

Sampling Freshwater Beaches



Why sample the water?

Protect public health

Reduce exposure to pathogenic bacteria

Minimize risk of water-borne diseases

Recommended by these groups and more



Water Sampling Protocol



Beaches >100 ft. sample center, left & right

Beaches <100 ft. sample left & right only

Collect samples at knee depth

1. COMPLETE sample date & time
2. CHECK “*E. coli*” for freshwater

LAB ACCOUNT (Billing) 8890070

Description: BEAVER POND

Collected by: _____

Sample Location / Station ID	Date Time Sampled	# of Containers	Matrix	E.Coli (swim)
BCHBVRALLLF	7/2/2012 13:05	1	A Q	✓
BCHBVRALLCR	↓	1	A Q	✓

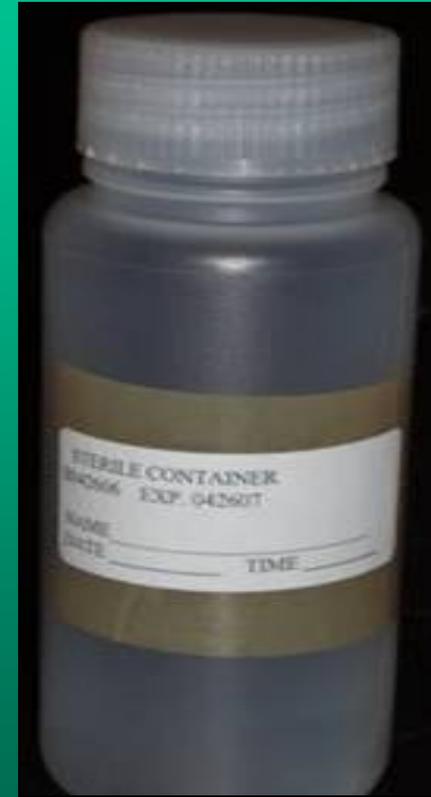
3. WRITE **Station ID** on bottle label

Water Sampling: Step 1

Always use a **sterilized** sample bottle for collecting bacteria samples.



Not
sterile



Sterile

Label container:

Station ID

Date & Time of sampling

Water Sampling: Step 2

Wade into water to knee depth

Wait for the water to be clear of debris that may have been disturbed



If known fecal contamination, be prepared with elbow length gloves or a sampling pole.

Water Sampling: Step 3

Remove the bottle cap carefully

Avoid touching inside of the cap with fingers or any other object

Bacteria could be present on hands that could potentially contaminate the sample



Wrong!



Right!

Water Sampling: Step 4

1. Turn the bottle upside-down so the opening is facing the water
2. With a downward motion, dip the bottle at least 1 foot below the surface
3. Fill the bottle with one sweeping motion (U-shaped)
4. Discard ~ 1 centimeter to allow some head (air) space if bottle is completely full

Water Sampling: Step 5

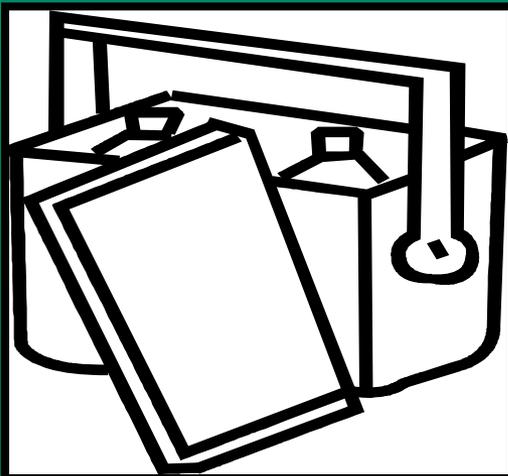
Replace & tighten the cap



Water Sampling: Step 6

Put samples on ice or an ice pack

Acceptable temperature to preserve samples is 10° C.

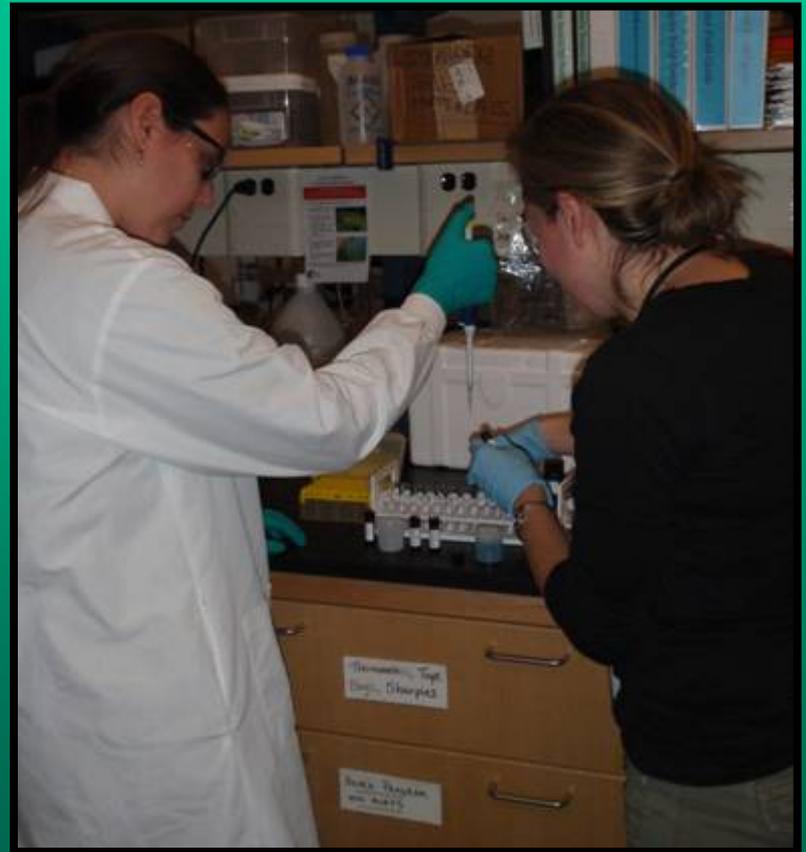


Water Sampling: Step 7

Bring samples to
Concord State Laboratory
for analysis

\$20 per sample

Results will be
available in 24 hours



Result Reporting

Results ready in 24 hours

DES calls ONLY if
>88 counts/100 ml of water

Signs to be posted & water
retested until < 88 counts

Advisory webpage updated
Twitter & e-newsletter sent

ADVISORY

High levels of BACTERIA have
been detected in this WATER.

N.H. Dept. of Environmental Services

**WATER CURRENTLY NOT
SUITABLE FOR WADING
OR SWIMMING!**

Exposure to this water may cause nausea,
vomiting, diarrhea, or fever.

Children, the elderly and others with sensitive
immune systems are especially vulnerable.

All current advisories posted at www.des.nh.gov.
Click "beach advisory" in left column

CONTACT INFORMATION:

NHDES Beach Program
29 Hazen Dr.; Concord, NH
(603) 271-0698
beaches@des.nh.gov



Cyanobacteria Sighting

If you suspect cyanobacteria,
Contact: beaches@des.nh.gov
603-419-9229



Submit pictures to
beaches@des.nh.gov

If >50% of cells are a type of
cyanobacteria
Beach Advisory posted



Cyanobacteria Advisory

Don't drink the water

Do not wade or swim
in the water

Keep pets out of the water

Wash hands after contact

ADVISORY

High levels of potentially toxic
CYANOBACTERIA
have been identified in this water

**WATER CURRENTLY NOT
SUITABLE FOR WADING
OR SWIMMING!**

Exposure to blue-green scums may cause nausea, vomiting, diarrhea, or fever in humans and pets.

Anyone who comes in contact with blue-green scum should rinse off with fresh water

All current advisories posted at www.des.nh.gov.
Click "beach advisory" in left column

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Additional Resources:

Beach Program Website

<http://des.nh.gov/organization/divisions/water/wmb/beaches/index.htm>

Sampling Protocol Fact Sheet

<http://des.nh.gov/organization/commissioner/pip/factsheets/bb/documents/bb-13.pdf>

Sterile Bottle REQUEST

<http://www2.des.state.nh.us/DESOnestop/HOBottles.aspx>

Beach Manager Handbook

http://des.nh.gov/organization/divisions/water/wmb/beaches/documents/beach_mgr_handbook.pdf

How to Identify Cyanobacteria

http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/cyano_id_flyer.pdf

EMAIL: beaches@des.nh.gov