



DELAWARE DEPARTMENT OF  
NATURAL RESOURCES AND  
ENVIRONMENTAL CONTROL

Division of Waste and Hazardous Substances  
Remediation Section  
<https://de.gov/remediation>  
302-395-2600

STANDARD OPERATING PROCEDURE  
SEDIMENT SAMPLING  
May 2021

## I. Sediment Sampling Procedure

Sediment samples are valuable for locating pollutants of low water solubility and high particle binding activity. The following equipment should be employed for sampling.

## II. Equipment:

Stainless steel or disposable plastic scoop/ponar or clamshell sampler/sediment coring device, sample containers with labels, waterproof marker, distilled water, nitrile gloves, waders, chain of custody report, and decontamination equipment.

## III. Procedure:

1. Prepare a sketch illustrating pertinent site features in the field logbook with arrows to record flow direction and approximate sediment sample locations.
2. Locate sediment sample locations designated in Site Sampling Plan.
3. Procure appropriate sample container and proceed to sample location downstream.
4.
  - a. **Stainless Steel or disposable plastic scoop.** Wearing protective gloves, take a sample jar with the mouth of the jar oriented upstream and scoop sediments into the jar with stainless steel scoop itself. Decant supernatant and repeat until the jar is full. Replace the lid, tighten securely, and rinse the jar with distilled water.
  - b. **Ponar or clamshell sampler.** Employ ponar or clamshell sampler at the desired sample location and retrieve sample. Wearing protective gloves, open the sampler and remove the sediment using a scoop. Place sediment in the desired sample jar. Replace the lid, tighten securely, and rinse the jar with distilled water.
  - c. **Sediment coring device.** Several types of sediment coring devices could be used to collect a sediment core (i.e. push core, split spoon, vibracore, etc.). Collect the core sample using procedures outlined in the device's Users Manual. Wearing protective

gloves, open the core to expose the sample. Using a scoop, place sediment from the desired depth interval in the sample jar. Replace the lid, tighten securely, and rinse the jar with distilled water.

5. The chemical preservation of solids is generally not recommended. Cooling to 4 degrees centigrade is usually the best approach. Refer to FS-14 for holding times and sample containers.
6. Label the sample container with project name, date, sample number and sampler's initials. Record pertinent information in the field logbook, and on the chain of custody report.
7. Decontaminate the stainless steel scoop, or discard the disposable scoop, and proceed to the next upstream location.