

## Summary of Water Testing

PROBLEM/SITUATION	COMMON SIGNS/SITUATIONS	CAUSES	TEST RECOMMENDED
Rusty colored water	Rust stains on clothing and porcelain plumbing fixtures. Metallic taste to water. Rust coating in toilet tank. Tap water turns rust colored after exposure to air.	Iron or manganese, or iron bacteria	Test for iron, manganese, pH, alkalinity, hardness (corrosive index), lead, copper.
Blue stains	Copper plumbing Blue stains on plumbing, fixtures, and laundry	Acidic water (low pH) is leaching copper from plumbing	Test for copper, pH.
“Rotten egg” or sewage odor	Iron, steel, or copper parts of pumps, pipes, and fixtures corroded. Fine black particles in water. Silverware turns black.	Hydrogen sulfide gas, sulfate-reducing bacteria, or sulfur bacteria.	<p><b>For sulfur or sewage odor:</b> Test for odor, hydrogen sulfide, sulfate, nitrate, total dissolved solids (TDS).</p> <p><b>For petroleum or solvent odor:</b> Test for volatile organic compounds (VOCs)</p> <p><b>If HOT water ONLY has an odor:</b> check/replace hot water heater corrosion control rod</p>
Acidic or Corrosive water	Metal parts on pump, piping, tank and fixtures corroded. Red stains from corrosion or galvanized pipe; blue-green stains from corrosion of copper or brass.	Acidic water (low pH) is naturally occurring in Rhode Island groundwater.	Test for pH, alkalinity, lead, copper.
Cloudy turbid water	“Dirty” or muddy appearance	Silt, sediment, microorganisms	Check well construction with local well driller. Test for turbidity, coliform bacteria.
Frothy, sudsy water	Water appears frothy	Malfunctioning septic system	Detergent screen
Chemical odor, fuel odor	Underground fuel storage tank nearby; gas station; improper use, storage, or disposal of fuels used around the home (car, lawn mower, other gas-powered machines)	Leaking underground storage tank, fuel spills	Test for volatile organic chemical (VOCs) scan, TPH test.
Unusual chemical odor	Well near dump, junkyard, landfill, industrial facilities	Groundwater contamination of chemicals	Test for organic chemical scan, heavy metals, consult with HEALTH on additional testing

			suggestions.
Recurrent gastrointestinal illness	Stomach problems, nausea, diarrhea	Bacterial contamination, cracked well casing, malfunctioning septic system	Test for coliform bacteria, nitrate sulfate
Sodium restricted diet, salty brackish taste	Well near the coast, a salt storage pile, or heavily salted roadway	Saltwater intrusion, groundwater contamination	Test for chloride, sodium, total dissolved solids (TDS) tests
No obvious problem	If your well is in an area of past or present apple orchards	Arsenic in pesticide formulations	Test for arsenic
No obvious problem	If your well is in an agricultural area	Pesticide leaching from agricultural practices.	Consult with HEALTH regarding any known contaminant problems. Test for pesticides used in the area. Nitrate, total dissolved solids (TDS), pH, coliform bacteria
Children in the house under the age of 6.	No noticeable signs	Lead pipes or components in plumbing. Brass contains lead.	Test for lead.
Children in the house under the age of 12	No noticeable signs	Fluoride is naturally occurring in Rhode Island groundwater	Test for fluoride
Metallic taste or appearance	Metallic taste to water.	Low pH (acidic water) can cause metals to leach from plumbing system, leaching of heavy metals from adjacent landuses.	Test for hydrogen sulfide, pH, alkalinity, hardness (corrosive index), copper, lead, iron, zinc, cadmium, sodium, chloride, and total dissolved solids (TDS)
Buying a house with a private well or thinking about installing a water treatment system			Test for coliform bacteria, nitrate, fluoride, iron, lead, manganese, turbidity, and other contaminants depending on your proximity to a potential contamination source