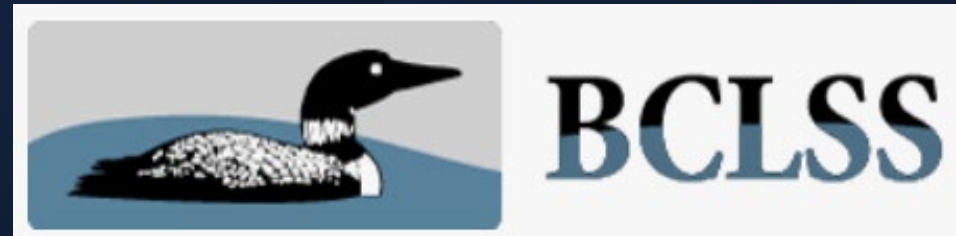
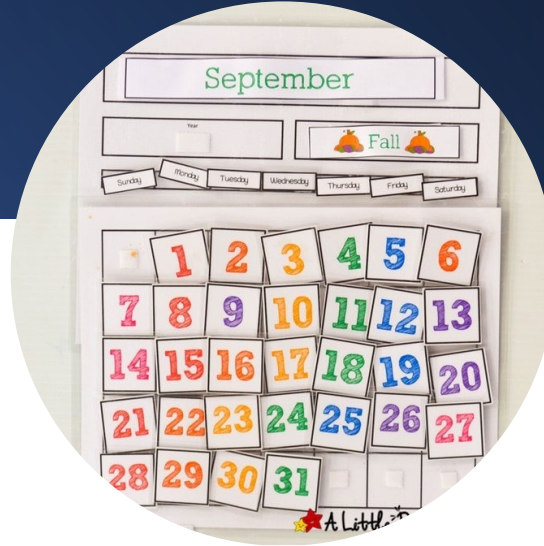


A Sampling Event in the Life of a Volunteer



A Guide to the BC Lake Stewardship and Monitoring Program

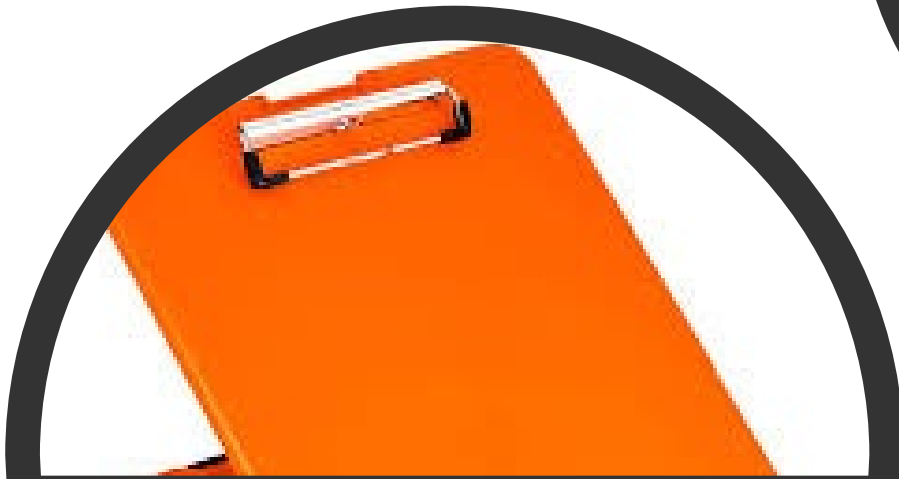
Step 1: Assessing the day




- Check the time: sampling is best done between **10am and 2pm**
- Check the day: sampling should be done **Sunday through Thursday only** (do not sample on Friday or Saturday; do not sample on the Sunday of a long weekend)
- If its stormy out, do not go sampling

Step 2: Preparing your gear

- Ensure you have everything you need for a successful sampling trip
- Clipboard with field sheets & map
- Secchi Disk, thermometer
- Field Meter and calibration instructions
- Check that everything is in good working order





Step 3: Navigate to your monitoring location

- Use the map provided or
- Use a GPS device
- Mark location with a Buoy
- Ensure you are following all boat safety regulations

Step 4A: Record Environmental Conditions

- Top portion of your field sheets
- Some readings are subjective, but still important
- Observations like storm events, pollen swarms, bird migrations, etc.

SITE OVERVIEW		
	EXAMPLE DATA	YOUR DATA
Lake Name	Tabor Lake	
Sampling Site Location Description	From west dock	
Date (dd-mmm-yyyy)	03/May/2022	
Time (24 hr)	11:00	
Volunteer Initial(s)	KK/GH	
Number of Volunteer Hours	1 hr	
CURRENT CONDITIONS		
Precent Cloud Cover (clear is 0/10)	9/10	
Wind Direction	east	
Wind Speed (calm, low, med, high)	low	
Surface Water Condition (flat, ripple, chop, rough)	ripple	
Air Temperature (to nearest 0.01 °C)	14.04	
Secchi Depth (average to 0.01 m)	5.42	
YSI Calibration (Record % D.O. reading at the end of calibration)	95.63 %	
Observations/Comments:		

Step 4B: Take a Secchi Depth Reading



- No hats or sunglasses
- Work off the shady side of the boat
- A - Lower disk till it disappears, take reading at water surface
- B - Raise disk till just reappears, take reading at water surface
- C - Average two readings, add value to field sheet




How to Calibrate my YSI Pro Solo ODO Field Meter

IMPORTANT: The YSI Pro Solo ODO Field Meter **MUST** be calibrated for **EVERY** sampling event.

To get accurate readings the meter depends on Barometric pressure, which varies daily, so the meter has to be calibrated each time you sample.

STEP 1

Connect the cable to the reader. Press and hold the  button to power on the hand held reader.

Loosen, but do not remove, the grey protective cover from the sensor to allow the sensor to breathe.

Press the "Cal" button on the hand held reader. A menu will appear in the top left corner of the screen.



Escape/Exit

Calibration menu



Navigation arrows



Enter/Accept

Power On/Off

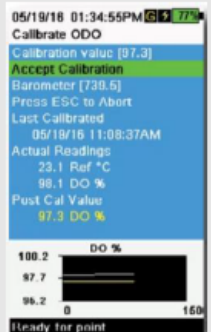
HINT: Ensure the sponge in the bottom of the protective cover is moist to help saturate the air inside the cover for calibration.

STEP 2

Using the  and  buttons, scroll until "ODO" is highlighted. Press "ENTER".

Using the  and  buttons, scroll until "DO%" is highlighted. Press "ENTER".

Allow the sensor to stabilize for several seconds, until the line is flat (40 seconds). Press "ENTER" to accept the calibration.




NOTE: The sensor needs to be stored in the grey protective cover with a moist sponge to ensure that the membrane on the sensor does not dry out. If the membrane dries out the sensor will no longer work.

STEP 3

Press "Esc" repeatedly until you return to the main readout screen. Remove the grey protective cover from the sensor.

Proceed with collecting the DO/Temp profile data being sure to record your measurements on the field sheet.

When your profile is complete, press and hold the  button to power off the hand held reader.

Ensure the sponge in the grey protective cover is moist. Replace the cover on the sensor and disconnect the cable from the reader for storage.



Step 4C: Calibrate Field Meter

- Record the DO% value on the field sheet during calibration

<https://www.youtube.com/watch?v=bCGumX1Qmzc>

HANDHELD DISSOLVED OXYGEN METER

YSI PRO SOLO

Professional Calibration



LAKE PROFILE DATA Record dissolved oxygen (DO) and water temperature to nearest 0.01										
Depth (m)	Temp. (°C)	D.O. (mg/L)		Depth (m)	Temp. (°C)	D.O. (mg/L)		Depth (m)	Temp. (°C)	D.O. (mg/L)
0				17				34		
1				18				35		
2				19				36		
3				20				37		
4				21				38		
5				22				39		
6				23				40		
7				24				41		
8				25				42		
9				26				43		
10				27				44		
11				28				45		
12				29				46		
13				30				47		
14				31				48		
15				32				49		
16				33				50		

Step 5: Collect Profile Data

- Bottom Portion of your field sheets
- Record Temp and DO every 1 m from surface to 1 m above bottom
- Record Dissolved Oxygen in mg/L

Step 6: Submit your data

Submit your data using the online data submission tool <https://arcg.is/1e90vb>

OR

Complete the digital field form and email it to volunteerlakes@gov.bc.ca

Helpful tips for filling out this field study sampling form:

1. Before you start, review the [Volunteer Lake Monitoring Methods and Resources](#) section.
2. **Submitting photos** along with your sampling data is **mandatory**.
3. Have your **completed lake depth profile sheet** ready to upload.
4. **Finally, have your photos and lake depth profile sheet on the same device you are using to fill out this form** in order to access them easily.

Sampling Form Field App: Try our mobile app to enter and save data offline (available for [Android OS](#) or [Apple iOS](#)).

Site Information ▾

EMS ID (required):*
Please refer to your requisition form (e.g. E123456 or 0123456)

Lake name (required):*
(e.g West Lake)

The digital form looks just like your paper field forms

Open a new tab at the bottom for each sampling date

Email the form to us after each trip

The online tool is used through a web browser or app

There are 2 separate sections to complete

The data comes directly to us as soon as you hit submit

BC LAKE STEWARDSHIP AND MONITORING PROGRAM - LEVEL 2 FIELD FORM											
Take evenly spaced (weekly or bi-weekly) surface water temperature, clarity (Secchi disk), and lake profile readings throughout the ice off season. Sampling should be made at the same time each week, if possible, and if weather and water conditions permit. Any departure from these conditions should be recorded under "comments". Please collect a minimum of 12 samples per year, taken between 10:00 am and 2:00 pm.											
SITE OVERVIEW											
Lake Name	EXAMPLE DATA		YOUR DATA								
Sampling Site Location Description	Tabor Lake										
Date (dd-mmm-yyyy)	03-May-22										
Time (24 hr)	11:00										
Volunteer Initials (s)	KK/GH										
Number of Volunteer Hours	1 hr										
CURRENT CONDITIONS											
Precent Cloud Cover (clear is 0/10)	10-Sep										
Wind Direction	east										
Wind Speed (calm, low, med, high)	low										
Surface Water Condition (flat, ripple, chop, rough)	ripple										
Air Temperature (to nearest 0.01 °C)	14.04										
Secchi Depth (average to 0.01 m)	5.42										
YSI Calibration (Record % D.O. at surface after calibration)	95.63%										
Observations/Comments:											
LAKE PROFILE DATA Record dissolved oxygen (DO) and water temperature to nearest 0.01											
Depth (m)	Temp. (°C)	D.O. (mg/L)	Depth (m)	Temp. (°C)	D.O. (mg/L)	Depth (m)	Temp. (°C)	D.O. (mg/L)	Depth (m)	Temp. (°C)	D.O. (mg/L)
VISIT 1	VISIT 2	VISIT 3	VISIT 4	VISIT 5	VISIT 6	VISIT 7	VISIT 8	VISIT 9	VISIT 10	VISIT 11	VISIT 12

Questions?

Thank-you all for attending and for your commitment to the BCLSMP

Feel free to contact us anytime by emailing volunteerlakes@gov.bc.ca

Level 1 & 2 Monitoring Training Complete