



Simple Steps for Taking Secchi Disk Measurements

Step 1: Choose your site and stick to it

You have some options. If you have a boat, you may choose to sample at the deepest area of the main bay of your lake. If your lake is large and you wish to split up the areas with other volunteers then choose a deep area in different areas of the lake. Either way, record the location in latitude/longitude and sample there **every time**.

Step 2: Measure the Secchi depth

Several considerations are involved with Secchi disk measurements:

- The quality of Secchi depth data is user-dependent; that is, it varies from person to person as a function of vision. Please take the time to get familiar with the method and keep the same observers as much as possible.
 - The depth of visibility for the Secchi disk is dependent on external factors such as sun light intensity and waves. Measurements should be taken at the same general time between 10am and 4pm, in the shade, and in calm waters.
 - Repeated measurements can aid in resolving precision. In addition, repeated measurements by multiple observers can aid in determining the relative accuracy of the measurement.
 - **BE SAFE!** Always anchor before you take measurements and double check your position. Always wear a PFD for measurements and have at least two people in the boat. Abort measurement mission if waves are greater than 6", if waves crest, or if heavy boat traffic is in the area. The lake will be there tomorrow or next week and we would like you to be as well.
1. Remove Sun Glasses before measuring and note sky and sun conditions. Ideally, it should be between 10:00 am and 2:00 pm. Take GPS reading (if possible).
 2. Slowly lower the Secchi disk into the water on the shady side of the boat just until it is no longer visible. Record this depth in meters.
 3. Slowly raise the disk until it just becomes just visible once again. Record this depth in meters.
 4. Average the depths from steps 2 and 3 to get the Secchi depth. Record this depth in meters along with the time. This may be repeated for a measurement of precision.
 5. Write down comments about the water, any sediment or algae seen or other factors that might affect turbidity.
 6. Repeat this procedure at least every two weeks over the open water season.

Step 3: Enter your results online

Visit our [online web form](#) to enter your data. You will need name and contact info for the person who did the sampling, site information, conditions at the time of sampling, and the Secchi depth reading. If you don't have a computer then write your results down and send to: info@alms.ca

We also recommend you set up an account and submit your results to the North American Secchi Dip-in <http://www.secchidipin.org/> . They have the tools that will allow you to graph the data overtime.

Interpreting your Results

Turbidity is a result of suspended sediment and biomass. For example, a glacially fed lake may have a large suspended sediment load resulting in high turbidity. Algae can increase turbidity in a lake over the summer as they grow and multiply. All of the various factors are picked up with a Secchi disk.

In general, lower turbidity is associated with cleaner, healthier water bodies. But turbidity measurements can vary across different types of environments, so they are especially useful when comparing similar environments or the same water body through time. We would need at least 5 years of data to make inferences on trends in water quality.

Relax and have a good time. Life is short. Thank you for helping to monitor your lake!

Alberta Lake Management Society
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