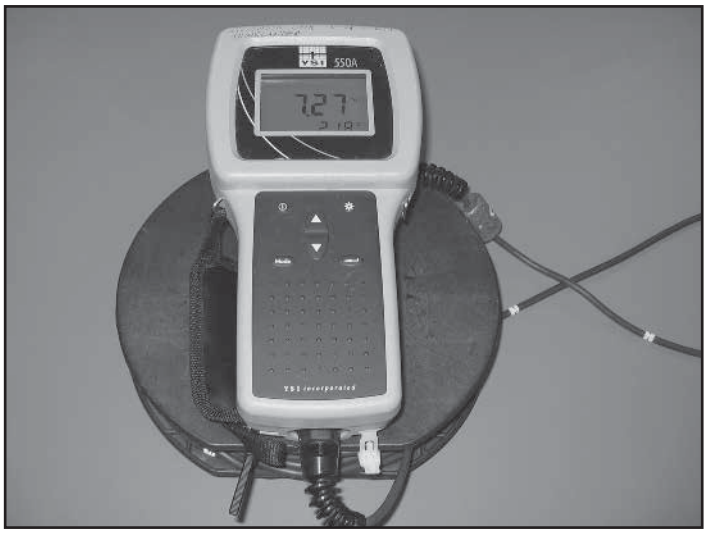
5. DISSOLVED OXYGEN MONITORING:

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.*



DNR PHOTO

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 turn off your meter and store out of direct sunlight.

NOTE: If you are using a dissolved oxygen meter **you must read the manufacturers manual before use**. Some meters require regular calibration and regular membrane changes.

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 dissolved oxygen meter and probe (you provide)
- ☑ Lifejackets (you provide)
- ☑ Anchor and rope (you provide)
- ☑ Field data sheets
- ☑ Pencil and waterproof pen

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 what these numbers are contact your CLMN regional coordinator. Before you launch your boat, make sure you have an anchor, sufficient gas, and personal flotation devices in your boat.

Before using your dissolved oxygen meter, be sure to read the owner's manual. In order to get accurate data from your meter, you must learn how to calibrate your meter and use your meter properly. Please keep a Calibration Log (see Appendix 7) to ensure good data.

If you use a YSI hand-held dissolved oxygen meter, please refer to the document "Helpful Tips When Calibrating YSI Hand-held Dissolved Oxygen Meter (Appendix 7) or refer to your manufacturer's instructions for calibration and use.

Sampling Overview

Dissolved Oxygen Meter

The CLMN allows volunteers to use their own dissolved oxygen meter to take your readings. If you choose to collect your dissolved oxygen data using this method, it is important to remember that some meters *must* be calibrated every time they are used. A calibration log and tips for using a meter is included in Appendix 7. The calibration log will keep you in tune with the performance of you meter, which ultimately will help you collect quality data. Please follow all instructions for care and maintenance found in the operation manual for your particular model as maintenance of the meter is imperative to get good data. If you choose this method you must inform your CLMN coordinator so they can flag the database with this information. At this time, the CLMN does not provide dissolved oxygen meters for volunteer use.

ON LAKE PROCEDURES

Dissolved Oxygen Monitoring

Dissolved Oxygen Meter

STEP 1. Your regional coordinator will assign 5 to 10 depths to sample for dissolved oxygen. Your meter will also record temperature. You will collect dissolved oxygen and temperature data at the same depths.

STEP 2. Follow manufacturer's instruction for calibration and use.

STEP 3. Lower the probe to the assigned depth. Record temperature and dissolved oxygen reading from the meter onto your data sheet.

NOTE: Dissolved oxygen should be collected in the "mg/L" mode only. Some meters are calibrated in percent saturation, so be sure to use the mg/L mode while gathering data.

Record the type of meter you are using under "observations" on your data sheet.