

2. TEMPERATURE MONITORING:

Using a Digital Meter

Before you start sampling, be sure to read the following pages to familiarize yourself with the equipment and the procedures that you will be using. All of the procedures that you will follow in sampling your lake are done for specific reasons. It is very important that you follow the sampling procedures exactly as they are laid out in the following pages to ensure good, consistent, high quality data. The following pages will provide you with sufficient background on the design of the equipment and proper procedures to use.



After sampling, it is very important to rinse and thoroughly air dry all of the equipment that you used. As always keep paperwork and envelopes separate from equipment. Be sure to unplug your meter and store out of direct sunlight.

What Equipment Will You Need?

- At your training session, your CLMN regional coordinator will outline and provide all of the equipment that you will need to successfully monitor your lake.
- Manual
- Lake map with sampling site marked
- Digital temperature meter and probe
- Lifejackets (you provide)
- Anchor and rope (you provide)
- Field data sheets
- Pencil and waterproof pen

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How Do You Prepare to Sample?

The Day You Sample

On the day you plan to sample, complete the top portion of your field data sheet by filling in the Waterbody # (or WBIC) and Station # (or Storet #). If you do not know these numbers, contact your regional coordinator. Check your monitoring equipment to make sure it is good working condition. If you have an electronic temperature meter, make sure the 9-volt battery is working. Before you launch your boat, make sure you have an anchor, sufficient gas, and personal flotation devices in your boat.

Sampling Overview

Temperature Readings

Some limnologists believe that lake temperature profile data are very important to document the effects of climate change. Keep this in mind, as the accuracy of the data you collect is critical. Temperature readings are easy to take. When using a digital temperature meter, a measured cable with a probe is lowered into the water and a hand-held digital meter records the temperature. The cable is marked in one foot increments. Your regional coordinator will give you the depths at which the temperature should be recorded for your particular lake.

Your temperature profile will also tell you if your lake stratifies. You will be able to determine the depth of the epilimnion and where the thermocline is. Temperature profiles will also help determine if a fish kill is a possibility on your lake.

ON LAKE PROCEDURES

Temperature Monitoring

Temperature Probe Method

STEP 1. Your regional coordinator will assign you 5 to 10 depths at which you should sample the temperature of your lake. List these pre-determined depths on your field data sheet.

STEP 2. Plug cable into unit.

STEP 3. Lower the probe to your assigned depths and note the corresponding temperatures from the meter onto your data sheet.



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STEP 4. Once you are finished, raise probe and unplug the cable from unit to conserve the battery. Be sure to store the digital meter out of direct sunlight.