

TIER 2

Lake Health Stewards

Monitoring Guide

Step 1: Air and Water Temperature



Location:

- Determine a site on your lake where you can consistently return throughout the season. Choose a deep part of the lake where you cannot see the bottom. Record the latitude and longitude of the site to ensure reliable and repeatable measurements. Use a GPS device, the Survey123 app (which automatically captures the coordinates), or Google Maps to accurately record the location.

Air temperature:

- Hang your thermometer in a shady spot or in your body's shadow.
- Wait until the thermometer stabilizes before reading the temperature (2-4 minutes).

Surface water temperature:

- Place your thermometer at the surface of water that is at least 1 metre deep and allow it to remain there for 2 minutes.
- Wait until the thermometer stabilizes before reading the temperature with the thermometer still in the water.

Below surface water temperature:

- Lower your thermometer into the lake about 75 cm or more depending on your site.
- Hold it in the water for 2 minutes.
- Pull the thermometer up and record the measurement right away (readings will change quickly once out of the water).

Step 2: Secchi Depth



Location: Lower the Secchi disk on the shaded side of the boat or dock to avoid interference from direct sunlight.

How to measure:

- Gently lower the Secchi disk into the water until the black-and-white pattern is no longer visible.
- Note the distance (in metres) from the surface of the water to the Secchi disk. This is Distance A.
- Slowly raise the Secchi disk until the black-and-white pattern reappears.
- Record this measurement as Distance B.
- To calculate the Secchi depth, average the two distances. : (Distance A + Distance B)/2

Watch this video for a visual example - [How to Measure Secchi and Site Depth](#)

Step 3: Additional Monitoring Parameters (Optional)



Water colour:

- Visually assess and record any significant changes in water colour. This can help indicate algae blooms, pollution, or other environmental changes.
- Capture the water colour with a photo.

Shoreline biodiversity:

- Conduct biodiversity assessment by documenting the types of plants, animals, and other organisms observed along the lake's shoreline. This data can provide additional insights into the overall health of the lake.
- Head to the [Lake Biodiversity Steward Guide](#) for more information about how to collect wildlife observations and submit them through [iNaturalist](#).

Step 4: Data Submission



Complete the Lake Blitz Observation Form:

- Either in the mobile Survey123 app or on a computer using the desktop option.

Create a site ID:

- When entering your data, create a Site ID for your sampling location. This should consist of your initials and a number for the site (e.g., JD1 for John Doe's site 1).
- Enter all your data, including your Secchi depth, water and air temperatures, water colour, and any additional observations.

Verify your sampling location:

- Ensure location services are enabled in your browser or app settings.
- **App:** By default, the Survey123 app tries to capture the location of your device. If your device provides a location, it will be used as the default location.
- **Desktop:** Zoom out on the map to locate the sampling site at your lake.
 - Click on the sampling location. A blue marker will appear, locking in your coordinates.

View your data on the map:

- Once your data is submitted, visit the [Lake Blitz Observation Map](#) to view your new data point and see how your results fit into the broader picture of lake health across Canada.

Monitoring Tips

- Ensure you're monitoring a location where you cannot see the bottom of the lake.
- Take Secchi disk readings consistently at the same spot.
- pH measurements are no longer required but can be monitored independently if you have the equipment.
- Photographing water colour can be challenging. For helpful tips, visit [EyeOnWater](#).
- Remember to take off your sunglasses when taking measurements to ensure accurate Secchi disk readings.

Head to the [Lake Blitz FAQ section](#) for more information or contact us at lakeblitz@livinglakescanada.ca