

## Rye, state DES set out to reduce 'Stinky Creek' contamination

### Faulty septics, increased development are blamed

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**RYE** — A three-year study of Parsons Creek has found bacteria from failed septic systems and other sources threaten the creek and pose a potential health risk to visitors of Wallis Sands beach.

Parsons Creek, part of a freshwater and estuarine watershed that drains into the Atlantic Ocean at Wallis Sands, has long carried the auspicious moniker of "Stinky Creek" around town for the ripe odors that emanate from it. Part of the stench is the result of the natural processes that take place at salt marshes affected by the ebb and flow of the tides. But something else stinks, too, and it is far more hazardous than an unpleasant odor.

Since 2008, the N.H. Department of Environmental Services' Beach Program and consultant FB Environmental Associates of Portland, Maine, have been assessing bacteria sources in the watershed. According to the DES-produced Parsons Creek Watershed Based Plan, the mouth of Parsons Creek consistently tests above state standards for Enterococci counts per 100 milliliters.

Enterococci is a fecal bacteria from warm-blooded animals and its high concentration in Parsons Creek indicates fecal contamination from a number of sources, said Sonja Carlson, DES beach program coordinator.

Natural bacteria levels are minute and needed for low levels of the food chain and decomposition, but higher levels can cause beach closures, foul smells and algae blooms, decreasing the use and value of the resource. It is of particular concern, Carlson said, because the sheltered and warmer waters where creek meets beach are popular spots for beach-goers, particularly children.

All but two of 14 sites within the watershed tested above acceptable criteria and further development could result in a greater amount of bacteria available, further harming the creek without proper controls in place, according to the DES report.

Parsons Creek is located within a 2.28-square-mile watershed made up of 49 percent undeveloped land along with roads and low-density residential development. It has two branches. One drains land above Marsh Road south to Wallis Marsh, and the other flows from Long John Road to Massacre Marsh. Both branches converge in Massacre Marsh before flowing under Ocean Boulevard and joining the Atlantic Ocean near Wallis Road.

The DES plan identified several causes of the contamination. The strongest threats come from improperly functioning septic systems and developed area runoff, but other suspected causes are wildlife, pet waste and agricultural runoff, such as from a buffalo farm on Brackett Road.

The town is working with DES and FB Environmental Associates to secure \$25,000 to \$50,000 in grant funding to rectify the pollution dilemma. The town proposes matching those funds through the use of town equipment, labor and administrative time.

Kim Reed, town planning administrator, said this is Rye's third attempt to secure grant funding. Rye was previously denied funding because its proposal was not specific enough, but Reed said the DES plan helped the town hone in on what it specifically wants to do to tackle the problem.

"The plan is a road map for helping Rye reduce the bacteria loads," said Sally Soule, coastal watershed supervisor for the DES watershed assistance department.

According to the town's pre-proposal application form, Rye has many neighborhoods developed before modern septic system regulations were in place. "Aging systems remain largely undocumented and of unknown design and condition," the document reads.

U.S. Department of Agriculture soil surveys found the watershed has numerous and extensive soil limitations for septic systems, meaning that as outdated or poorly maintained systems malfunction, natural soil and landscape alone cannot protect surface water quality.

Some "urgently needed" first steps to reduce contamination from septic systems include a survey of septic systems, a homeowner education program and ordinance revisions involving stakeholders, the town's application states.

The DES plan also identifies several areas in the watershed where impervious surfaces in developed neighborhoods drain straight into the creek, vegetated buffers are missing and pet waste is abandoned near surface waters.

Soule said possible solutions range from managing stormwater better to identifying septic systems that may be functioning poorly, if not outright failing.

Reed said Rye is approaching the issue in phases and the first step is pinpointing the source of contamination. She said a good start that does not require the grant would be to install rain gardens, improve culverts and widen roads to divert runoff from the creek.

"I really feel that it is important to get the water quality in our ocean cleared up," she said. "The ocean is a valuable resource to the town of Rye."

Soule said Rye faces tough competition for the grant. As budgets shrink, less money is available, and 21 applicants are seeking a slice of the \$300,000 to \$400,000 for watershed restoration, she said.

On the plus side, contamination in the creek has not necessarily resulted in high bacteria counts on the beach, Carlson said. There have been some instances of high bacteria counts on Wallis Sands in the area some call "Pirates Cove," but on only one occasion was that the case at Wallis Sands State Park, she said. There have been no beach advisories for bacteria in Rye this summer and the DES takes samples in Rye twice weekly from Memorial Day to Labor Day, Carlson said. Beach advisories are available at [DES.nh.gov](http://DES.nh.gov).