

2008 Cape Neddick River Water Quality Testing

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The Community Development Department began testing the Cape Neddick River in August of 2007. Based on the results, it was apparent that the testing should be intensified in 2008. The Community Development Department resumed the water testing on June 25, 2008. Testing procedures were kept the same as 2007. Maine Healthy Beaches subsidized some of the testing, which was conducted by Nelson Analytical Lab. Maine Healthy Beaches also helped with planning and sampling on several occasions. All of our results can be viewed at www.mainehealthybeaches.org, as well as on the attached table.

In addition to the beach testing done by the Parks and Recreation Department, the upstream testing locations were increased from five locations in 2007 to fourteen locations in 2008. As shown on the attached figure, 4 testing locations are in the channel of the Cape Neddick River and 10 testing locations are in tributaries of the river. The testing focused on the eastern half of the watershed, primarily east of Route 1. The purpose of increasing the number of test locations was to pinpoint which subwatershed the bacteria was coming from. We thought that many of the test locations would be clean and therefore ruled out immediately, enabling us to focus our testing on 2 or 3 subwatersheds that had high bacteria levels. Unfortunately, 11 out of 14 test locations had bad tests, so instead of being able to hone in on the pollution, it showed that most of the subwatersheds in the area have a bacteria problem. The strongest trend in the testing was that bacteria levels are much higher after rain events. Bacteria levels were also higher when the tide is going out. It should be noted that due to staff constraints, the testing was not as comprehensive as we would have liked.

In 2009, we plan on doing some random winter testing at CNR-1 (Shore Road Bridge) in order to draw comparisons to summer and fall test results. In May, we plan to resume the testing at all 14 locations. Our goal is to test each location twice per month, just before low tide. With more consistent testing than we had in 2008, we anticipate being able to focus the testing on specific subwatersheds. At that point, we will move test locations upstream in that watershed, attempting to bracket the bacteria to a specific location. As a complement to the field testing, we will continue developing the septic system database. This will allow us to cross reference the parcels in a subwatershed with high bacteria levels to see who is maintaining their septic system properly.

Figure 1: Test location with 2008 mean enterococci test result



