



Common Drinking Water Quality Complaints

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Households with private wells may have any of the water quality problems listed below.

Compound	Source	Acceptable Levels	Problem	Treatment
<i>Calcium or Magnesium</i>	Limestone, soil	Nuisance over 5 grains per 100 mg/L	Scale build up in kettles and water heaters, excess use of soap	Water softener, soluble phosphate additives
<i>Copper</i>	Naturally occurring, acidic water reacting with copper & brass pipes & fittings	1.0 mg/L	Green stains, greenish/blue water, pitting of fixtures, metallic taste	Water softener
<i>E. coli (bacteria)</i>	Human and animal sewage	0	Undetectable (no taste, colour or odour in water)	Boiling, distillation, ultraviolet light, ozone, chlorination
<i>Fluoride</i>	Natural groundwater	1.5 mg/L or less	White opaque appearance, mottling/spotting of teeth	Reverse osmosis
<i>Hydrogen Sulphide</i>	Found naturally in mineral ores, oil and coal deposits, in ground water, industrial wastes	0.05 mg/L	Rotten-egg smell, taste, corrosive black deposits in piping when in conjunction with iron, pitting of metal sinks & fixtures	Greensand/permanganate ion-exchanger, chlorination and filtration, aeration
<i>Iron</i>	Well casings, pump parts, piping, hot water tank, mineral deposits	0.3 mg/L	Rusty (red to brown) staining of fixtures & laundry, metallic or bitter taste, clogged pipes, reduces well yield	Chlorination, Ferric Sulfate, filtration units, aeration, softener, ion-exchanger
<i>Lead</i>	Lead solder, brass fixtures, lead pipe	0.01 mg/L	Undetectable	Reverse osmosis, flush cold water taps
<i>Manganese</i>	Found naturally in rock/ore	0.05 mg/L	Black stains on fixtures, laundry, clogged pipes, metallic taste, reduced well yield	Filtration, water softener, aeration chlorination and filtration
<i>Methane</i>	Naturally occurring or produced from wastewater	3 L/m ³	Gassy smell, gas bubbles escaping from water, cloudy or milky	Aeration, activated carbon filter

Compound	Source	Acceptable Levels	Problem	Treatment
Nitrate	Fertilizer, sewage, plant decay	10 mg/L	Undetectable (no taste or odour in water), causes infants to turn blue due to oxygen starved body tissue	Reverse osmosis
PH	Naturally occurring, acidic water reacting with copper and brass pipes and fittings	6.5-8.5	Either corrosive or produces mineral incrustation, bitter taste	Polyphosphate, silicates, calcium carbonate, sacrificial media
Parasites (Giardia, Cryptosporidium)	Human and animal sewage	0	Undetectable (no taste, odour or colour)	Boiling, distillation, ultraviolet light, ozone, ultra-fine filter media
Sodium	Rock, road salt, sea water, water softener	200 mg/L (average adult), 20 mg/L (for those on sodium restricted diets)	Salty taste, pitting of fixtures	Reverse osmosis, draw drinking water from unsoftened supply, distillation
Sulphates (Magnesium, calcium, sodium)	Naturally occurring in rock, gypsum, surface waters polluted with industrial wastes	500 mg/L	Water has laxative effect in adults, diarrhea in children, hardness or foaming in steam boilers, taste	Reverse osmosis
Total coliform (bacteria)	Environmental organism found in soil, organic matter	0-5 colonies	Undetectable (no taste, odour or colour)	Boiling, distillation, ultraviolet light, ozone, chlorination
Turbidity	Suspended particles like silt/clay/organic matter	5.0 or less Nephelometric Turbidity Units	Cloudiness, grittiness, interferes with disinfection (u.v. light or chlorination)	Filters, alum treatment

Additional parameters for pesticides, volatile organic compounds and other chemicals can also be found in the Ontario Drinking Water Standards. To obtain a copy, contact your local Ministry of the Environment office. Contact the health unit for more information about well water testing.



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