

Commissioner's Column

Bathing Beach Protection

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This summer, many Westchester residents will enjoy spending time at one of the county's bathing beaches. Although this is a fun and healthy way to experience fresh air and exercise, it presents a potential hazard of waterborne illness.

To minimize the risk of such waterborne recreational illness at the beach, the Westchester County Health Department monitors 42 swimming venues in the county for indicators of possible sewage contamination.

Operating under the authority of the New York State Sanitary Code and the Westchester County Sanitary Code, the Bathing Beach Program monitors water quality at three types of beaches: marine beaches on the Long Island Sound, Hudson River Beaches, and Westchester's inland freshwater beaches.

The 22 beaches on the Long Island Sound are located on a body of water that is used by many commercial and recreational vessels. In addition, the Sound is affected by many point and non-point sources of pollution. Although the great size of this water body helps buffer the effect of the pollution sources, the beaches along its perimeter require careful monitoring. In addition to beach monitoring efforts, the department maintains an off-shore boat sampling program that serves as an early warning for major water quality problems and is used to confirm shoreline problems.

Each beach is sampled for coliform, fecal coliform and enterococci bacteria once per week. The results of these samples are reviewed and logged in a computerized system. More than 1,100 water samples were collected and analyzed in 2005. The owners of a beach are notified of the result of the samples that fail to meet bathing water standards as soon as sample results are available. When this occurs, confirmatory resampling is immediately performed and a survey made to determine if raw or partially treated sewage is contributing to the elevated bacterial levels. If the survey reveals discharges of raw or partially treated sewage, the bathing area is closed by the Department of Health. When sample results continue to exceed the recommended standard and no evidence of sewage contamination can be found, a bathing area will remain closed pending the determination of the cause.

If there is a known sewage contamination event, such as a pump station failure or ruptured sewage pipe, beach closures may be recommended prior to receiving any sample results. Such decisions must be based on spill trajectory modeling, current tides, wind direction or other factors that would transport or direct the contamination into bathing waters.

After heavy rains, the beaches in Mamaroneck and Echo Bay New Rochelle have had an ongoing problem with elevated coliform bacteria levels. The large drainage basins that contribute to the runoff into these harbors is in great part to blame for the high bacteria counts. These drainage basins represent large non-point sources of pollution. During periods of rain, storm water runoff enters the storm drain system and discharges in stream tributary to these harbors. This storm water runoff elevates the bacteria levels in the harbors. The Health Department closes these beaches for varying lengths of time following a rainfall depending upon the amount of rain and past historical data. Usual pre-emptive closures are one day for more than one-half inch of precipitation and two days for greater than one inch.

The two beaches on the Hudson River require careful monitoring because of the proximity of the Yonkers, Ossining and Peekskill sewage treatment plants in addition to the usual non-point sources of contamination.

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Our 20 inland beaches offer a different challenge. Pollution load from commercial and recreational sources is not a significant factor; however these beaches are located on smaller water bodies without a large volume of water to buffer the effect of pollution sources. In the past we have closed lake beaches due to private septic system failure and overflows.

This past summer saw a decreased number of swimmer's itch cases along the coastline of Long Island Sound. Four complaints of the annoying rash were reported. Swimmer's itch is a cercariae dermatitis caused by parasites of birds and mammals. The parasite is carried in the intestines of waterfowl and aquatic mammals. Snails become infected with the parasites and release larvae into the water. The larvae search out a suitable host. The itch occurs when the larvae penetrate human skin rather than their natural hosts. The allergic reaction of swimmer's itch can be extremely annoying but is not dangerous and is self limiting. However, scratching the itch may cause secondary infection.

The first signs of swimmer's itch are noticeable soon after leaving the water. Once dry, you will detect tingling sensations on exposed parts of your body and especially under your bathing garment. The next sign is the development of small red spots where the organism has penetrated through your skin. Hours later, the tingling sensation will cease and red spots will enlarge and become itchy. The itching stage usually disappears within a week. Most cases of swimmer's itch do not require treatment. However, corticosteroid creams, calamine lotion and colloidal oatmeal baths can be administered.

Physicians may wish to advise patients who are planning to visit a beach how they might prevent episodes of swimmer's itch. Bathers should towel dry briskly and shower immediately after leaving the beach. Avoid shallow waters near the shore since that is where itch-causing larvae usually live. Do not feed waterfowl as this may aggravate the problem by causing potential hosts to be concentrated in a limited area.

Cases of swimmer's itch should be reported to the Westchester County Health Department so that affected areas can be posted to warn other bathers. ♦

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