

# Sampling Freshwater Beaches



# Why sample the water?

Protect public health

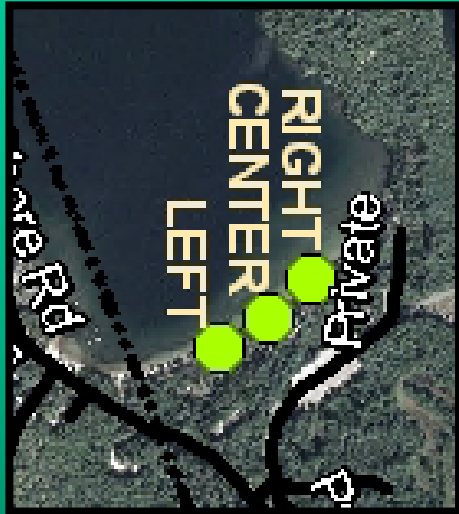
Reduce exposure to pathogenic bacteria

Minimize risk of water-borne diseases

Recommended by these groups and more



# Water Sampling Protocol



**Beaches >100 ft. sample left, center & right (facing water)**

**Beaches <100 ft. sample left & right only (facing water)**

**Collect samples at knee depth**



# Critical Log-in Form & Label Information

Fill in date & time sampled.  
Check E. coli for freshwater.

LAB ACCOUNT (Billing)

Description: BEAVER POND

Collected by: \_\_\_\_\_

Sample Location / Station ID	Date Time Sampled	# of Containers	Matrix	E.Coli (swim)
BCHBVRALLLF	7/2/2011 13:05	1	A Q	✓
BCHBVRALLCR	↓	1	A Q	✓
BCHBVRALLRT	↓	1	A Q	✓
			A	

Place **STATION ID** on bottle label

# Water Sampling: Step 1

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

## Label container with:

- ✓ Station ID from log-in sheet
- ✓ Date & time of sampling



Not  
sterile



Sterile

## 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

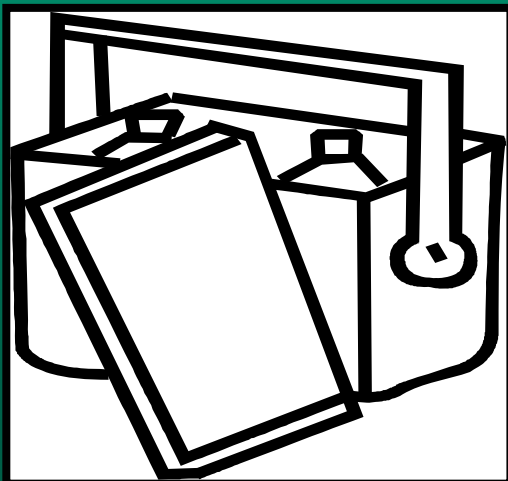
Replace & tighten the cap.



## Water Sampling: Step 6

Put samples on ice or ice pack.

Acceptable temperature to preserve samples is 10° C.



## Water Sampling: Step 7

Bring samples and log-in sheet to the State Laboratory in Concord for analysis **within 6 hours** of collection.

\$20 per sample

Results will be available in 24 hours.



# Result Reporting

Results ready in 24 hours.

Will call only if elevated  
>88 counts/100 ml of water.

Signs to be posted & water  
retested until < 88 counts.

Advisory webpage updated,  
Twitter, & email  
newsletter still sent.

## NOTICE

THIS BEACH AREA MAY NOT  
BE SUITABLE FOR SWIMMING  
DUE TO  
**HIGH LEVELS OF BACTERIA**

Per Commissioner  
NH Department of Environmental Services

*Please:*

- Do not drink the water or let children drink the water!
- Do not wade or swim in the water!

Exposure to pathogenic organisms may cause various symptoms,  
including nausea, vomiting, diarrhea, fever, general malaise  
or skin rashes.

*For more information contact:*  
NHDES-Beach Inspection Program  
PO Box 95, 29 Hazen Drive  
Concord, NH 03302-0095  
603-271-3503 or 603-271-3414  
beaches@des.nh.gov



# Cyanobacteria Reporting

Contact DES for suspected bloom conditions

[beaches@des.nh.gov](mailto:beaches@des.nh.gov)

603-419-9229

Submit sample (clean, non sterile bottle)  
to Limnology Center or pictures to

[beaches@des.nh.gov](mailto:beaches@des.nh.gov) .

Sample microscopically examined for  
potentially toxin  
producing cyanobacteria.

If greater than 50% of cells are a type of  
Cyanobacteria,  
Beach Advisory posted and  
area re-sampled weekly.

## NOTICE

THIS BEACH AREA MAY NOT  
BE SUITABLE FOR SWIMMING  
DUE TO HIGH LEVELS OF  
**POTENTIALLY TOXIC  
CYANOBACTERIA**

Per Commissioner

NH Department of Environmental Services

Please:

- Do not wade or swim in water containing visible blue-green or greenish scums!
- Do not drink the water or let children drink the water!
- Do not let pets or livestock into the water!

Exposure to blue-green algal scums may cause various symptoms, including nausea, vomiting, diarrhea, mild fever and general malaise. Anyone who comes in contact with an algal scum should rinse off with freshwater.

For more information contact:  
NH Beach-Advisory Service  
29 Forest Drive  
Concord, NH 03301  
603-271-3000 or 603-271-3414  
beach@des.nh.gov



# 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>

## Lab Log In Form REQUEST

<http://des.nh.gov/organization/divisions/water/wmb/beaches/documents/lab-login-request.pdf>

## Beach Manager Handbook

[http://des.nh.gov/organization/divisions/water/wmb/beaches/documents/beach\\_mgr\\_handbook.pdf](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](http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/cyano_id_flyer.pdf)

EMAIL: [beaches@des.nh.gov](mailto:beaches@des.nh.gov)