

Experienced Water, Where Does It Go?

Island sewage only has a few options. It can be collected and piped to a wastewater treatment plant; it can stay at home and be treated in your own backyard, or in some instances it might be collected with the neighbors' wastewater and taken care of in a community system. It all depends upon where you live.

Map Orientation, Wastewater options

A small area around town center, the Community Care Center and Bunker Trail are served by sewer. The rest of the Island relies on septic systems to treat "experienced" water. The yellow dots depict developed parcels outside of the Vashon Sewer District service area that rely on some sort of on-site sewage disposal. Though not shown here, many households in the sewer service area still use septic systems. The green areas along the shoreline are designated Marine Recovery Areas.

Every body poops

U.S. Geological Service scientists estimate that people deliver about 10 pounds of nitrogen per year per person to their septic system. The Puget Sound Action Team estimates that a 1,000 pound horse or beef cow produces about 109 pounds of nitrogen per year. That's over 10 times more than a human.

We're septic-dependent

Over 90 percent of Island homes are not served by sewer. In fact, both Vashon High School and McMurray Middle School depend on septic systems to treat wastewater.

Septic sensibility

Local installers remember that septic systems used to be buried "the deeper the better," fostering an out-of-sight out-of-mind attitude—a definite problem for groundwater. Now, there's an emphasis on making sure your septic system is accessible to encourage long-term monitoring and maintenance.

Beulah Park-Cove Beach community system

Beulah Park, an upland neighborhood with small lots and Cove Beach, a series of mostly walk-in beachfront homes at the base of a steep hill were annexed by Vashon Sewer District to solve the problem of failing septic systems. A new community sewage collection and treatment system began operation in 2001, serving 47 single family homes and six apartment units. The sewage is treated and discharged into a neighborhood drain field on a .64 acre lot; open space amidst the busy Beulah Park neighborhood.

Marine Recovery Areas (MRA)

The goal of a Marine Recovery Area is to protect, preserve and restore shellfish harvest opportunities. Property owners within an MRA must inspect and repair or replace as necessary, their on-site sewage system. Public Health—Seattle & King County designated a *Vashon-Maury Island Marine Recovery Area* in 2008. Currently, the focus of our MRA is on shore-front properties.

Shellfish harvest

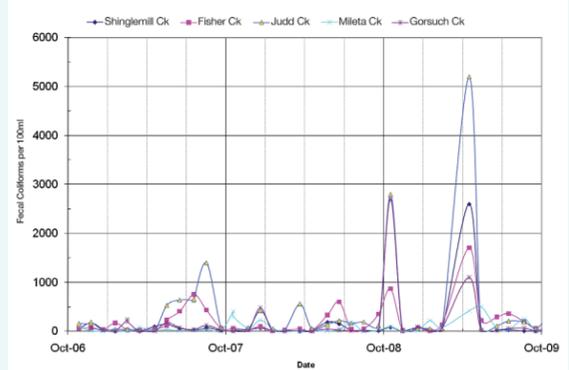
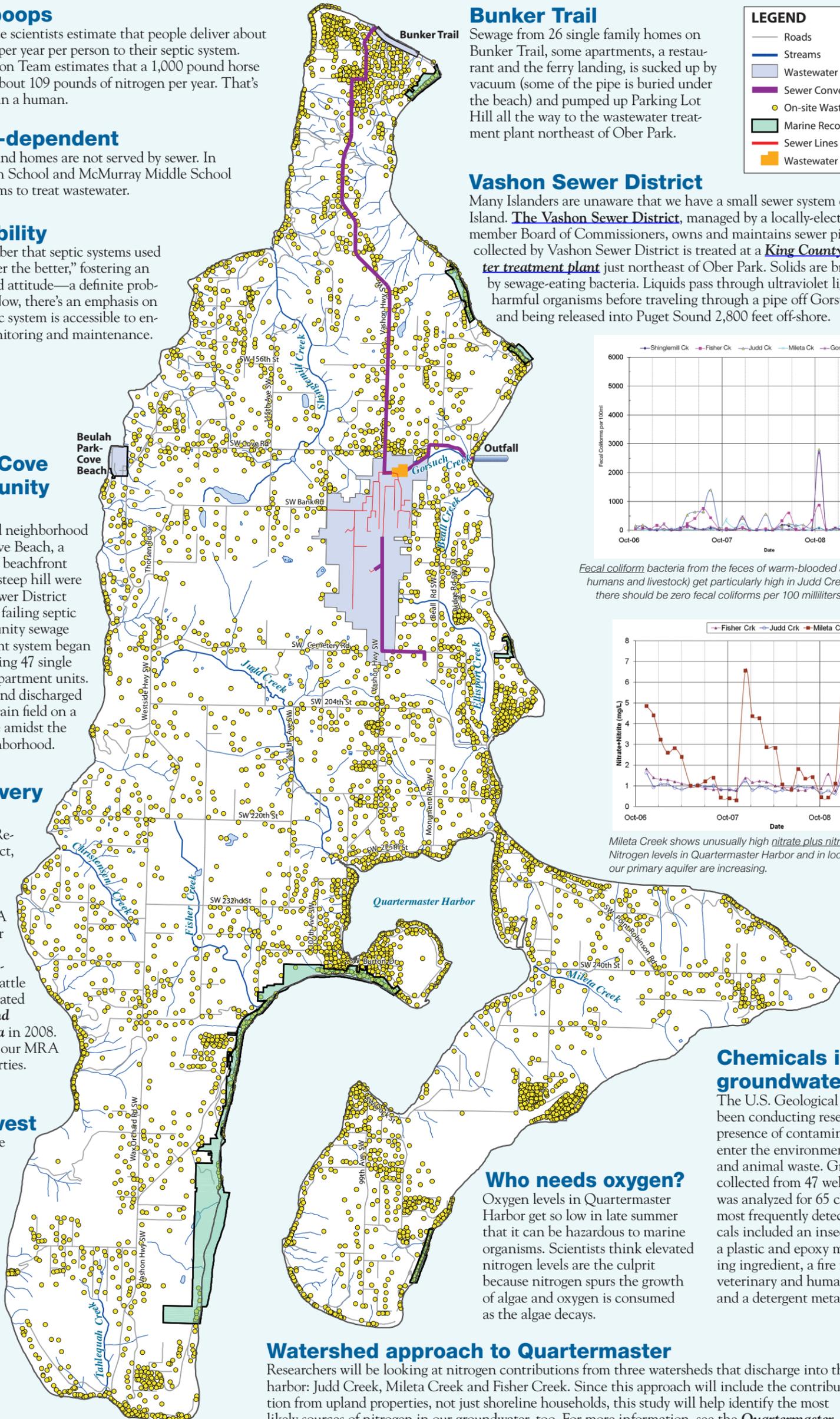
Greg Combs, from state Public Health shellfish program, reports there are more areas open for commercial and recreational shellfish harvest on the Vashon-Maury Island shoreline than there were 15 years ago, thanks largely to the wastewater treatment plant's outfall extension and the sewer line extension to Bunker Trail.

Bunker Trail

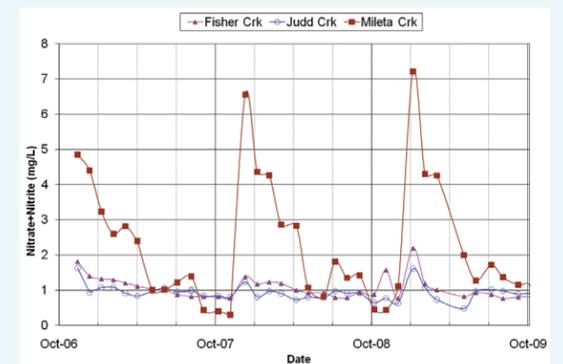
Sewage from 26 single family homes on Bunker Trail, some apartments, a restaurant and the ferry landing, is sucked up by vacuum (some of the pipe is buried under the beach) and pumped up Parking Lot Hill all the way to the wastewater treatment plant northeast of Ober Park.

Vashon Sewer District

Many Islanders are unaware that we have a small sewer system on the Island. The Vashon Sewer District, managed by a locally-elected three-member Board of Commissioners, owns and maintains sewer pipes. Sewage collected by Vashon Sewer District is treated at a King County wastewater treatment plant just northeast of Ober Park. Solids are broken down by sewage-eating bacteria. Liquids pass through ultraviolet lights to kill harmful organisms before traveling through a pipe off Gorsuch Road and being released into Puget Sound 2,800 feet off-shore.



Fecal coliform bacteria from the feces of warm-blooded animals (including humans and livestock) get particularly high in Judd Creek. For reference, there should be zero fecal coliforms per 100 milliliters in drinking water.



Mileta Creek shows unusually high nitrate plus nitrite levels in winter. Nitrogen levels in Quartermaster Harbor and in localized areas of our primary aquifer are increasing.

Chemicals in groundwater

The U.S. Geological Survey has been conducting research on the presence of contaminants that enter the environment via human and animal waste. Groundwater collected from 47 wells in 18 states was analyzed for 65 chemicals. The most frequently detected chemicals included an insect repellent, a plastic and epoxy manufacturing ingredient, a fire retardant, a veterinary and human antibiotic and a detergent metabolite.

Who needs oxygen?

Oxygen levels in Quartermaster Harbor get so low in late summer that it can be hazardous to marine organisms. Scientists think elevated nitrogen levels are the culprit because nitrogen spurs the growth of algae and oxygen is consumed as the algae decays.

Watershed approach to Quartermaster

Researchers will be looking at nitrogen contributions from three watersheds that discharge into the harbor: Judd Creek, Mileta Creek and Fisher Creek. Since this approach will include the contribution from upland properties, not just shoreline households, this study will help identify the most likely sources of nitrogen in our groundwater, too. For more information, see the Quartermaster Harbor Nitrogen Loading Study.

