

## Sampling Protocols: Soil/ Sediment

**Note:** Metadata should be taken prior to sample collection; these steps have been omitted from this protocol.

### Supplies

Gloves	DNA preservative	Lab tape
Shovel	Bleach in spray bottle	Parafilm
25 mL Falcon tube	ETOH in spray bottle	Sharpie

### Steps

#### Sampling in a waterbody

**Note:** When sampling from within a waterbody, ensure you have collected water samples *BEFORE* collecting sediment, and collect from upstream of where you are standing.

1. With gloved hands, label three falcon tubes per sample site and the ziploc bag to hold ALL three tubes. Record sample labels on metadata sheet.
2. Put on clean gloves and remove a sample tube from the baggie.
3. Fill one of the sample tubes with sediment. You may need to pour off water and scrape around with the tube to get the sediment. Ensure tubes are at least 2/3 full.
4. Using parafilm, seal the area where the cap and the tube meet to prevent leakage.
5. Repeat steps 3 and 4 with the other two sample tubes. The three tubes are considered biological replicates, and should be collected approximately 0.3 meters apart from each other.
6. Ensure all tubes are returned to the baggie and seal.
7. Store the tubes at room temperature or in the fridge (not the freezer). Ensure they don't remain at room temp for more than a week.
8. OPTIONAL: Add 3 mL of DNA preservative if soil/ sediment contains heavy vegetation or is overly saturated with source water.

#### Sampling from dry land

1. With gloved hands, label three falcon tubes per sample site and the ziploc bag to hold ALL three tubes. Record sample labels on metadata sheet.
2. Spray your shovel first with the bleach solution and then the ETOH solution if not properly cleaned from previous usage. If washed thoroughly, only ETOH is needed. Do not blow on the shovel to expedite drying. Place into a secure clean bag or hand carry to sampling location.
3. With your shovel, remove the top layer of soil/ sediment (approximately 3 cm) as discard away from sample site. Record habitat condition and soil/ sediment type on your metadata sheet.
4. Dig straight down, make a semi-circle with your shovel to aid in soil/sediment removal. At a depth no greater than the shovel length, try to remove soil/ sediment as straight out as possible and fill the tubes

to at least 2/3 full. Do not grab fallen soil/ sediment from the surface. Record depth of sample on your metadata sheet.

5. Using parafilm, seal the area where the cap and the tube meet to prevent leakage.
6. Repeat steps 3 - 6 until all three sample tubes are completed. These tubes are biological replicates and should be sampled at approximately 0.3 meters from each other.
7. Refill any holes made and move to your next site noting the shovel should be cleaned with ETOH between sites - not between samples.