

Surfrider Foundation Blue Water Task Force



Water Sampling Instructions

Sampling kit checklist

- cooler & ice pack
- Whirl-Pak sample bags or sampling bottles (bring extra in case they break or leak!)
- sampling data sheets
- pen or pencil
- permanent marker for labeling sample bags
- plastic gloves or hand sanitizer

Sampling set up instructions

1. Complete data sheets as much as possible upon arrival to the beach.
 - a. Record ambient information (e.g., air temperature, water temperature, etc.) using [Surflife](#)
2. Label Whirl-pak sample bags or bottles with site location and date using a permanent marker (bottles may have tape for you to write on).
3. Bring the cooler to the beach with you and set it down on dry sand or other surface.
4. Clean your hands with hand sanitizer or put on sterile gloves. * see note below.
5. Remove the top perforation from the Whirl-pak bag and put it in your pocket (don't litter).
6. Now that the Whirl-pak bag is open, be sure not to put your fingers inside the opening of the bag.
7. If sampling with a bottle, make sure to open the bottle and hold the top without touching the inside of the bottle or the top.

Sampling in calm water

1. Walk out into the water to knee depth, being careful not to disturb too much sediment.
2. Pull the white tabs to open the Whirl-pak bag or remove cap from the sample bottle.
3. Dip the sampling bag or bottle 6 inches below the surface in open water and fill the bag approximately to the 100mL line.
4. Collect your sample from water in front of you (where you have not yet stepped), and do your best to avoid picking up sand, sediment, or algae in your sample.

Sampling in the Surf Zone

1. Safety is always the first priority. A water sample is **not** worth a rescue in rough ocean conditions.
2. Pull the white tabs to open the Whirl-pak bag or open your bottle prior to entering the water.
3. It is impossible to find a consistent water depth when sampling in waves as they wash in and out of shore, but collect your sample in water as close to knee-depth as possible.
4. Collect your sample during an **incoming** wave or surge of water (not an outgoing wave), while avoiding collecting as much sand, sediment, or algae as possible.
5. Sample should be collected **6 inches below the surface of the water**, as much as possible in wave conditions.

Sampling in a creek or stormwater pipe discharge

1. It is particularly important for volunteers to be careful in these locations where bacteria levels tend to be chronically high.
2. Pull the white tabs to open the Whirl-pak sampling bag or remove cap from the sampling bottle.
3. When sampling an outfall pipe: hold the sampling bag or bottle open underneath the water flow, making sure the opening/top of the bag does not come in contact with the pipe.
4. When sampling a creek or shallow standing water: make sure there is enough standing water to collect a sample without collecting sediment.
5. If the water is deep enough, aim to collect your sample between the surface and bottom of the stream in free flowing water. Hold your sampling vessel pointed up stream and let the water flow into the open container.

Sealing and transporting the sample

1. Exit the water or the sampling area safely, always being aware of your surroundings
2. Close the Whirl-pak bag by pulling on the yellow tabs outward, or screw the top onto your bottle.
3. Whirl or flip the bag over in a direction *away from you* several times to seal the water in.
4. Secure the closure of the Whirl-pak bag by twisting the yellow metal reinforced tabs together.
5. Hold the Whirl-pak Bag or sampling bottle upside down and carefully check for leaks or punctures.
6. If necessary, repeat the process above until you get a leak-free, watertight sample
7. Make sure to apply anti-bacterial soap or thoroughly wash hands after sample collection
8. Immediately put the sample upright in the cooler with ice or ice pack. Repeat until all samples are collected and transported back to the lab.
9. Samples must be kept cool/on ice and processed within 6 hours from the time they are collected.

References

- Sample video collection demonstration, <https://vimeo.com/367331845>

****Note – Should you sample with disposable gloves or use hand sanitizer only?**

The main reason either gloves or hand sanitizer is used is to avoid contamination of the collected sample by any bacteria that could be on the sampler's hands. The best way to avoid this contamination is to keep your fingers out of all sample bag and bottle openings and the insides of any lids. If you find this easier to do without gloves on, then using hand sanitizer is a perfectly good option. You might want to check with your County or State BEACH monitoring program to see how they collect their samples and to emulate their procedure so that your chapter's BWTF methodology is comparable with their program.

In some situations, wearing gloves can protect the sampler from being exposed to contamination in the water. For instance when sampling known contaminated stormwater discharges or at beaches that are frequently affected by sewage spills. In these situations, Surfrider recommends that samplers wear gloves and wading gear to avoid exposure to polluted water. Always rinse off hands, legs/feet and equipment after completing a sampling run.