

Solving Water Problems

Observation or General Effect	Probable Cause	Possible Solution
Suspended material in the water, excessive wear on valve seats, seals, bearing, or other plumbing parts.	Sand, clay, slit, or dirt	Remove larger particles by backwashing filters and smaller particles with 1 to 5 micron cartridge filters.
Water is colored, has an off or bad taste, stains fixtures or has a musty odor	Chlorine, iron, organic material, hydrogen sulfide, or humates	These can be complex problems but generally, chlorination or aeration followed by a 1 to 5 micro filter and an activated carbon filter improves quality.
Rotten egg odor	Hydrogen sulfide	Remove by using an oxidizing filter followed by an activated carbon filter
<p>Grey to white mineral deposits on or around faucets, shower heads and at the water line in toilet bowls.</p> <p>Hot water heater makes noise, slow recovery, electric heating elements have to be replaced frequently. Aeration screens on faucets clog with gray to white mineral or scale deposits.</p>	The insoluble salts of calcium and magnesium (hardness)	Installation of a water softener.
Suspended rust colored particles, can also cause red to black deposits on fixtures and appliances.	Iron and Manganese	Remove by filtration.
Dark to black spots on clothes, usually most noticeable on laundry, where chlorine bleach is used	Iron and Manganese	Low levels of soluble iron and be removed by a water softener; higher levels require the use of an oxidizing filter.
Light green or blue green deposits around faucets or on fixtures.	Copper	Check for the direct connection of galvanized iron pipe to copper pipe without the use of dielectric unions. Check for electrical faults in appliances ground to the plumbing system.

Coliform bacteria contamination. Indicates the presence of potential disease producing organisms. Large numbers of non-coliform bacteria may cause taste and odor problems. These can be determined by requesting a Heterotrophic Plate Count.	Shock Chlorinate well and distribution system	If follow up coliform analyses are still positive, install a continuous chlorination or ultraviolet disinfection system.
High dissolved solids	Dissolved mineral	Remove with Reverse Osmosis or Distillation
Heavy Metals	Lead, cadmium, selenium, arsenic, copper, etc.	Remove with Reverse Osmosis
High nitrates as N (>10 mg/L)	Septic systems, fertilizer, feedlot runoff or natural minerals.	Remove with Reverse Osmosis
High Fluoride (>4 mg/L)	Natural minerals	Remove with Reverse Osmosis
Organic chemicals	Industrial contamination or chlorination of water.	Most can be removed with an activated carbon filter.