

Sampling Instructions

Squaw Creek Snapshot Sampling

Sample Preparation, Collection, and Handling: **One bottle** needs to be filled at each site - one 15 milliliter plastic test tube for bacteria. It is important to keep the filled bottles chilled at all times. The bacteria bottle (test tube) should be filled a minimum of 10 milliliters but allow some head space or an air bubble at the top.

Your participation and attention to sampling instructions 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. One bottle for each of your sites.
 - b. Ice and a 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).
 - f. 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.** Each bottle has been pre-labeled with your site name. Pull out the appropriate bottle for the site (each site will need 1 bottle). Using the permanent marker, label the bottles with the sample time before collecting the sample. Use the same time as you list on your field form. Each bottle has 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 Bacteria Sample** - The bacteria sample should be collected directly from the stream. Enter the stream below where sample will be collected. **The sample should be collected from the middle of the stream while facing upstream - if possible, collect sample upstream of any bridges.** Carefully remove the lid from the bottle. Tip the bottle at a 45° angle and fill. The bacteria bottle (test tube) should be filled a minimum of 10 milliliters but allow some head space or an air bubble at the top. Once the bottle is filled, place lid on bottle. **Place the bottle back into the Ziploc bag and into 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.

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 the samples were collected from the bridge.
2. **Collection of Bacteria Sample** - The bacteria sample 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 sampling device up and down a few times to allow water to enter). Retrieve the sampling device. Swish the water around the sampling device and empty. Repeat a total of 3 times. Fill the sampling device. Remove the lid from the bottle. Pour water from sampling device into the bottle. The bacteria bottle (test tube) should be filled a minimum of 10 milliliters but allow some head space or an air bubble at the top. Once the bottle is filled, place lid on bottle. **Place the bottle back into the Ziploc bag and into the cooler.**
3. **IOWATER Field 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.