

ENVIRONMENTAL Fact Sheet



29 Hazen Drive, Concord, New Hampshire 03301 • (603) 271-3503 • www.des.nh.gov

WD-BB-13

2023

Water Sampling Protocol for Public Beach Inspections

This protocol is followed by the New Hampshire Department of Environmental Services (NHDES) Beach Inspection Program and may be implemented by members of the public that are interested in completing similar sampling. For an updated map of beaches currently in the NHDES Beach Inspection Program's sampling schedule, please visit the [Healthy Swimming Mapper](#).

Determining the Sample Location

Samples should be collected from the left perimeter, right perimeter and center of the swimming area of the beach. This bracketing better represents water quality of the entire swim area and not just one particular spot. If the swim area is less than 100 feet in length, it is generally sufficient to take only two samples (each a third of the distance from either end of the swim area). Many New Hampshire beaches already have established stations, so please contact the Beach Program Coordinator to obtain specific station information.

Procedure for Collecting Water Samples

1. Obtain a sterilized sample bottle(s).
2. Label the bottle with beach name, town, date, time and sample location (left, right).
 - a) Use a waterproof marking pen or cover the label with clear tape.
3. Gently wade into the water to knee depth (about 1 meter).
 - a) Be sure to not kick up sand.
 - b) If debris has been disturbed, wait for the water to clear before continuing.
4. Remove the bottle cap carefully.
 - a) Avoid touching the inside of the cap with fingers or any other object.
5. Hold the cap in one hand, and with the other hand turn the bottle upside down so the opening is facing the water surface.
 - a) Do not touch the opening of the bottle neck.
6. With a downward motion, dip the bottle at least one foot below the surface.
7. Fill the bottle with one sweeping U-shaped motion away from the body.
8. Discard a few milliliters to allow some head (air) space.

9. Carefully place and tighten the bottle cap.
 - a) Be sure to avoid touching the inside of the cap or the bottle neck.
10. Transfer the samples to a cooler with ice or an ice pack.
 - a) Acceptable temperature for *E. coli* samples is <10°C.
11. Transport the samples to an accredited laboratory within 6 hours after collection.
 - a) Be sure to contact the accredited laboratory for updated information (current hours of operation, chain of custody papers, billing) before delivering samples.

Note: Always use sterile bacteria bottles to avoid cross contamination. Do not touch the inside of the sample bottle cap or neck of the sample bottle as any bacteria that may be present on the body could contaminate the sample. Never rinse the sample bottle.

Sampling Results

Once results are received from the laboratory, it is recommended to compare the *E. coli* results to the state standard for public beaches. An advisory should be issued if any one sample is above 158 MPN/100 mL or if two samples are above 88 MPN/100 mL. An advisory sign can be obtained from the Beach Program Coordinator and should be posted at public entrances and along the shoreline of the beach. It is recommended that additional samples be collected until results are below the state standard.

Please send a copy of results to the Beach Program Coordinator so that data can be stored in our database and used for water quality assessments.

Additional Resources:

[Healthy Swimming Mapper:](#)



Find [Accredited Laboratories](#) on NHDES OneStop.

Find information on NHDHHS Public Health Lab [Water Analysis Laboratory](#).

Contact Information:

Beach Program Coordinator

beaches@des.nh.gov

[\(603\) 848-1905](tel:(603)848-1905)