

April 25, 2002

Mr. John Bowman, Chairman
Mattapoisett Board of Health
16 Main Street
Mattapoisett, MA 02739
and via fax: 508-758-3030

Re: water testing of Town Beach Brook

Mr. Bowman:

As you know, at the request of the Board of Selectmen, the Buzzards Bay Project has been evaluating issues surrounding flooding and water quality in Town Beach Brook. As part of this effort, we began testing water quality in the stream and where it enters the beach. The purpose of this testing was to determine whether the stream posed any threat to water quality (either swimming or shellfishing). If the stream does threaten water quality, it may be eligible for state grant funds for pollution remediation.

Generally, small streams like this discharge higher pollutant levels during rainfalls. To establish baseline data for the stream, we sampled it on April 18, 2002 during dry weather conditions (and at high tide in this instance). The samples were analyzed by the New Bedford Health Department and tested for fecal coliform and Enterocci bacteria. The results are attached.

As shown, Enterococci bacteria are considerably elevated throughout this stream, even during dry weather conditions. The fecal coliform levels are variable, and at Rt. 6 and Church St. could not be read, possibly because of interference from high levels of other bacteria. In the future, we will have the laboratory dilute the upper stream samples to obtain accurate bacterial counts and also perform *E. coli* tests.

More importantly, samples of the culvert discharge adjacent to the beach near the pier, showed Enterococci levels of 460 per 100 ml. This sample showed a salinity of 3.8 ppt (fairly fresh). Please note that, as one proceeds east along the beach, salinity rises dramatically (see data sheet), and Enterococci declines. However, even on the other side of the rocks in the separating the stream culvert discharge from the beach, Enterococci levels are still at 50 per 100 ml. As you know, the new beach testing standard adopted by the state last year is as follows:

*For marine water, the indicator organism shall be Enterococci.
(1) No single Enterococci sample shall exceed 104 colonies per 100 ml. and the geometric mean of the most recent five (5) Enterococci levels within the same bathing season shall not exceed 35 colonies per 100 ml.*

The high levels of Enterococci in front of the discharge is a concern because we observed children wading in that area during the anomalously warm weather we had during the week that we sampled. During the next few weeks, we will sample the stream during another dry period and during two rainfalls. This dry weather sampling was during high tide; our next dry weather sampling will be during low tide. We will forward the results to you as we receive them. If high levels continue from the discharge, you may need to place a sign in front of the discharge advising bathers to avoid that area¹. You may also wish to sample near this discharge pipe when you monitor the bathing beach during the bathing season if bathers utilize this area.

If you have any questions regarding these results, please do not hesitate to call me.

Sincerely,

Joseph E. Costa, PhD
Executive Director

attachments: map, datasheet

¹ The new regulations are quite stringent in this regard. Section 105 CMR Section 445.040: Posting and Reopening Notifications states: “(A) Posting. Whenever the bathing water quality does not meet the requirements of 105 CMR 445.030 or after any significant rainstorm at a bathing beach where there has been a history of violations of the water quality requirements contained in 105 CMR 445.030, the Board of Health, its agent, or any other authorized person shall immediately, and in no event later than 24 hours, notify the Department, and post or cause to be posted, a sign, or signs, at the entrance to each parking lot and each entrance to the beach stating:
WARNING! NO SWIMMING
SWIMMING MAY CAUSE ILLNESS
and a graphic depiction of a swimmer in a red circle with a diagonal hatch mark. The sign shall also contain the reason for the warning, the date of the posting and the name and telephone number of the board of health.”

