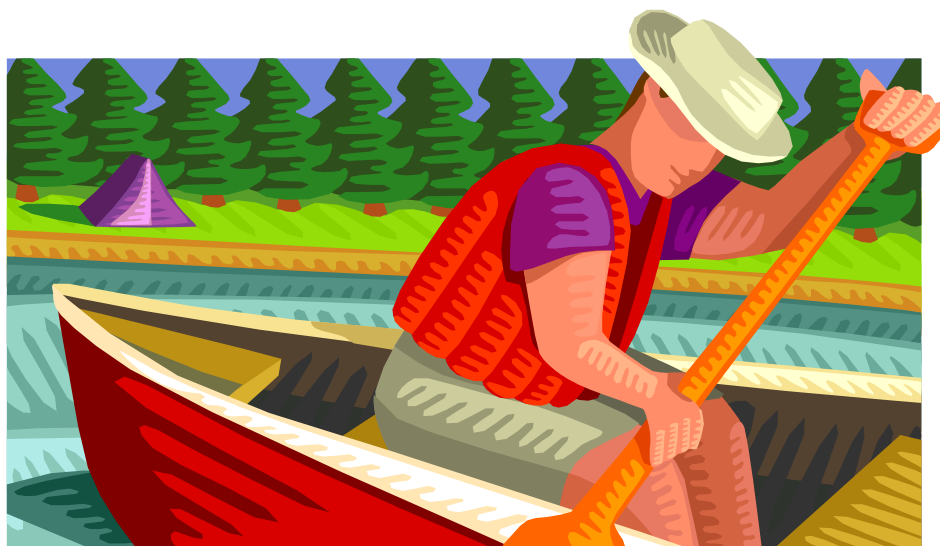


Collecting Water Samples





UNIVERSITY OF
Rhode Island

COLLECTING UNFILTERED WATER SAMPLES

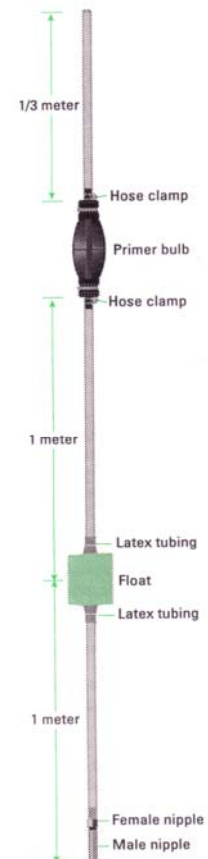
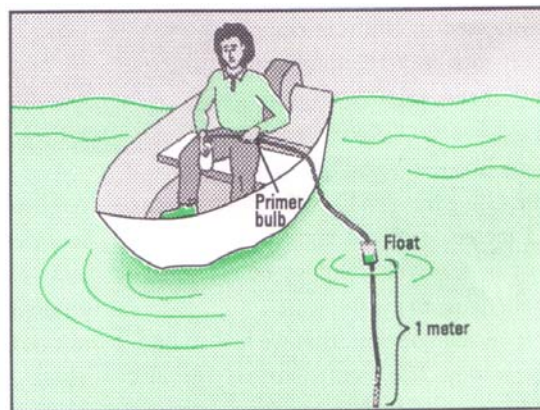
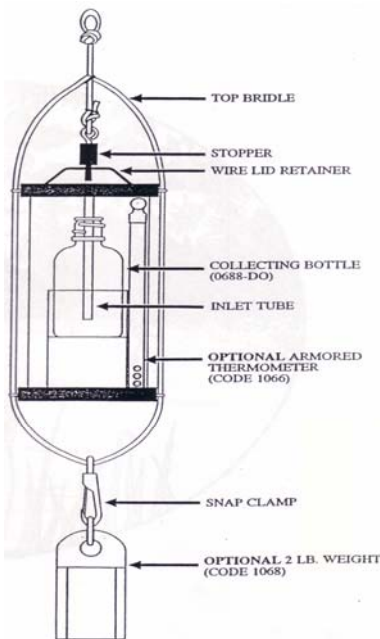
(Field SOP 009)

Date: 11/04
Revision: 1
Author: Linda Green

University of Rhode Island Watershed Watch

Unfiltered water samples are collected for pH, alkalinity, total phosphorus and total nitrogen, from both deep and shallow water depths. We collect water samples in plastic bottles for pH and alkalinity and in glass bottles for total phosphorus and nitrogen.

1. Collect a shallow water sample using the shallow water sampler (see Shallow Water Sampler Operation Field SOP 011) or a deep water sample using the deep water sampler (see Deep Water Sampler Operation Field SOP 012).
2. Un-cap and rinse the sample bottle(s) for collection of unfiltered water sample(s) with some of the collected water. Discard the water used to rinse the bottle.
3. Fill the sample bottle to within approximately 1 inch of the bottle top. This will leave an air space in the sample bottle to allow for mixing of the sample in the laboratory.
4. Cap the sample bottle and place it into your cooler.
5. Repeat the sampling procedure until all surface or deep unfiltered water sample bottles are filled.
6. Finish your other monitoring activities and return to shore.

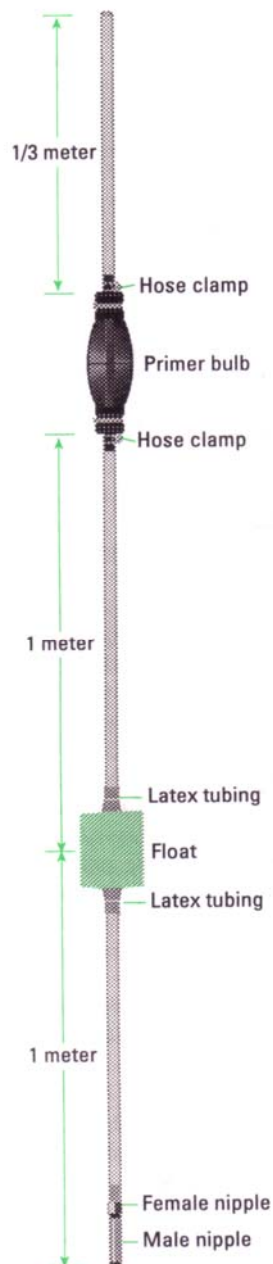


SHALLOW WATER SAMPLER OPERATION

(Field SOP 011)

Date: 3/05
Revision: 1
Author: Linda Green

University of Rhode Island Watershed Watch



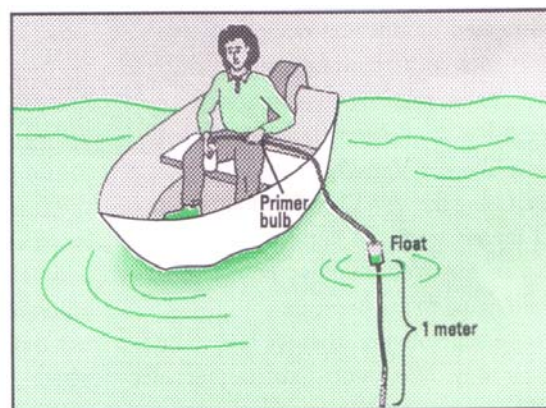
The Shallow water sampler was designed by Jim Geib, when he was a volunteer monitor with the URIWW program. A marine gasoline tank primer bulb acts as a pump and can be operated with one hand. The other hand is left free to hold the tubing securely inside the mouth of the collection bottle. To maintain the proper sampling depth, Geib made a float by cutting pieces from a polyethylene foam noodle pool toy. The float is held securely in place at 1 meter above the end of the sampling tube. The sampler should not be used to collect samples for bacteria since its not sterile or dissolved oxygen since the collection procedure introduces oxygen into the sample.

Instructions for use

Place the end of the sampler with the brass pipe into the water and lower it until it is supported by the float.

Squeeze the bulb 10 times to rinse out the sampler. Do not use this water as your sample.

Holding the sample bottle in one hand, pump the bulb with the other hand and fill the bottle. You are sampling at a depth of 1 meter.



The Shallow Water Sampler in use.



UNIVERSITY OF
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DEEP WATER SAMPLER OPERATION

(Field SOP 012)

Date: 3/05
Revision: 1
Author: Linda Green

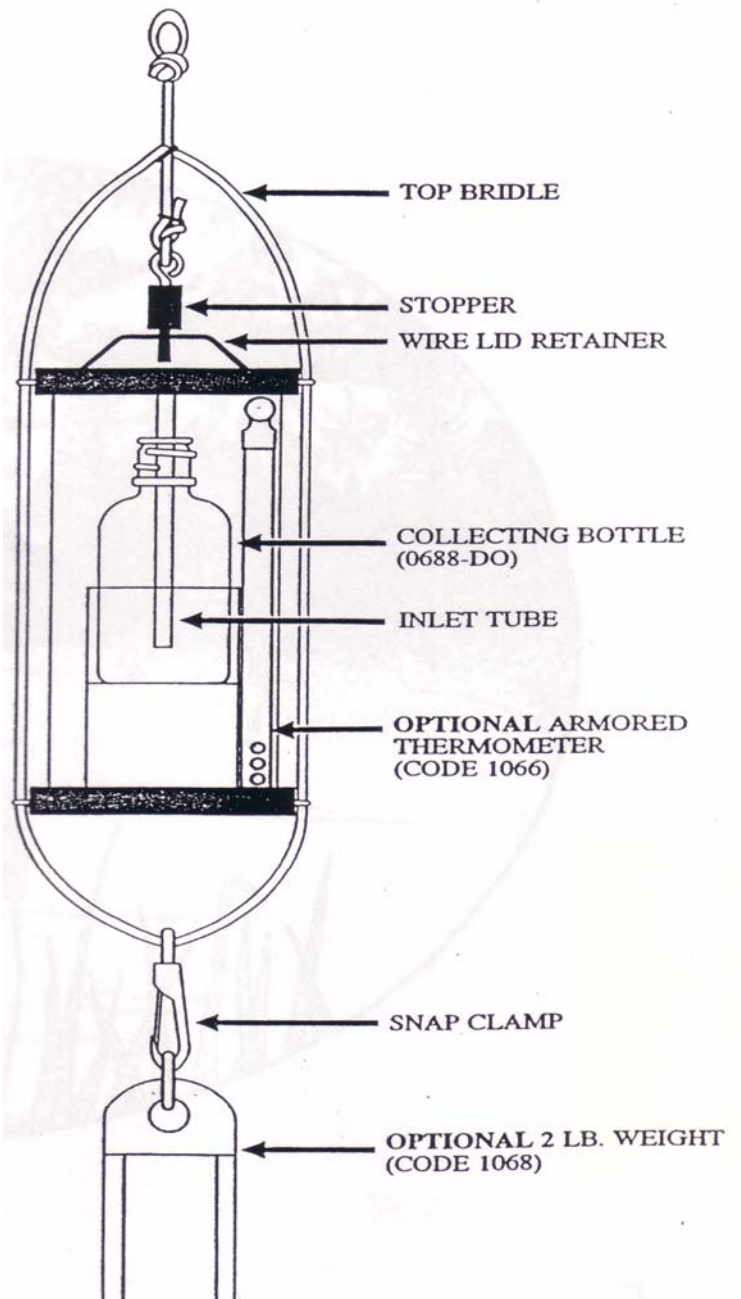
University of Rhode Island Watershed Watch

Introduction

The LaMotte Water Sampling Bottle (3-0026) is a unique device that collects water samples representative of specific depths and is particularly suited to the collection of dissolved oxygen samples. Samples may be taken at specific depths by using the attached stopper and an optional calibrated line and 2 pound weight. Simply lower the bottle to the sample depth. When the trip line is pulled the sample collection bottle will begin to fill, overflowing and flushing more than 5 times. During retrieval, decreasing water pressure prevents exchange of air and water with the sample. Excess water in the sample chamber can be used for other tests. The interior chamber also accommodates LaMotte Model 545 Armored Thermometer for accurate sample temperature readings. The thermometer can be pressed gently into a hole in the base of the sampler chamber, and the sample temperature can be read through the clear body of the sampler.

Operation

1. To release the wire lid retainer lift it up and away from the sampler.
2. Remove the plastic lid with attached inlet tube, by sliding it up the rope bridle.
3. Insert a Dissolved Oxygen collecting bottle, with the cap removed, into the inner chamber of the sampler.
4. Replace the plastic lid, inserting the inlet tube into the collecting bottle.
5. Snap the wire lid retainer into the grooves on the lid by lifting up and in.
6. Attach a two pound weight to the snap clamp at the bottom of the rope bridle.
7. Attach a calibrated line to the loop at the top of the rope bridle



8. Press the plastic stopper securely into the center inlet hold.
9. Lower the water sampling bottle to the desired depth.
10. Collect the water sample by removing the stopper from the inlet hole with a quick jerk of the calibrated line.
11. Note: As air is displaced by water entering the sampler, bubbles will be observed rising to the surface (downstream). When the water sampler is filled, bubbles will no longer appear. Filling takes about 45 seconds to one minute.
12. Use a steady, hand-over-hand motion, to retrieve the water sampler.
13. If the thermometer is used with the sampler, read the temperature through the clear sample body without removing the thermometer from the sampler. Record the temperature.
14. Place the sampler on a flat surface.
15. Release the wire lid retainer and remove the plastic lid with inlet tube attached, sliding it up the rope bridle.
16. Remove the collecting bottle from the inner chamber of the sampler. If the dissolved oxygen test is to be performed on this sample follow the directions in your dissolved oxygen test kit.
17. The remaining water in the sampler can be used to perform additional tests.

For more information:

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