
ENVIRONMENTAL Fact Sheet



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N.H.'s Public Beach and Swimming Facilities Inspection Program

As the popularity of public pools and spas continues to increase, it is important that DES remain on the forefront of public health and safety. Diseases such as cryptosporidiosis, giardiasis, legionellosis, dysentery, leptospiroses, and folliculitis can be spread through contact with contaminated natural waters, swimming pools and spas. Some strains of *Escherichia coli* are also known to be human pathogens. Pools and spas can also play a role in the transmission of infections of the eye, ear, nose, throat, and skin. Because of such public health concerns, the proper construction and maintenance of public swimming facilities is of great importance.

Public Bathing Facility Program for Pools, Spas, & Water Parks

When DES embarked on a pool and spa inspection program, the first goal was to identify public pools at motels, hotels, condominiums, campgrounds, health clubs, municipalities and other public pools throughout the state. A computer database was created that identified all public bathing facilities, owners, and other strategic information. To date, DES has identified approximately 1,200 pools and spas statewide.

Each facility operator must possess a design approval from DES. Approval can only be granted with the acceptance of engineering plans that meet or exceed DES standards for pool or spa design. DES recognizes new and innovative technologies. There is a \$100 plan review processing fee. Once a plan receives state approval, a permit is issued for construction.



Inspections are carried out by the DES Bathing Facility Coordinator and the Regional Sanitarians. DES's goal is to inspect each facility on an annual basis. Pools with violations receive up to three unannounced visits over a three-month period to check on their progress and maintenance program. Facilities are closed if *E. coli* and total coliform are present and if standard bacterial plate counts are greater than 500 colony forming units per milliliter (CFU/mL). Facility pH, temperature, free and total chlorine or bromine, pump room, safety, and operational records are also checked. Operator education on proper facility maintenance is crucial and has often proven the key in turning a facility from a health hazard to a safe place to swim. DES recognizes certification of pool operators from the National Swimming Pool Foundation.

If you like an occasional swim in a public pool or frequent a local spa, there are ways to know if the facility you visit is safe for swimming or relaxing:

- Ask the operator if the facility has been inspected.
- Check the operational maintenance records. Each facility is required by law to check pools and spas for disinfectant levels and other chemical/physical parameters every 4 hours. Particularly observe the free chlorine or bromine level. The free disinfectant concentration should be greater than 1.0 mg/L if chlorine and 2.0 mg/L if bromine. Most of the disinfectant should be free residual and not as total chlorine. Free residual is the key, because this is the disinfectant that is available to kill off bacteria.
- Check the pool clarity. A turbid pool is often a dirty pool. Make sure that the main drain is clearly visible from the deck.

The New Hampshire Public Beach Program

DES's public beach inspection is operated from mid-June to Labor Day. About 170 public bathing beaches on lakes, rivers, and impoundments are inspected monthly, while coastal public beaches are inspected on a weekly basis. An inspector collects three bacteria samples from each beach, takes note of potential problem areas, inspects the toilet facilities, and confers with lifeguards on duty.

E. coli is the bacteria used as a standard for New Hampshire freshwater beaches. *E. coli* is an indicator organism that can easily be cultured in a 24-hour period. The state standard for freshwater public swimming areas is 88 counts/100 mL. Statistically, as *E. coli* increases, the risk of contracting a waterborne disease increases. At our seacoast beaches, *Enterococci* is the indicator organism used; a count of 104-counts/100 mL signifies that bathing may not be safe. Each bathing facility is notified within a 48-hour period if the bacteria standards are violated. Beaches that reflect bacteria counts at the standard range are resampled while counts that exceed the standard range are issued a beach advisory and are posted.

Elevated bacteria levels can result from watershed runoff, aquatic birds-especially geese, numerous swimmers, beach location and current weather conditions. Hot, humid conditions at beaches that get little or no water circulation often result in unhealthy bacteria levels.

Whether you are swimming at a natural beach or a public facility, look for signs that may reflect the water quality. Check the water clarity, use your nose to determine foul odors, check any available records, look for aquatic birds, and check for floating substances in the water.

For more information about the Public Beach and Swimming Facilities Inspection Program, please contact Jody Connor, DES Limnology Center, (603) 271-3414.