LITTLE LAKE (Midland) CONDITIONS UPDATE

Sample Date: Aug 31, 2021
Next Sample: Sept 14, 2021
(weather permitting)

Temperature at Surface

24.8 ˚C

This is considered warm, but is less than the maximum value recorded in early July.

Water Clarity

3.5m

Lake Depth

4.0m

Water clarity is good and the lake bed is usually visible, though it is often covered with aquatic plants.

View from rowing club boat launch

Bottom Water Dissolved Oxygen

10.5 mg/L

This is excellent, and plenty for cold and warm water fish.

Little Lake Water Level

12 cm

Readings taken at the McMurty Dr outflow structure indicate that levels are the lowest they've been all season. Lower levels are normal for late August.

Little Lake outflow on McMurty Dr.

Observations from the Field

- **Some foam on water surface**
- **Lots of small & medium specks of algae**
- **Floating aquatic plant material on surface**
- **Yellowish colour to the water**

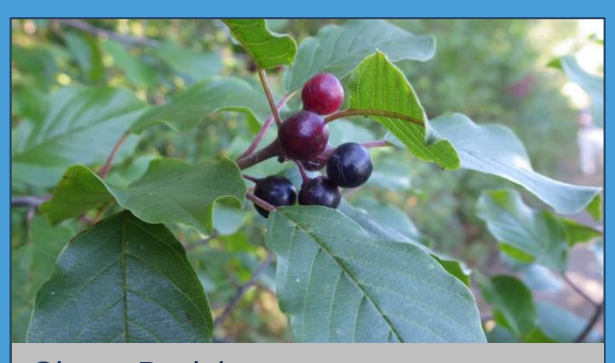
Bald Eagle spotted over Little Lake

Fisherman on Little Lake

Invasive Species

Invasive Species found on Little Lake in recent surveys: **Glossy Buckthorn** (*Frangula alnus*) and **Eurasian Water-milfoil** (*Myriophyllum spicatum*)

- **Glossy Buckthorn** is a shrub that crowds out native plant species in large numbers. Buckthorn can also affect nutrient levels in the soil that make areas inhabitable for native plants to grow.
- **Eurasian Water-milfoil** is an aquatic invasive plant that forms thick mats of underwater vegetation which prevents native plant growth and can significantly hinder the recreational use of the water way by entangling boat propellers and hindering activities such as swimming and fishing.

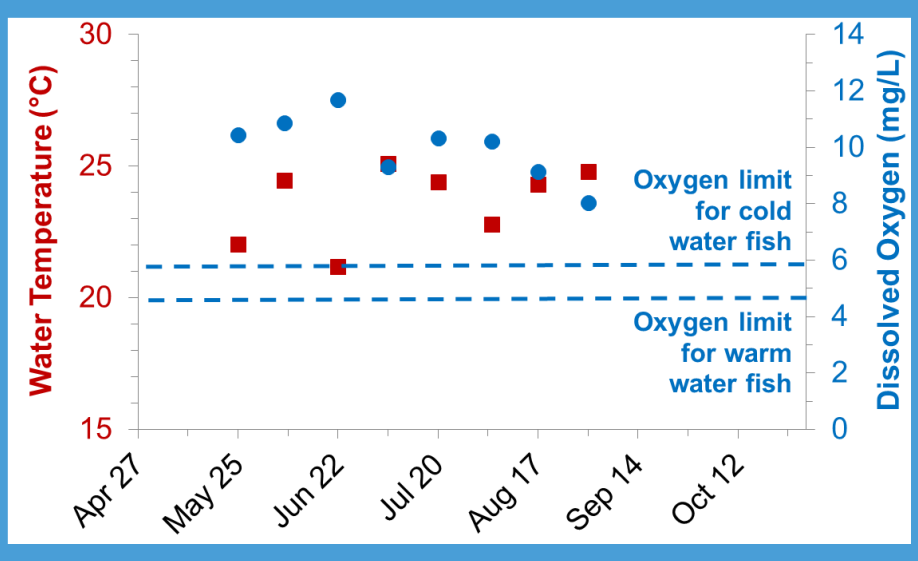


Glossy Buckthorn

Eurasian Water-milfoil

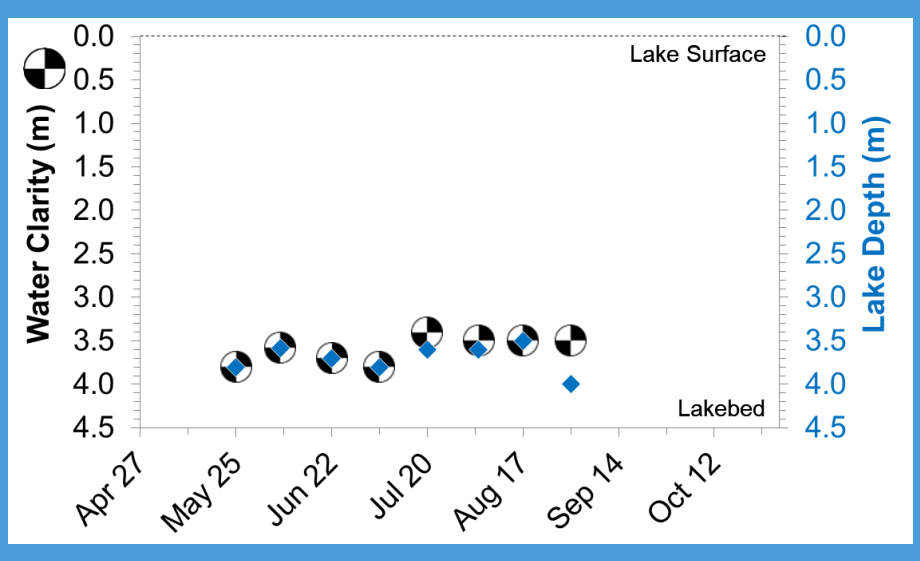
LITTLE LAKE SEASONAL WATER QUALITY TRENDS

Surface Temperature & Bottom Water Dissolved Oxygen



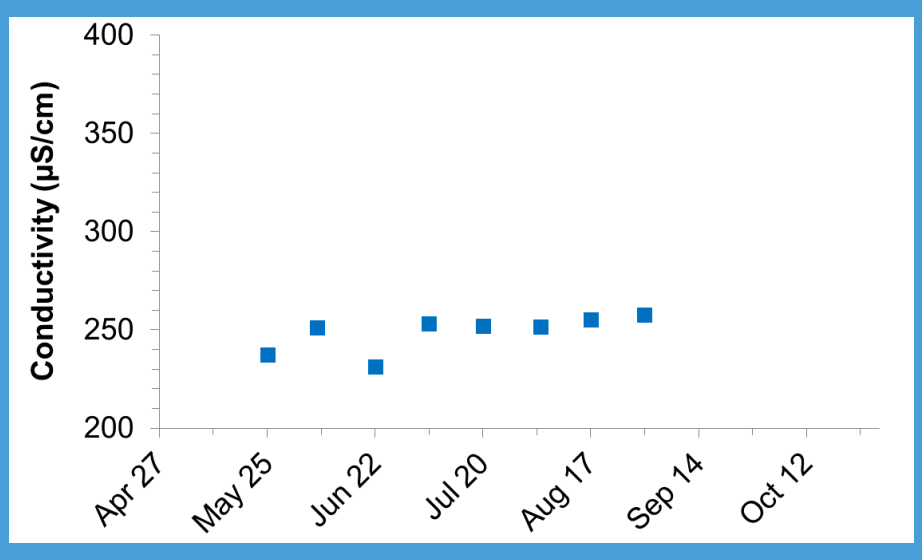
Oxygen levels have remained above the Provincial Water Quality Objectives for cold and warm water fish, although high temperatures may cause stress.

Water Clarity & Lake Depth



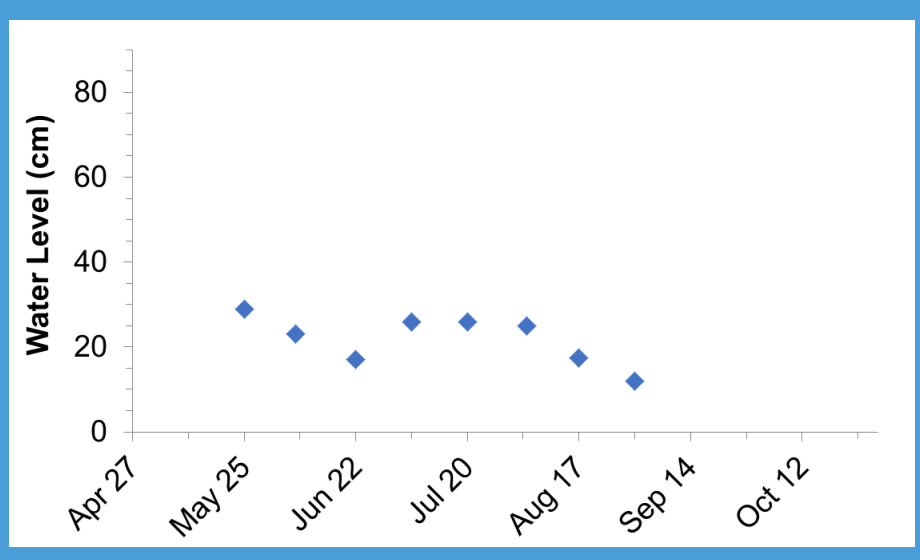
Water clarity in Little Lake is considered good if the lakebed is visible. This wasn't the case on July 20th & Aug 31st due to interference from aquatic plants.

Surface Water Conductivity



Conductivity indicates the amount of dissolved material in the water. Values are lower than other inland lakes in the area like Orr Lake.

Little Lake Water Levels (McMurty Dr. Outflow)



Little Lake water levels are closely linked to recent rainfall. Water levels are not managed, however the Town maintains the outflow structure.

LITTLE LAKE (Midland) CONDITIONS UPDATE

Sample Date: Sept 14, 2021
Next Sample: Sept 28, 2021
(weather permitting)

Temperature at Surface

19.8 ˚C

The lake is cooling off now as nighttime temperature start to drop.

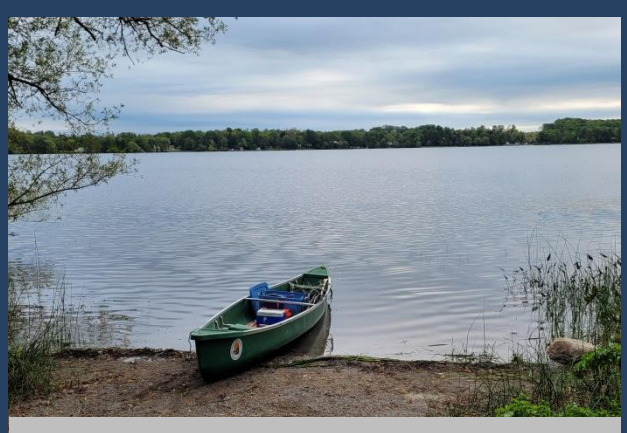
Water Clarity

3.4 m

Lake Depth

3.6 m

Water clarity is good and the lake bed is usually visible, though it is often covered with aquatic plants which can interfere with the clarity reading.



View from rowing club boat launch

Bottom Water Dissolved Oxygen

8.9 mg/L

This is excellent, and plenty for cold and warm water fish.

Little Lake Water Level

15 cm

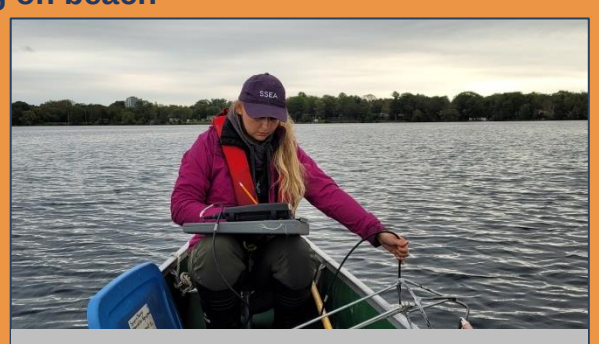
Readings taken at the McMurty Dr outflow structure indicate that levels have increased slightly since Aug 31. Lower levels are normal for this time of year.

Little Lake outflow on McMurty Dr.

Observations from the Field

- **Some aquatic insect casings**
- **A few small specks of algae, water clear**
- **Floating aquatic plant material on surface and decomposing on beach**
- **Bright yellow/green colour to the water**

Gulls at Little Lake Park



Measuring temperature and oxygen

Invasive Species

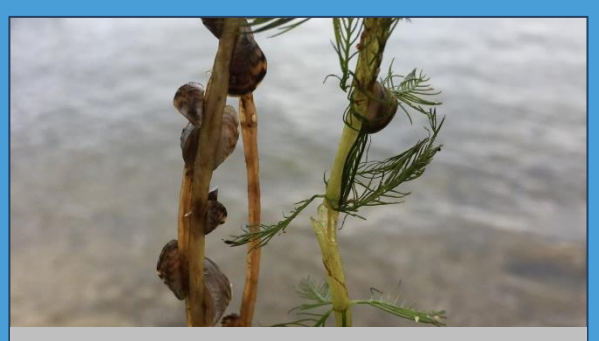
Invasive Species found in Little Lake in recent surveys: **Zebra & Quagga Mussels** (*Dreissena spp*)

- **Invasive Mussels** are that are widespread in Severn Sound, Bass Lake and Lake Couchiching
- They are efficient filter feeders, and can have negative impacts on the ecology of a lake
- **SSEA has only documented mussel larvae.** Let us know if you've observed adult mussels in the lake!

CLEAN DRAIN DRY
Prevent the Spread of Aquatic Invasive Species

Recreational users are reminded to Clean, Drain and Dry ALL equipment before & after entering the lake!

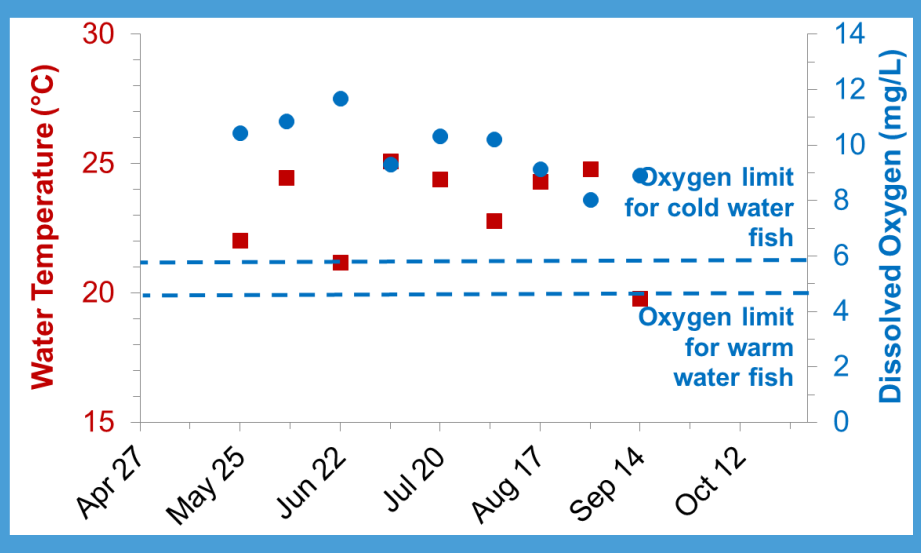
Zebra mussel attached to *Chara*



Mussels on Eurasian Milfoil

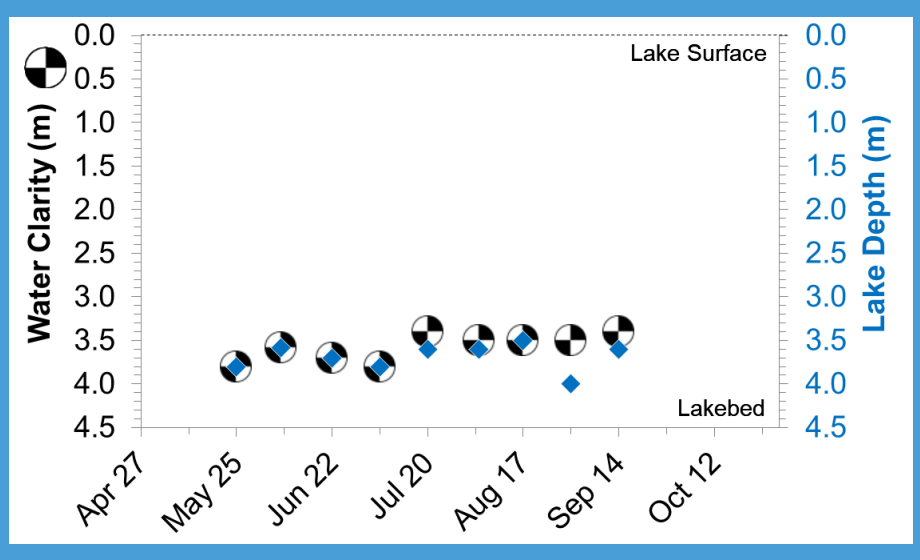
LITTLE LAKE SEASONAL WATER QUALITY TRENDS

Surface Temperature & Bottom Water Dissolved Oxygen



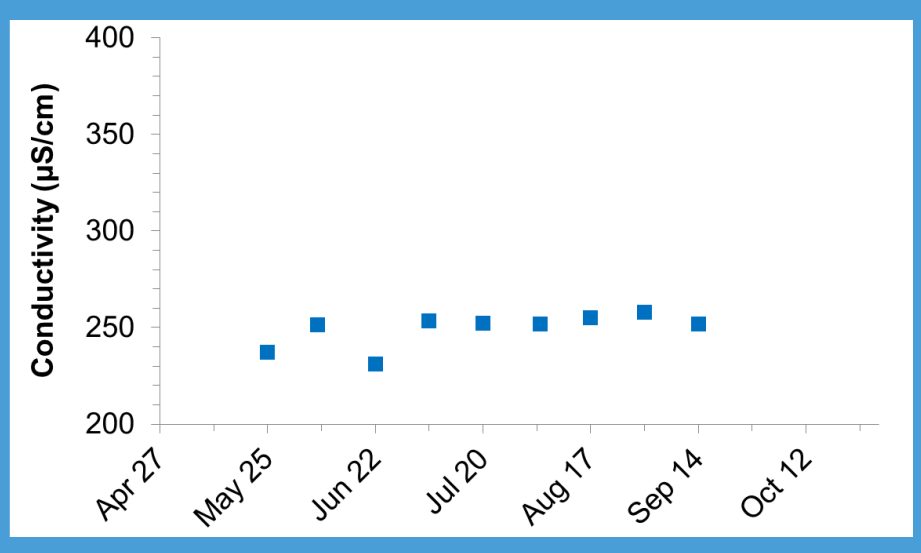
Oxygen levels have remained above the Provincial Water Quality Objectives for cold and warm water fish, and temperatures are now starting to cool off.

Water Clarity & Lake Depth



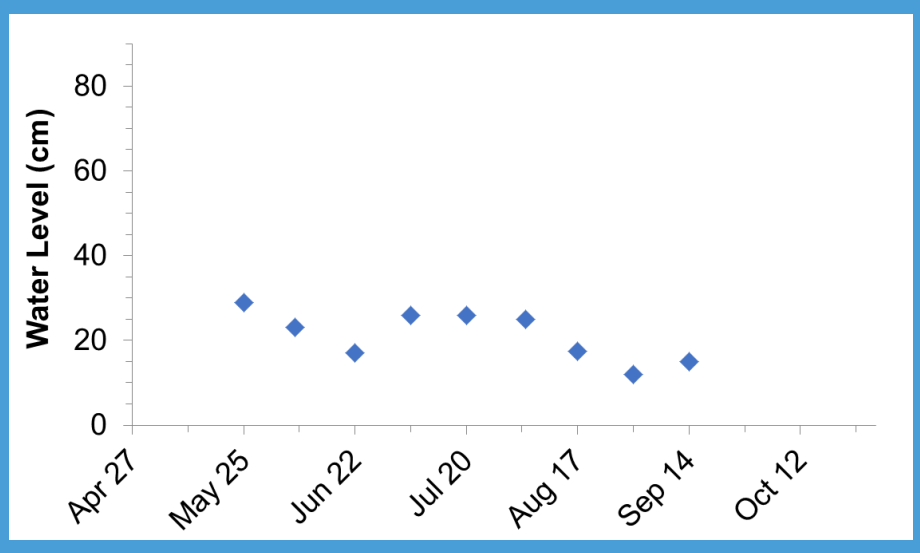
Water clarity in Little Lake is considered good if the lakebed is visible. This wasn't the case on July 20th & Aug 31st due to interference from aquatic plants.

Surface Water Conductivity



Conductivity indicates the amount of dissolved material in the water. Values are lower than other inland lakes in the area like Orr Lake.

Little Lake Water Levels (McMurty Dr. Outflow)



Little Lake water levels are closely linked to recent rainfall. Water levels are not managed, however the Town maintains the outflow structure.

LITTLE LAKE (Midland) CONDITIONS UPDATE

Sample Date: Sept 27, 2021
Next Sample: Oct 12, 2021
(weather permitting)

Temperature at Surface

16.0˚C

Temperatures are cooling off with the onset of cool fall nighttime air temperatures.

Water Clarity

3.6 m

Lake Depth

3.9 m

Water clarity is good, however the lakebed was not visible due to aquatic plant growth.

View from Little Lake boat launch

Bottom Water Dissolved Oxygen

8.9 mg/L

This is plenty for cold and warm water fish species.

Little Lake Outflow Level

26 cm

Readings taken at the McMurty Dr outflow structure indicate that levels have increased since Sept 14. Recent rainfall caused an increase in levels.

Little Lake outflow on McMurty Dr.

General Observations

- **Lots of foam near shore**
- **Some flecks of algae**
- **Vegetation washed up on shore**
- **Clear, but yellowish green water colour**

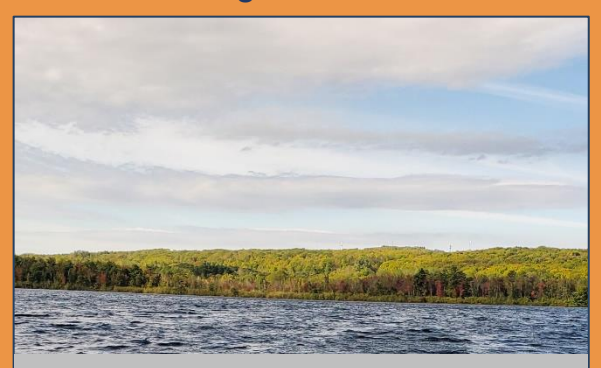
Invasive Species

Invasive Species found on Little Lake shoreline in recent surveys:

Common Reed/Phragmites
(*Phragmites australis ssp. australis*)

Phragmites is a tall perennial grass that is native to Eurasia. Phragmites is an aggressive semi-aquatic plant that threatens native plants and wildlife, human safety, agriculture and recreational activities. It invades a variety of habitats including lakes, shorelines, wetlands, beaches, ditches, and roadsides and succeeds in disturbed habitats. The seed head and stems will persist through the fall, winter and into early spring.

Trumpeter Swans – note black bills



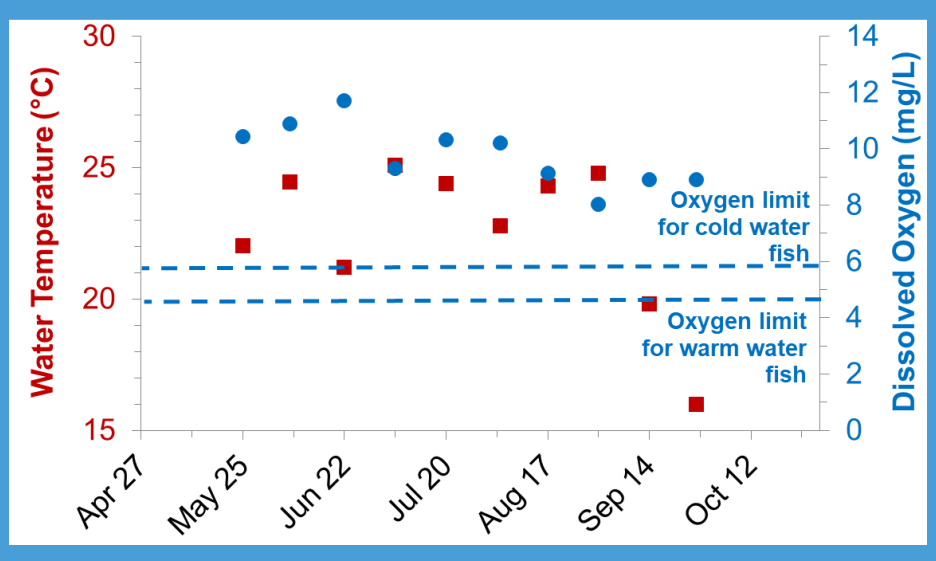
Changing colours, west end of lake

Phragmites - aquatic

Phragmites - terrestrial

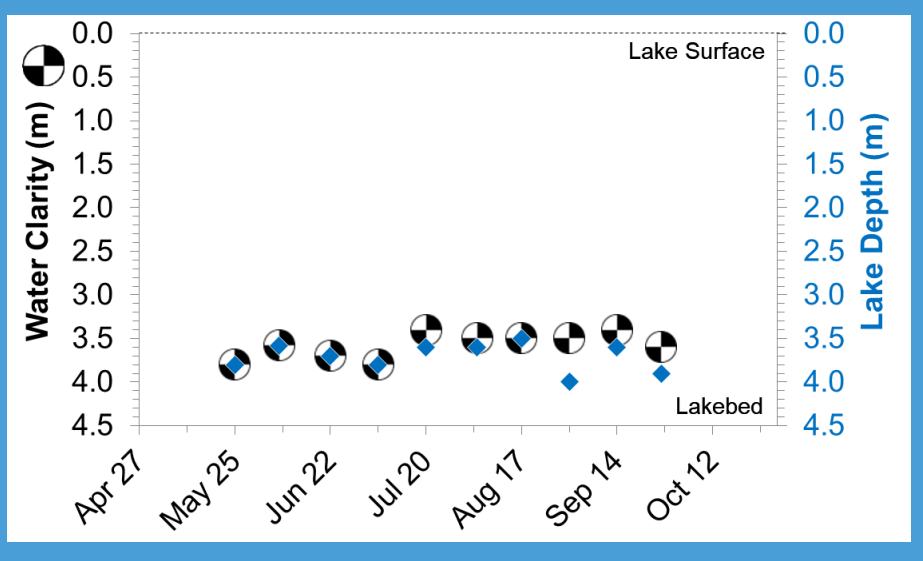
LITTLE LAKE SEASONAL WATER QUALITY TRENDS

Surface Temperature & Bottom Water Dissolved Oxygen



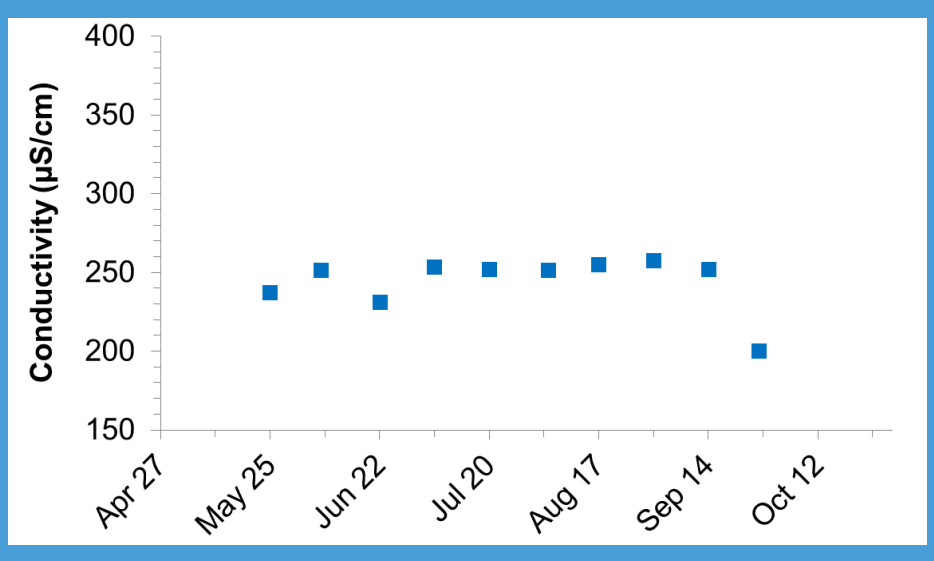
Oxygen levels have remained above the Provincial Water Quality Objectives for cold and warm water fish, even during periods of high temperatures.

Water Clarity & Lake Depth



Water clarity is considered good if the lakebed is visible. There were several times this wasn't the case due to aquatic plants obscuring the lakebed.

Surface Water Conductivity



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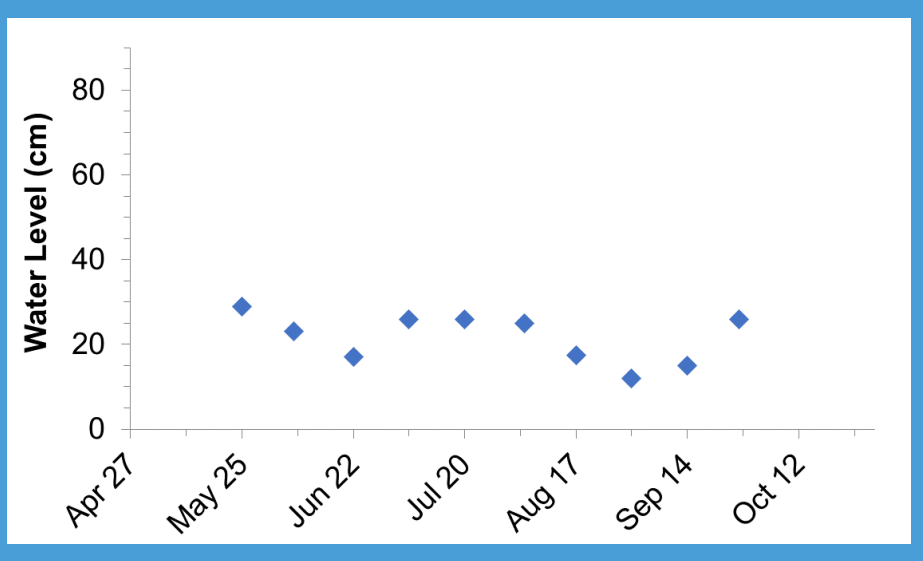
Lake Water Levels at McMurty Dr. Outflow



Little Lake water levels are closely linked to recent rainfall. Water levels are not managed, however the Town maintains the outflow structure.

LITTLE LAKE (Midland) CONDITIONS UPDATE

Sample Date: Oct 12, 2021 (Last sample run)

Temperature at Surface

19.0˚C

Temperatures increased slightly with warm daytime temperatures.

Water Clarity

3.2 m

Lake Depth

4.1 m

Water clarity is good, however the lakebed was not visible due to decaying plants & soft sediment.

View from Little Lake boat launch

Bottom Water Dissolved Oxygen

9.6 mg/L

This is plenty for cold and warm water fish species.

Little Lake Outflow Level

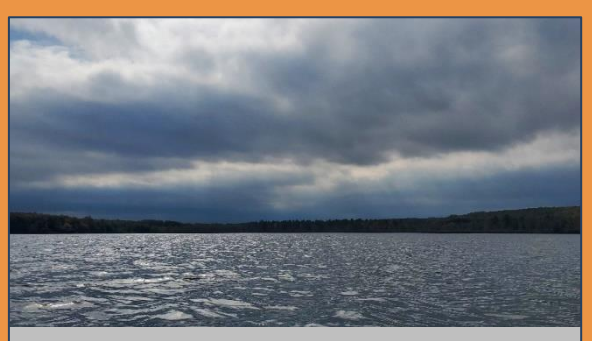
25 cm

Readings taken at the McMurty Dr outflow structure indicate that levels have decreased slightly since Sept 27.

Little Lake outflow on McMurty Dr.

General Observations

- **Some foam near shore**
- **Small amount of algae flecks in open waters**
- **Vegetation decaying on lakebed**
- **Clear water**



Dramatic fall skies over the lake

Willow trees help stabilize the shore

Invasive Species

Here are some Invasive Species that <u>have not been detected in Little Lake</u> but you should be on the look out for:

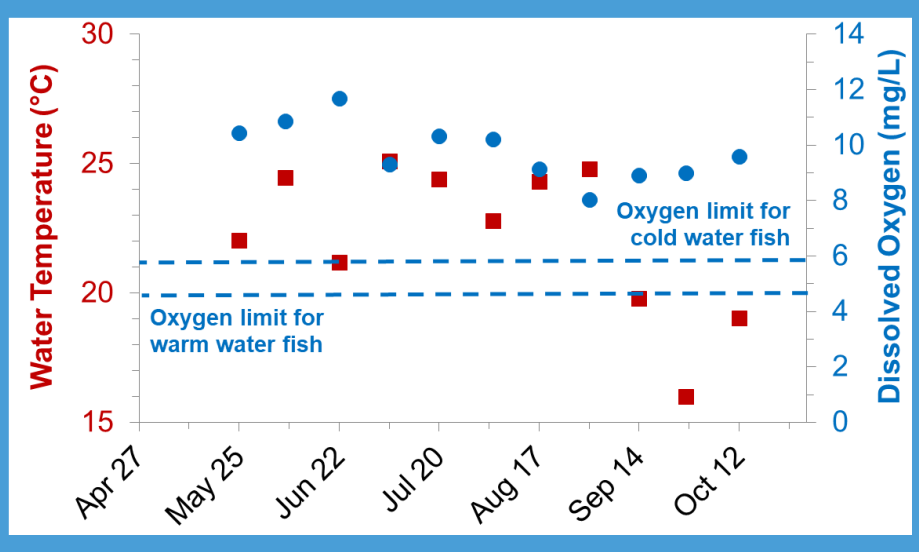
- **Round Goby** (*Neogobium melanostomus*) is a fish that reproduces rapidly and outcompetes native species of fish, including species at risk. It is illegal to use Round Goby as bait in Canada. Gobies are widespread in Severn Sound.
- **Spiny Waterfleas** (*Bythotrephes longimanus*) are predatory zooplankton that congregate to form masses on fishing lines. They reproduce quickly, outcompeting native zooplankton species, and harming fish that eat them due to their sharp spines.

Round Goby

Spiny Waterflea

LITTLE LAKE SEASONAL WATER QUALITY TRENDS

Surface Temperature & Bottom Water Dissolved Oxygen



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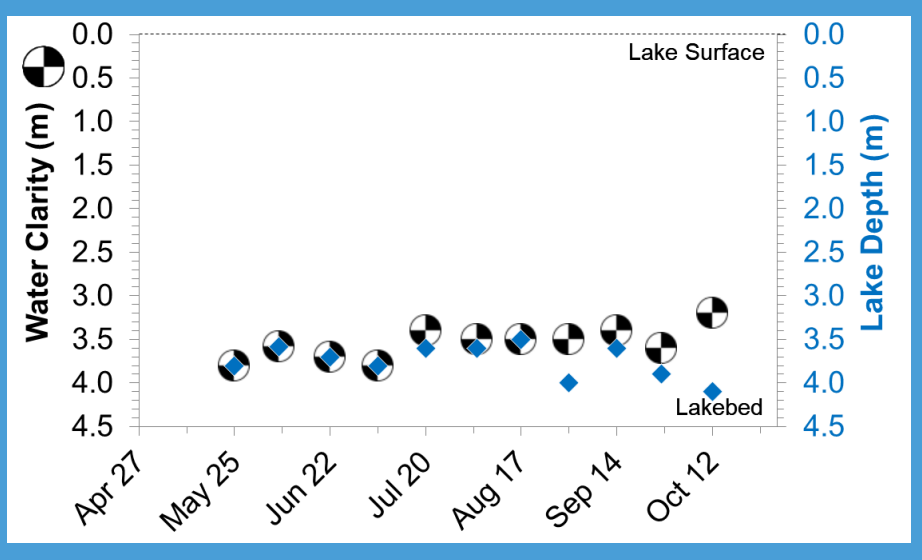
Water Clarity & Lake Depth



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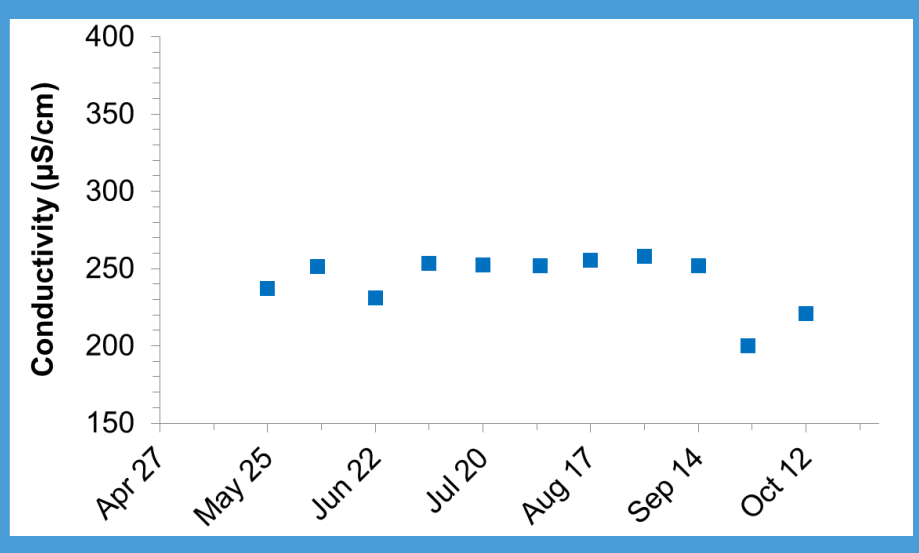
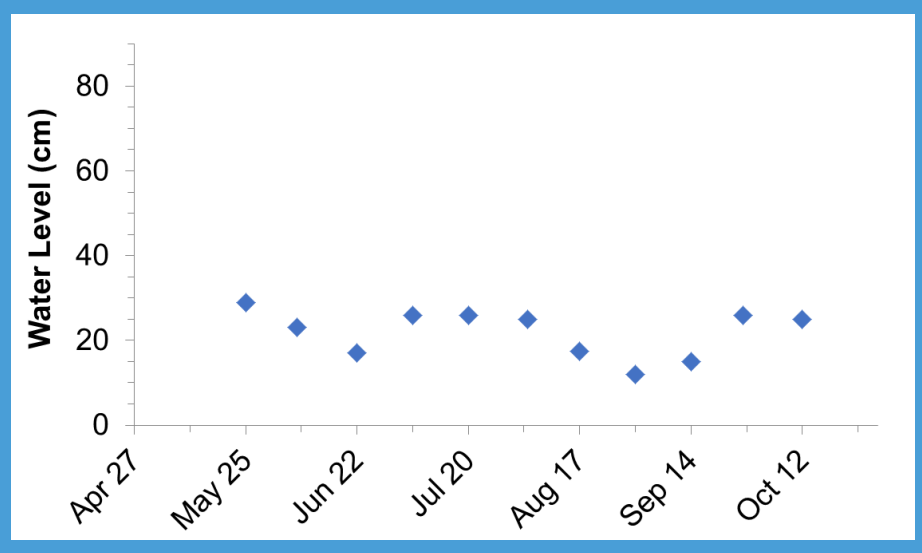
Surface Water Conductivity



Conductivity indicates the amount of dissolved material in the water. Values dropped recently with increased rainfall, which has a dilution effect.

Lake Water Levels at McMurty Dr. Outflow



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