

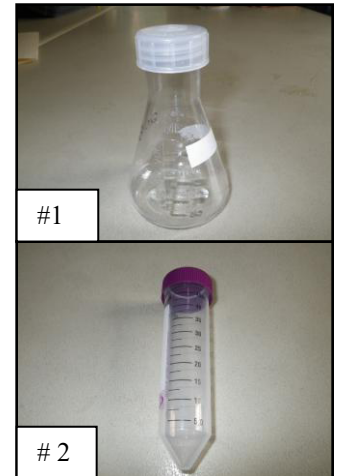
Total Phosphorus Surface Grab Sampling Instructions for Volunteer Monitors

Rev. 2022-05-05

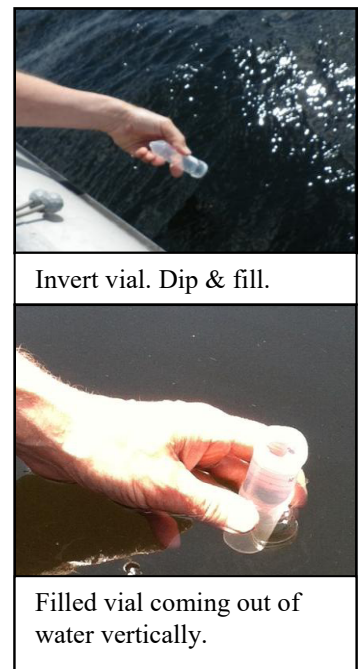
Lake Stewards of Maine (LSM) and DEP have arranged for volunteer monitors to mail samples for total phosphorus analysis to the Health and Environmental Testing Laboratory (HETL) at the Maine DHS in Augusta. This ‘system’ has been established to accommodate volunteers who have expressed interest in obtaining additional total phosphorus data and are willing to pay the lab fee of \$45.00 for each analysis.

If you are interested, follow these steps:

- 1) Make arrangements through LSM to be trained & certified to collect Total Phosphorus surface grab samples, if not already trained.
- 2) Contact Joe Niskach at the HETL Lab (joseph.niskach@maine.gov), or (207) 287-8014 to request a “Total P Kit.” Email contact is preferable. Please contact Joe **at least two weeks** before you need the kit.
- 3) HETL will send out an insulated box containing *two* sample containers: an *Erlenmeyer flask* (photo #1) with a screw-on cap, a vial with a purple screw-on cap (photo #2), an ice pack, and a “Chain of Custody” form. The vial is used to collect a precise sample volume from your lake, after which the contents are poured into the flask, which is mailed to HETL in the packing materials provided by the lab. Freeze the ice pack immediately.
- 4) Carefully follow the procedure below to obtain the sample:



- a) **Pre-trip Preparations.** Before going out on the lake, label the Erlenmeyer flask (using permanent ink or pencil) with the lake name, lake identification number or MIDAS number, date, ‘SG’ to indicate that it is a surface grab, and your last name. *Phosphorus samples are very easily contaminated so the sampler must take precautions to keep both sample bottles clean, such as putting them in a sealed plastic bag in a clean cooler before the trip.*
- b) **Obtain Secchi Reading.** Take a Secchi Disk reading at the regular monitoring station and record it on a field sheet to eventually pair with the phosphorus result. **The phosphorus sample should be taken at the same location where you take the Secchi reading.**
- c) **Pre-sampling Preparations/considerations.** The phosphorus sample should be collected from the transparency monitoring station. Sampler must wash his/her hands on one side of the boat, rubbing skin briskly, to six inches above the wrists using only lake water to dislodge any dust and dirt which could contaminate the sample. Next, remove the purple cover from the vial. Do not touch the inner surfaces or mouth of the vial or the cover. Fill the vial with lake water and swirl it briefly, before emptying it back into the lake. Rinse the vial three times, then empty out all rinse water. You are now ready to collect the sample. Plan to collect the sample on the opposite side of the boat from which hands were washed and bottle rinsed.
- d) **Sample Collection & Handling.** When filling the vial with the sample, avoid areas where there is any visible oil sheen or debris floating on the water’s surface. Invert the vial and submerge to a depth of about six inches; angle the mouth of the vial toward the surface of the water, while pushing it through the water away from the boat scooping it full of water. Be sure that the vial is completely full and vertical when coming out of the water so that no sample is spilled.



e) Remove the cap from the Erlenmeyer flask, shake out any drops of water inside, then pour the contents of the vial into the flask, being careful not to spill any of the sample. (This is most easily done with two individuals, but it



Vial filled to above brim.



Carefully pour into flask.



Screw cap onto flask.

can be done by one with practice and a steady hand.) Place the cap on the flask firmly such that no water leaks out. The caps can be brittle so avoid over-tightening which can crack the cap. Put the sample in a cooler on ice; refrigerate immediately. The flask with the purple top cannot be used again for phosphorus sampling. Unless you have another use for it, please recycle immediately, to avoid future confusion.

5) Mail the sample as soon as possible (at least within three days) using the following guidelines: **Include a check for \$45 (for each sample enclosed) made out to Maine DHHS, the completed "Chain-of-Custody" form (see example), sample, and frozen ice pack in the insulated box and mail the sample back to the lab Monday - Thursday using U.S. Postal Service or UPS. Please don't mail samples on Friday or Saturday, as there are no weekend mail deliveries to the lab. The sample must be analyzed at the lab within 28 days of collection.**

Chain - of - Custody

State of Maine Health and Environmental Testing Lab
221 State Street Station #12 Augusta, ME 04333-0012
Phone (207) 287-2727 Fax (207) 287-1884

Sample Date: **MM-DD-YY**
Town/County: **Town/City**
Project Name: **LSM**

Company:		Appropriation/PO#		Compliance sample <input checked="" type="checkbox"/>	
Contact: Your name		Bill To:		Copy To: <input checked="" type="checkbox"/>	
Address: address		Address:		Address:	
Phone: phone		Phone:		Phone:	
e-Mail address:		e-Mail address:		e-Mail address:	

Sample ID	Sample type	Preservation	Container vol	Container type	Quantity	State or Comp/State	Matrix: Groundwater, Surface Water, Wastewater, Drinking Water, Other	Analysis Required	NETL Number
Lake Midas, Sh xxx	NISE						Lake Water	Total Phos.	

Notes:

Sampled By: _____ Date/Time: _____ Received By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____ Received By: _____ Date/Time: _____

Rush (Yes or No) _____ Fax Results (Yes or No) _____ Custody seal intact (Yes or No) _____ Temperature on Arrival _____ °C

If the sample is deemed hazardous it may be returned to the client at your expense for proper disposal. By signing this Chain-of-Custody you agree that the limit of The HETL's liability to be the cost of the analytical fees in question. rev 5/11/07

6) The lab will analyze the sample then mail the results. Record the result received from the lab in the right column on the front of the multiple-date field sheet or on the back of the single-date field sheet before sending the sheet to your Regional Coordinator or LSM. Or, attach a photocopy of the results to your Field Form before submitting to your data. **All TP data must have a matching Field Data Form to be accepted by LSM & DEP.**

7) To get the most information for your money, use the following table to target sample collections according to the number of samples for which you are willing to pay.

Number of Samples	Month
1	Mid-August
2	Mid-July & Mid August
3	Mid-June, Mid-July & Mid-August
4	Mid-May, Mid-June, Mid-July & Mid-August
5	Mid-May, Mid-June, Mid-July, Mid-August & Mid-September
10	Every other week May - September