



Shallow Ponds: Triseason Water Monitoring and Collection SOP

Before going out on the water **go over the checklist on the next page** to make sure you have everything you need. In general you should plan to **fill every bottle** that is in your monitoring kit. Have all testing items organized so that you can complete your monitoring as soon as you come off the water.

1. Go out to your sampling location, anchor your boat.

Monitors on very shallow ponds (< 3 meters) - if possible, take your water samples before you anchor your boat to avoid stirring up and collecting bottom sediments.

2. Make your first set of **Secchi depth transparency** measurements.
3. Perform **bacterial monitoring** in water at arm's depth, removing the "sterile" label just before sampling.
 - Do not touch inside of bottle or lid.
 - Do not put lid on boat seat.
 - Do not use any water sampling device.
 - Recap bottle immediately after sampling and put in cooler.
4. Put the shallow sampler in the water. Rinse the sampler by squeezing the bulb ten times. **Rinse all of your bottles** with 1 meter deep water.
5. **Fill** the two biweekly chlorophyll bottles, the large white plastic bottle (with red label) and the brown glass "unfiltered" bottle (red label) with 1 meter deep water. Put all the bottles in a cooler with a cooler pak.
6. **Measure the temperature of the 1 meter water** in one of the plastic bottles. Keep the bottle out of direct sunlight. After recording the temperature put the bottle in a cooler.
7. Make your **second set of Secchi depth transparency** measurements.
8. Check the **depth to pond bottom** using your Secchi disk, **return to shore**.
9. OUT OF DIRECT SUNLIGHT, **do the chlorophyll filtration two times on water from each of the two chlorophyll bottles, for a total of four times.** **Save the filtered water in the yellow-labeled brown glass bottle.** There will be more than enough water to rinse and fill this bottle.

CAUTION: You should not have to push with all your strength in order to filter the water. If you see water drops coming out from between the top and bottom of the white plastic filter holder the filter has become plugged (either with algae or sediment). You must start over with a fresh filter and water sample. Use less water, for example 25 ml, and record the amount used on your postcard and on the filter itself.

10. Fill out your postcard. **Bring all water samples and all accumulated chlorophyll filters (from your freezer) to URI.** Use an insulated cooler.



Tri-season Monitoring Checklist - Shallow Locations

On the water:

- personal flotation device
- anchor
- map of pond with landmarks and sampling site noted
- monitoring notebook and monitoring postcard
- Secchi disk, 2 clothespins
- view tube
- shallow sampler
- 2 plastic chlorophyll collection bottles
- bacterial monitoring bottle (labeled "sterile")
- 1 white plastic bottle (red label)
- 1-2 brown bottle(s) labeled "unfiltered" (red label)
- thermometer
- insulated cooler bag

On shore: chlorophyll filtration apparatus

- syringe
- round plastic filter holder
- 4** small filter circles (from black film canister)
- wrapping/blotting filters (a larger filter circle, torn in half or quarters)
(You may also use a coffee filter, or paper toweling)
- tweezers
- flip-spout squeeze bottle containing magnesium carbonate
- aluminum foil squares (your own)
- sheet of location labels
- 1 brown bottle labeled "filtered"**