

## Vermont Lay Monitoring Program Sampling Review

- Collect samples once per week or every 5 - 10 days, Memorial Day through Labor Day
- Collect a minimum of 9 samples
- Confirm proper station locations using landmarks or GPS
- Always anchor firmly
- If participating in rain gauge study, add total rainfall (in section 1 of data sheet) since last sampling date from rain gauge log
- Use the correct 5-letter lake code
- Record time in 2400 hours
- Lower Secchi disk on the shaded side of the boat or create your own shade; do not use sunglasses
- Record lowest depth at which Secchi disk is still visible
- Read Secchi line at water surface in tenths of a meter

### Supplemental Sampling Protocol

#### **STATION 1**

1. Measure Secchi disk clarity and record

#### **Surface sampling (shallow station monitors):**

2. Rinse sample bottles *A* and *B* twice with surface water
3. Fill bottles with lake water from arm's depth to the surface

#### **Hose sampling:**

4. Rinse sample bottles *A* and *B* twice with surface water
5. Rinse bucket twice with surface water
6. Rinse hose twice
7. Lower hose slowly to twice the Secchi depth or at least 1 meter off bottom, keeping the rope loose
8. Tightly crimp hose when at proper depth
9. Bring weighted mouth of hose up with rope
10. Hold weighted end over bucket; do not let it touch the bucket bottom
11. Lift crimped end overhead, then release, draining water towards weighted end in bucket
12. Pass hose completely through hands overhead, ensuring all water drains to bucket
13. Swirl sample water in bucket
14. Pour water from bucket into bottle *A*
15. Repeat procedure steps 7 - 14 for bottle *B*
16. Connect hose ends to prevent contamination

#### **STATION 2 (inland lakes only)**

17. Measure Secchi disk clarity and record
18. Return to shore and conduct laboratory procedures

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#### **STATION 2 (inland lakes only)**

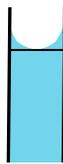
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## Laboratory Procedures

### Phosphorus sampling:

1. Shake bottle *B* and fill to the line on the phosphorus vial (see diagram at right)
2. Cap tightly and label with *lake name*, *station #*, and *date*
3. Store sample in a cool, dark place

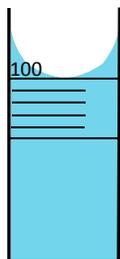
Read at eye level →



### Chlorophyll-a sampling:

4. Fold and tear one large filter into halves
5. Use half of large filter for filter jackets
6. Label jackets in pencil with *lake name*, *date*, *A* or *B*
7. Shake bottle *A*
8. Rinse filtering apparatus and graduated cylinder twice with *A* water
9. Use tweezers to place small filter paper on center piece
10. Shake bottle *A* again
11. Measure 100 ml of water using graduated cylinder (see diagram at right)
12. Filter water
13. Squeeze pump a few extra times to remove excess water
14. Fold into quarters and remove filter paper carefully using tweezers
15. Place inside filter jacket *A*
16. Paper clip small filter into jacket securely with writing visible
17. Repeat steps 7 - 16 procedure for sample *B*
18. Freeze chlorophyll filters in an airtight, dark jar or in tinfoil

Read at eye level →



### Wrap-up:

19. Rinse laboratory equipment and store in a clean box
20. Store all field and laboratory equipment in a safe place
21. Complete any remaining items on data sheet, including *AIS Survey*, *Total Sampling Time*, *Weekly Gas Estimate*, and *Comments*
22. Complete *Public Perception Survey* on back of data sheet
23. Make a copy of the data sheet

### Questions:

Contact Mark Mitchell, LMP Coordinator, at (802) 490-6129 or [Mark.Mitchell@vermont.gov](mailto:Mark.Mitchell@vermont.gov)



## Laboratory Procedures

### Phosphorus sampling:

1. Shake bottle *B* and fill to the line on the phosphorus vial (see diagram at right)
2. Cap tightly and label with *lake name*, *station #*, and *date*
3. Store sample in a cool, dark place

Read at eye level →



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