

# INSTRUCTIONS FOR DEP AND VLMP LAKE MONITORING FIELD FORMS

## Which Form Do I Use?

The type of lake monitoring you perform will determine which Field Form to use. If you have received the wrong type of form or need additional copies, please contact your Regional Coordinator. Three types of field forms are available:

1<sup>st</sup> – Form DEP-142b (Rev 1/09), is a one-sided, two-page carbonless form that provides space for nine **Secchi disk** readings and weather conditions. The majority of volunteer monitors use this form. The original is sent to the Regional Coordinator and the second page provides a copy for the monitor to keep. (Follow steps 1-12, below.)

2<sup>nd</sup> – Form DEP-142a (Rev 1/09), is a one-sided, two-page carbonless form that is used to record a Temperature and **Dissolved Oxygen** profile in addition to the Secchi disk information. The original is sent to the Regional Coordinator, and the second page provides a copy for the monitor to keep. (Follow steps 1-15, below.)

3<sup>rd</sup> – Two-sided, one page form for monitors that are collecting **chemistry**, Total Phosphorus and/or Chlorophyll samples in addition to Secchi and Dissolved Oxygen data. The front of this form is the same as the previous form (Form DEP-142a), but has Form DEP-142c (Rev 4/07) on the other side for the additional data. Since these are not carbonless, monitors should make photocopies of these forms for their own records before sending the original to the Regional Coordinator. (Follow steps 1- 21, below).

## Can I use last year's forms?

*Please do not use old forms.* The forms are updated from year to year. Old forms are missing important information.

## Should I enter data on more than one form?

*PLEASE RECORD DATA ONLY ONCE.* If you use more than one type of field form during the season, only record the data on one of the forms. If using dissolved oxygen forms, record Secchi readings on that sheet. Recording the same information on two types of forms creates duplicate information.

## Can I put more than one station or more than one lake on the same sheet?

If you sample more than one station or multiple lakes, *Please use a separate sheet for each location.*

## How do I fill out the form?

Follow instructions 1 through 12 for all three forms:

NOTE: It is best to use a **pencil** because some inks are water soluble.

1. Fill out the top portion of the appropriate form with the lake name, verbal description of sampling station (e.g., deep hole, off Fox Island, North end of lake, etc.), town, and county for the sampling station.

*[Forms for Dissolved Oxygen profiles include space for Station Latitude and Longitude; these are optional fields to be used by monitors having access to Global Positioning Satellite (GPS) devices. If you are able to obtain these coordinates, please include the Datum used by the GPS unit - NAD83 or WGS84 are preferred. If you succeed in locating the deepest depth of your station then please circle "Y" under "On Target?" If you are near but not quite right on, circle "N". If the GPS device displays accuracy, please record accuracy with units as well.]*

2. The coding boxes under the top line of information are filled with the first four letters of LAKE name, MIDAS number (lake ID number), the sampling station number (generally the deepest hole is 01 unless DEP/VLMP has agreed otherwise). Up to two Monitors may be entered; in each set of boxes, please enter the last name followed by a comma then the first name. If three or more people are monitoring, please note additional names in the COMMENTS section near the bottom of the page. The PROJECT code should be "EI03" for most volunteers; larger subgroups may have specific codes.

3. Record the date as month, day, and year.

4. Record time the Secchi disk reading is taken as military time on the field sheet. NOTE: between 1 PM and midnight, add twelve hours to get military time (e.g., 8:30 a.m. is 0830; 2:15 p.m. is 1415).

5. Record the weather conditions, such as estimated wind velocity, wind direction, and cloud cover on field sheet in spaces provided. NOTE: wind direction codes are provided on field sheets. A table to aid in wind velocity estimations appears at the bottom of Form DEP-142b. *Record as a single number - not a range.*

6. Record Secchi disk reading to two decimal points. All readings should be in meters.

7. Record Scope type. See table to determine type used. If your scope is different than choices available, describe in COMMENT section of form and leave scope type blank.

8. If the Secchi disk hits the bottom of the lake and you can still see it, answer "Y" to "Did Disk Hit Bot?". This piece of information is very important. If the disk is visible when it hits the bottom, your reading is an underestimate of the true transparency.

9. Record QA Certification number of the person obtaining the Secchi reading. This number is the first two letters of the last name of the person when they joined the program followed by a 4-digit number. Include a leading 0 for cert. numbers below 1,000. If you do not know your number, please contact your Regional Coordinator. Each person must have a QA number for data to be accepted.

10. Fill in Reading #. When you are taking one reading, the reading # will be 1. If the same person is taking more than one reading on the same day, using the same scope type, please record each reading separately and enter 2 for the second, 3 for the third. *At least twice a year monitors should take duplicate Secchi readings (one after the other) and record them separately as reading #1 and reading #2.* If you monitor with another volunteer, compare readings and record the comparisons twice a year.

11. Record comments at bottom of sheet. These should include any observations you've made while sampling, including unusual weather conditions prior to monitoring.

12. If obtained, record Total Phosphorus (TP) Surface Grab results in parts per million (ppm). Indicate the lab used in the comments section (142b only).

### **Dissolved Oxygen Profiles**

*Follow these additional steps (13 - 15) using DEP Form-142a*

13. Fill out profile header information: Circle depth units. Circle temperature units. Circle D.O. method. If using a D.O. meter, indicate the type and Model number, calibrate the meter and check the D.O. calibration box. (Note: meters must be calibrated before taking readings.)

14. Enter temperature and D.O. readings in spaces by appropriate depth. Enter additional depths if necessary.

15. **Take at least one QA/QC duplicate reading for every ten readings in the profile.** Those using chemical kits should obtain a duplicate reading from the deepest depth. Those using meters should obtain duplicates at a rate of one for every ten readings when winding up the cable. Because the purpose of obtaining these duplicate readings is to check the precision of the meter, choose depths where both temperatures and oxygen levels are stable. Avoid the metalimnion because by definition, readings are less stable in that zone. Enter duplicate readings in the section labeled QA/QC DUPS. Duplicate readings that are not within +/- 0.2 or +/- 0.3 of the original readings indicate that either you are not waiting long enough for readings to stabilize or that there is a problem with the meter. ***D.O. profiles without QA/QC duplicate readings will be discarded.***

### **Total Phosphorus, Chlorophyll, or Chemistry samples**

*Follow these additional steps using two sided form (DEP-142a and DEP-142c).*

16. Record depth of cores, and sample number(s) for Chlorophyll and Total Phosphorus at bottom of first page, if obtained.

17. Turn sheet over and fill out top with lake name, Midas number, sample station and date samples were taken.

18. Record depth, units and type of sample for each core or grab sample taken.

19. If obtained, record results and method code (M) for pH, color, conductivity and alkalinity. NOTE: codes for units, type, and methods are printed at the top of the page. If entering color data, indicate whether the result is for True (filtered) or Apparent color in column entitled 'T/A' to the right of the color result. Use 'O' if a different method is used, indicate the name of the method and explain the method in the Notes section at bottom of page.

20. If obtained, record the TP sample # and enter the results when returned from the laboratory; also record the lab used (see code at top of page) and the number of the replicate (Rep) in the spaces provided. NOTE: If only one sample was taken of that type at that depth, the Rep # will be 1. If two or more samples were taken of the same type at the same depth, Rep # will be 1 for the first, 2 for second, and so forth.

21. If obtained, enter the Chlorophyll results when returned from the laboratory; also record the lab used (see code at top of page) and the number of the replicate (Rep) in the spaces provided. NOTE: If only one sample was taken of that type at that depth, the Rep # will be 1. If two or more samples were taken of the same type at the same depth, Rep # will be 1 for the first, 2 for second, and so forth.

[Note: If two or more bottles (samples) are collected in the field, label one as Rep 1 and the second as Rep 2 and so forth; preparing two Chl filters from one bottle doesn't make a replicate sample.]

If samples are submitted to a laboratory, take care to follow proper labeling formats which will enable you to match and record results with the appropriate lake and depth when they are received.

**PLEASE REVIEW YOUR FORMS FOR COMPLETENESS AND SIGN THE BOTTOM BEFORE GIVING TO YOUR REGIONAL COORDINATOR.**

**Thank You!**

