

Fact Sheet for Beach Operators: BEACH SAMPLING

WATER SAMPLING IS REQUIRED

As of May 2008, the Ministry of Health and Long-Term Care under the authority of the *Health Protection and Promotion Act* now requires the Northwestern Health Unit (NWHU) to receive routine beach/swimming area water samples from all public beaches in the NWHU jurisdiction.

Sampling is conducted to prevent or reduce the cases of water-borne illness and injury related to recreational water use at public beaches, swimming areas, and recreation camps.

Sampling shall take place weekly throughout the business season of the beach. Samples shall be collected by a trained employee or the owner/operator of the beach and submitted to the NWHU for further testing. The NWHU will supply the owner/operator with the needed equipment and training before the testing is set to commence.

ROLE OF THE NORTHWESTERN HEALTH UNIT

The Northwestern Health Unit conducts pre-season assessments of each public beach/swimming area. These assessments are conducted on a yearly basis prior to the onset of regular testing. Assessments include:

- Mapping and inspection of the beach/swimming areas;
- Training in beach sampling and transporting for the owner/operator of the beach;
- Delivery of equipment (cooler pack, sampling bottles, forms, signage); and
- Notification and corrective actions for the beach owner/operator in the event of an adverse water result.

ROLE OF THE OWNER/OPERATOR

The owner/operator will be responsible for conducting the sampling and taking action in the event of an adverse water result. Responsibilities of owners/operators include:

- Surveillance and inspection of the beach/swimming areas;
- Weekly water sampling of the beach/swimming areas;
- Weekly transport of the water samples to the NWHU;
- Posting of signage at beach/swimming areas in the event of an adverse water result or probable health hazard;
- Retesting the beach/swimming areas in the event of an adverse water result; and
- Responsibility to contact a Public Health Inspector at the NWHU in the event of any changes or concerns regarding the beach/swimming areas, changes in water quality, and symptoms of rash, itch, or illness associated with recreational water.



There is no charge for shipping or testing of water samples collected by public beach operators.

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BEACH SAMPLING STEPS

- 1) Sampling must occur on either a Monday or Tuesday. All water samples must be submitted to the NWHU before 2:00 p.m. **on the same day they are collected.**
- 2) Gather your labeled water bottles, equipment, cooler with ice pack, and map. Place the water thermometer in the water at the same distance from the beach that water samples are taken. Allow the thermometer a minute or two to reach an accurate temperature. Record the temperature on the Public Beach Routine Surveillance Field Data Report form.
- 3) Take each of the 5 samples at the designated point that is indicated on the map. (The NWHU will provide the map.) Samples from the beach area should be taken at a minimum depth of one meter of water and at a minimum of one foot below the surface of the water. Samples off docks can be taken by leaning over the dock and sampling at a minimum of one foot below the surface of the water.

QUESTIONS ABOUT BEACH SAMPLING?

Contact a Public Health Inspector at one of these Health Unit offices:

KENORA
Phone: (807) 468-3147
OR 1-800-830-5978

DRYDEN
Phone: (807) 223-3301
OR 1-888-404-4231

FORT FRANCES
Phone: (807) 274-9827
OR 1-800-461-3348

- 4) When handling the sample bottle:
 - Remove the cap carefully, being sure not to touch the inside of the cap or inside neck of the bottle with your fingers, as this may contaminate the sample.
 - **Do not** place the cap on the ground, or on a rock, dock, or bench, as this may contaminate the water sample causing an adverse result.
 - **Do not** rinse out or empty out the white powder in the bottle.
 - Fill the bottle slightly above the “MAX FILL LINE” printed on the outside of the bottle. It is important that the bottle contains this amount of water for proper testing. If the bottle is overfilled, carefully pour out any water above the Max Fill Line.
 - Twist the bottle cap securely to ensure it is tightly sealed and does not leak.
 - Immediately place the filled bottle of water back into the cooler pack with ice. Do not allow the cooler pack or water bottles to be left in the direct sun, as increased temperatures will affect the result.
- 5) Complete the Public Beach Routine Surveillance Field Data Report according to the conditions while sampling the beach.
- 6) Pack the bottles in the cooler pack with ice and place the Bacteriological Analysis of Water form in a Ziploc bag to prevent water damage. Place both in the cooler and transport to the local office of the Northwestern Health Unit immediately.
- 7) Ask the Front Desk Receptionist for new labeled empty bottles and forms for next week’s sampling and hand in your Public Beach Routine Surveillance Field Data Report. Take your cooler pack, bottles, and forms back to the beach to use the next week.

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FACTORS THAT MAY INFLUENCE BEACH WATER QUALITY

POTENTIAL SOURCES OF CONTAMINATION	INFORMATION TO BE OBTAINED
Commercial / Industrial (liquid waste discharges)	<ul style="list-style-type: none"> • nature of effluent • surface runoff • continuous or intermittent flow • points of discharge
Municipal (separate and combined sewer systems, sewage treatment plant bypasses)	<ul style="list-style-type: none"> • location of outfalls and storm relief overflow points • periods of activity • estimated intensity and duration of rainfall
Sanitary Landfills	<ul style="list-style-type: none"> • location • surface runoff or leachate • points of discharge
Private Sewage Disposal Systems	<ul style="list-style-type: none"> • location • points of discharge
Agricultural / Horticultural (municipal sludge utilization, manure spreading, spray irrigation of liquid wastes, concentrated feedlots, livestock pasturing)	<ul style="list-style-type: none"> • site of activity • proximity to surface water body • nature of effluent • continuous or intermittent • points of discharge
Waterfowl	<ul style="list-style-type: none"> • locations where flocks gather • estimate of flock size • duration of stay
Beach Aesthetics (algae, dead fish, oily scum, and other debris)	<ul style="list-style-type: none"> • deleterious or objectionable substance and conditions
Meteorological	<ul style="list-style-type: none"> • rainfall intensity, duration and territorial coverage • mean air and water temperatures • direction of normal and wind induced water currents • historical data for beach which would facilitate prediction of rough water effects on water quality and duration of poor water quality due to turbulence • reduced stream flow
Bather Loads	<ul style="list-style-type: none"> • estimate of number of beach users each day