of plant growth, poor water quality
- Hypereutrophic - extreme nutrient levels, toxic algae blooms, low oxygen level, dead zones

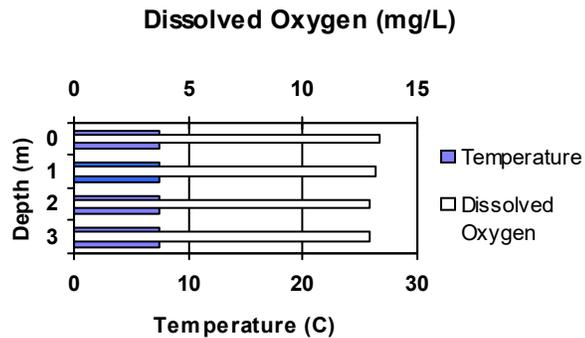


Water Quality Monitoring Report

Customer	Waterbody	Sample Information
Stonewater Heather Pond	Stonewater Heather Pond	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.5	13.4	112
1	7.5	13.2	112
2	7.5	12.9	107
3	7.5	12.9	107



Secchi Disk Depth 2.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	470	uS/cm	
Total Dissolved Solids	313	mg/L	Moderate concentration of dissolved salts
pH	8.9	S.U.	Water is slightly alkaline
Alkalinity	144	mg CaCO3/L	Water is hard
Total Phosphorus	13	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	47	mesotrophic
Based on Total Phosphorus	37	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

-
- WARNING, condition requires immediate attention.
 - CAUTION, condition requires further evaluation.
 - OK, condition within acceptable limits.
 - NEUTRAL, condition neither good nor bad.

Notes

Report describes conditions at the time the sample was collected.

Approved by Jaimée Desjardins Date 11/20/2025
Mrs. Jaimée Desjardins, Technical Services Manager

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PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
Phone: (616) 891-1294

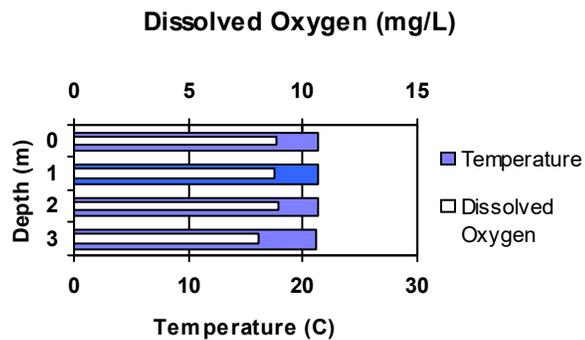
LAKE CHECK Water Quality Monitoring Report

2025857

Customer	Waterbody	Sample Information
Stonewater Heather Pond	Stonewater Heather Pond	Date: 10/1/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	21.4	8.9	77
1	21.4	8.7	74
2	21.3	8.9	76
3	21.2	8.1	79



Secchi Disk Depth 1.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	414	uS/cm	
Total Dissolved Solids	289	mg/L	Moderate concentration of dissolved salts
pH	8.6	S.U.	Water is slightly alkaline
Alkalinity	141	mg CaCO ₃ /L	Water is hard
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	54	moderately eutrophic
Based on Total Phosphorus	33	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

-
- WARNING, condition requires immediate attention.
 - CAUTION, condition requires further evaluation.
 - OK, condition within acceptable limits.
 - NEUTRAL, condition neither good nor bad.

Notes

Report describes conditions at the time the sample was collected.

Approved by Jaimee Desjardins Date 11/20/2025
Mrs. Jaimee Desjardins, Technical Services Manager

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PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
Phone: (616) 891-1294

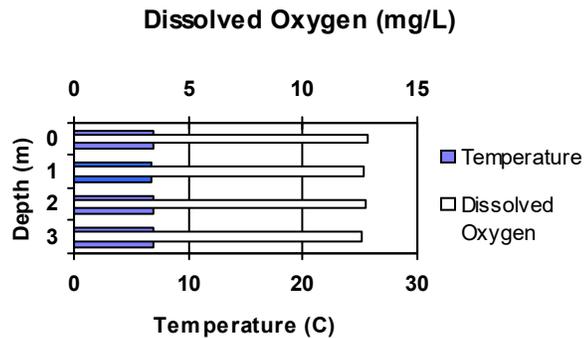
LAKE CHECK Water Quality Monitoring Report

2025872

Customer	Waterbody	Sample Information
Stonewater Lake Mystic Lake	Stonewater Mystic Lake	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	6.9	12.8	105
1	6.8	12.7	105
2	6.9	12.7	105
3	6.9	12.6	104



Secchi Disk Depth 3.0 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	531	uS/cm	
Total Dissolved Solids	347	mg/L	Moderate concentration of dissolved salts
pH	8.6	S.U.	Water is slightly alkaline
Alkalinity	172	mg CaCO ₃ /L	Water is hard
Total Phosphorus	17	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	44	mesotrophic
Based on Total Phosphorus	41	mesotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

-
- WARNING, condition requires immediate attention.
 - CAUTION, condition requires further evaluation.
 - OK, condition within acceptable limits.
 - NEUTRAL, condition neither good nor bad.

Notes

Report describes conditions at the time the sample was collected.

Approved by Jaimee Desjardins Date 11/20/2025
Mrs. Jaimee Desjardins, Technical Services Manager

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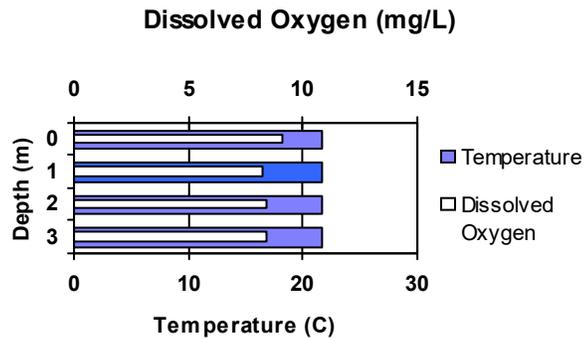
LAKE CHECK Water Quality Monitoring Report

2025873

Customer	Waterbody	Sample Information
Stonewater Lake Mystic Lake	Stonewater Mystic Lake	Date: 10/1/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	21.6	9.1	89
1	21.6	8.3	81
2	21.6	8.4	82
3	21.6	8.4	82



Secchi Disk Depth 2.0 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	459	uS/cm	
Total Dissolved Solids	319	mg/L	Moderate concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	156	mg CaCO ₃ /L	Water is hard
Total Phosphorus	16	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	50	moderately eutrophic
Based on Total Phosphorus	40	mesotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

-
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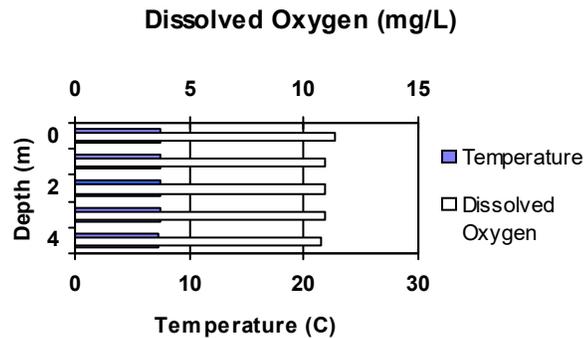


Water Quality Monitoring Report

Customer	Waterbody	Sample Information
Stonewater Parkshore	Stonewater Parkshore	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.5	11.4	100
1	7.4	10.9	98
2	7.4	10.9	94
3	7.4	10.9	89
4	7.3	10.7	86



Secchi Disk Depth 2.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	686	uS/cm	
Total Dissolved Solids	456	mg/L	Moderate concentration of dissolved salts
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	210	mg CaCO3/L	Water is very hard
Total Phosphorus	22	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	47	mesotrophic
Based on Total Phosphorus	44	mesotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

-
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Notes

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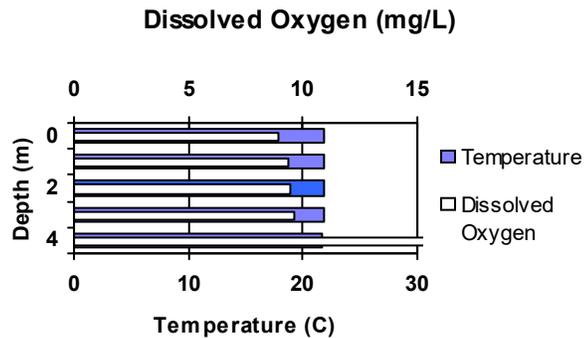
LAKE CHECK Water Quality Monitoring Report

2025879

Customer	Waterbody	Sample Information
Stonewater Parkshore	Stonewater Parkshore	Date: 10/1/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	21.9	8.9	92
1	21.9	9.4	96
2	21.9	9.4	92
3	21.8	9.6	94
4	21.7	93.2	10



Secchi Disk Depth 3.0 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	560	uS/cm	
Total Dissolved Solids	390	mg/L	Moderate concentration of dissolved salts
pH	8.6	S.U.	Water is slightly alkaline
Alkalinity	151	mg CaCO3/L	Water is hard
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	44	mesotrophic
Based on Total Phosphorus	33	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

-
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Notes

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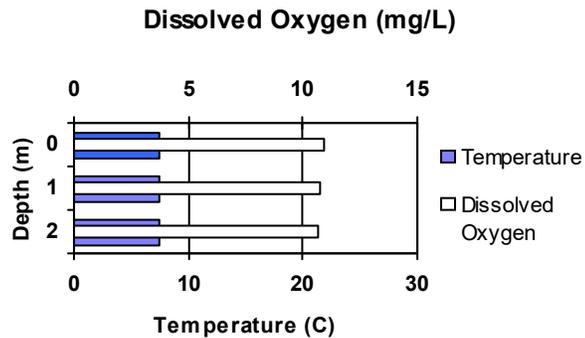
Water Quality Monitoring Report

2025876

Customer	Waterbody	Sample Information
Stonewater Springhill	Stonewater Springhill	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.4	10.9	101
1	7.4	10.7	99
2	7.4	10.7	94



Secchi Disk Depth 2.0 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	474	uS/cm	
Total Dissolved Solids	320	mg/L	Moderate concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	185	mg CaCO3/L	Water is very hard
Total Phosphorus	14	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	50	moderately eutrophic
Based on Total Phosphorus	38	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

-
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Notes

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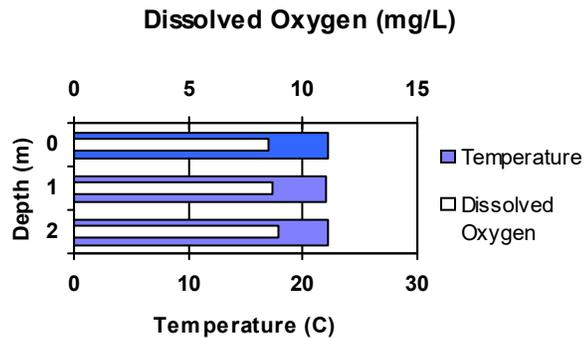
LAKE CHECK Water Quality Monitoring Report

2025877

Customer	Waterbody	Sample Information
Stonewater Springhill	Stonewater Springhill	Date: 10/1/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	22.2	8.5	73
1	22.0	8.7	75
2	22.2	8.9	78



Secchi Disk Depth 2.0 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	447	uS/cm	
Total Dissolved Solids	306	mg/L	Moderate concentration of dissolved salts
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	53	mg CaCO3/L	Water is very soft
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	50	moderately eutrophic
Based on Total Phosphorus	33	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

-
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Notes

Report describes conditions at the time the sample was collected.

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Mrs. Jaimee Desjardins, Technical Services Manager

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LAKE CHECK Water Quality Monitoring Report

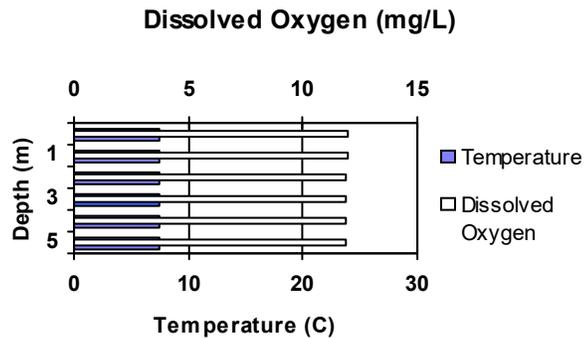
2025880

Customer	Waterbody	Sample Information
Stonewater Stoneridge	Stonewater Stoneridge	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.4	12.0	100
1	7.4	12.0	100
2	7.4	11.9	99
3	7.4	11.9	99
4	7.4	11.9	99
5	7.4	11.9	99

Secchi Disk Depth 4.0 meters



Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	471	uS/cm	
Total Dissolved Solids	312	mg/L	Moderate concentration of dissolved salts
pH	8.9	S.U.	Water is slightly alkaline
Alkalinity	136	mg CaCO3/L	Water is hard
Total Phosphorus	14	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	40	mesotrophic
Based on Total Phosphorus	38	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

-
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Notes

Report describes conditions at the time the sample was collected.

Approved by

Jaimee Desjardins

Date 11/20/2025

Mrs. Jaimee Desjardins, Technical Services Manager

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Water Quality Monitoring Report

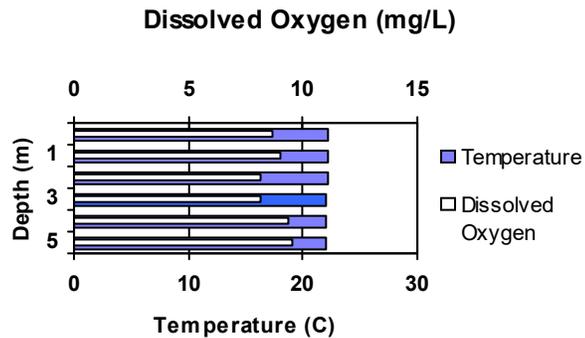
2025881

Customer	Waterbody	Sample Information
Stonewater Stoneridge	Stonewater Stoneridge	Date: 10/1/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	22.2	8.7	86
1	22.2	9.0	88
2	22.2	8.2	81
3	22.1	8.2	81
4	22.0	9.4	92
5	22.0	9.6	96

Secchi Disk Depth 4.0 meters



Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	403	uS/cm	
Total Dissolved Solids	276	mg/L	Moderate concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	123	mg CaCO ₃ /L	Water is hard
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	40	mesotrophic
Based on Total Phosphorus	33	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

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Notes

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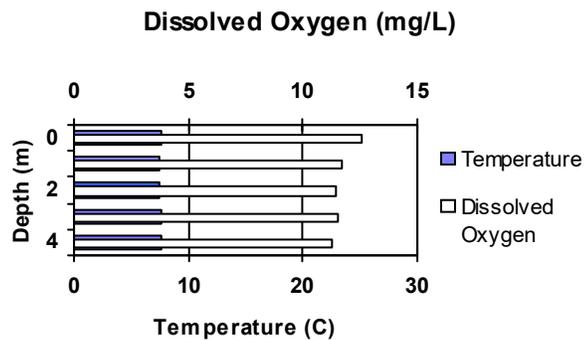
LAKE CHECK Water Quality Monitoring Report

2025874

Customer	Waterbody	Sample Information
Stonewater Teal Lake	Teal Lake	Date: 4/11/2025
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.6	12.6	110
1	7.5	11.7	101
2	7.5	11.5	99
3	7.6	11.5	97
4	7.6	11.3	89



Secchi Disk Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	532	uS/cm	
Total Dissolved Solids	355	mg/L	Moderate concentration of dissolved salts
pH	8.7	S.U.	Water is slightly alkaline
Alkalinity	150	mg CaCO3/L	Water is hard
Total Phosphorus	23	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	42	mesotrophic
Based on Total Phosphorus	45	mesotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

-
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Notes

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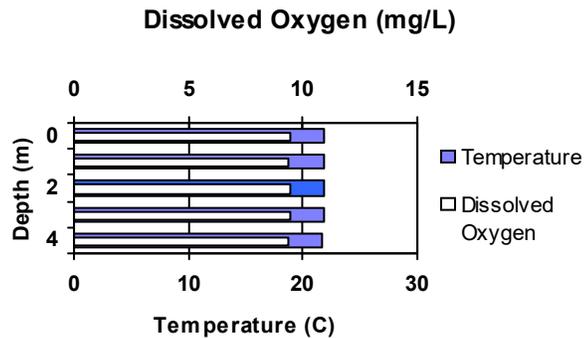
2025875

Customer	Waterbody	Sample Information
Stonewater Teal Lake	Stonewater Teal lake	Date: 10/1/2025
		Site: middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	21.9	9.4	96
1	21.9	9.4	98
2	21.9	9.4	94
3	21.8	9.4	95
4	21.7	9.4	94

Secchi Disk Depth 3.0 meters



Analytical Results

Parameter	Result	Units	Interpretation
Conductivity	549	uS/cm	
Total Dissolved Solids	380	mg/L	Moderate concentration of dissolved salts
pH	8.8	S.U.	Water is slightly alkaline
Alkalinity	100	mg CaCO3/L	Water is soft
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	44	mesotrophic
Based on Total Phosphorus	33	meso-oligotrophic

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- No remedial action recommended at this time.
- REPEAT LakeCheck NEXT YEAR!

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