

Sampling Instructions Squaw Creek Snapshot Sampling

Sample Preparation, Collection, and Handling: Two bottles need to be filled at each site. One small plastic bottle (120 milliliters; contains a powder preservative) for bacteria; and one medium plastic bottle (250 milliliters; contains sulfuric acid as a preservative - avoid spilling) for nutrients. Samples and paperwork should be returned to the central meeting location. **It is important to keep the bacteria samples chilled at all times!**

Your participation and attention to sampling instruction and logistics is vital to the success of this project.

1. Make sure that you have the following BEFORE you proceed to the sample sites:

- a. Bacteria and nutrient bottles and cooler for your sites.
- b. Frozen ice packs in the cooler.
- c. Sample collection device and rope.
- d. Field forms (one per sample site), permanent marker, pen or pencil.
- e. A map of the collection site(s).
 - i. IOWATER testing equipment - thermometer, pH test strips, Chemetrics dissolved oxygen kit, Nitrite-N/Nitrate-N test strips, Chemetrics phosphate kit, chloride test strips, water transparency tube.

At the site:

2. All bottles have been pre-labeled with your site name. Pull out the appropriate bottles for the site (each site will need 2 bottles). Using the permanent marker, label the bottles with the sample time and your initials before collecting the sample. Use the same time for both bottles at one site. All bottles have been sterilized, so when collecting the sample, avoid touching the inside of the bottle or the lid.

SAMPLE COLLECTION - are you able to safely get in to the stream to collect the water samples? If YES, follow Plan A. If NO, follow Plan B.

Plan A - samples to be collected directly from the stream.

1. Field form - Pull out the appropriate field form for the site you are sampling. Complete the Field Form Record your name and the name of others who helped collect the sample, the date and time the sample was collected, and your observations on water color, water odor, presence of animals in the stream, presence of tile lines, evidence of human use, and condition of stream banks along the stream at your site. Indicate that the samples were collected directly from the stream

2. Collection of Water Samples - These two samples should be collected directly from the stream. Enter the stream below where samples will be collected. The samples should be collected from the middle of the stream while facing upstream. ***If possible sample upstream from any bridges.*** Remove the lid from the small plastic bottle. Tip the bottle at a 45° angle and fill. This bottle contains a preservative so avoid overfilling. Place lid on bottle. **Place this bacteria bottle in the cooler.** Fill the medium plastic bottle that contains the sulfuric acid. Be careful to not overfill the bottle with sulfuric acid. This bottle does not need to be in the cooler.

3. IOWATER Field Tests - Complete the IOWATER tests for water temperature, dissolved oxygen, phosphate, pH, nitrate-N, nitrite-N, chloride, and water transparency. For directions on using the equipment, see the Instructions for IOWATER methods handout. Record results on the field form.

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Plan B - samples to be collected from a bridge using the sampling device.

1. Field form - Pull out the appropriate field form for the site you are sampling. Complete the Field Form. Record your name and the name of others who helped collect the sample, the date and time the sample was collected, and your observations on water color, water odor, presence of animals in the stream, presence of tile lines, evidence of human use, and condition of stream banks along the stream at your site. Indicate that samples were collected from the bridge.

2. Collection of Water Samples - These samples should be collected using the sampling device provided. Avoid having the sampling device or rope touch the ground. Lower the sampling device down to the stream on the upstream side of the bridge. Partially fill the sampling device (you may need to bounce the sample device up and down a few times to allow water to enter; try to minimize disturbing the sediment on the bottom of the stream). Retrieve the sampling device. Swish the water around the sampling device and empty. Repeat a total of 1 times. Fill the sampling device- Remove the bacteria lid from the small plastic bottle. Pour your sample water into the bacteria bottle. Avoid overfilling. Place lid on bottle. **Place this bacteria bottle in the cooler.** Fill the medium plastic bottle that contains the sulfuric acid bottle. Be careful to not overfill the bottle with sulfuric acid. This bottle does not need to be in the cooler.

3. Collection of Sample for IOWATER Tests - Fill the sampling device again. Pour water into the large beaker. Complete the IOWATER tests for water temperature, dissolved oxygen, phosphate, pH, nitrate-N, nitrite-N, chloride, and water transparency. For directions on using the equipment, see the Instructions for IOWATER methods handout. Record results on the field form.