

# WATER ANALYSES INTERPRETATION

(based on the USGS, Federal & State EPA, and Maine CDC Guidelines for Drinking Water)

## **pH**

Normal range: 6.5 to 8.5

Generally waters having a pH below 6.5 are acidic and above 7.5 are alkaline. Corrosion has been associated with low pH; water may have a sour taste if less than 4.0. If pH exceeds 8.5, water may have an alkali taste and scale may form in pipes.

## **CHLORIDE**

Normal range: 1 to 2 mg/L

Chlorides in normal ground waters fall in the 1 to 2 mg/L range, and in reasonable concentration are not harmful to humans. Concentrations of 250 mg/L and above give a salty taste to water and could cause corrosion of pipes and plumbing fixtures. Elevated chlorides may result from saltwater intrusion or road salt contamination of the well water.

## **HARDNESS (as calcium carbonate)**

Less than 60 mg/L:	Soft
61-120 mg/L:	Moderately Hard
121-180 mg/L:	Hard
180 mg/L or greater:	Very Hard

Because of adverse action with soap, and a tendency to produce scale in hot water pipes, heaters, etc., it may be desirable to install a water softener.

## **NITRATE & NITRITE**

Nitrates may be naturally occurring compounds during the decay of organic or plant material. Elevated concentrations may originate from fertilized fields, manure piles, or from septic contamination.

Nitrates in high concentration cause methemoglobinemia or so-called nitrate poisoning in infants. Supplies with 10 or more mg/L are judged unsatisfactory and are not considered safe for drinking or cooking.

## **COPPER**

Copper is an essential element in human metabolism and does not constitute a health hazard, but does impart an undesirable taste to water when present in concentrations above 1 mg/L. At concentrations above 1.3 mg/L, intestinal distress may result.

## **LEAD**

Lead in high concentration can cause kidney and nervous system damage. \*The Maine State Maximum Exposure Guideline (MEG) is set at 10 ug/L for Lead in drinking water by the Maine Center for Disease Control (MECDC). This guideline for drinking water set by the State suggests that anything over the MEG is considered to be potentially harmful to human health. Questions regarding Lead or any other drinking water contaminants should be directed to the Maine State Toxicologists at 1-866-292-3474 (toll free for in-state calls only) or 207-287-4311.

## **IRON & MANGANESE**

Both Iron & Manganese are highly objectionable constituents in water supplies. These metals impart a brownish color to laundered goods and can appreciably affect the taste of water. Manganese only in concentrations, above 0.05 mg/L, Parkinsonian type symptoms may occur. Iron only over 5.0 mg/L could potentially cause health issues.

## **COLIFORM / E.COLI BACTERIA**

Total coliforms are a diverse group of bacteria that are present in solids, plant matter, and occur as normal intestinal microorganisms of humans and animals. While coliform bacteria themselves are not harmful, they are an indicator of the potential presence of disease causing organisms.

E. coli is a member of the coliform group of bacteria and may be associated with septic contamination of groundwater or fecal contamination of surface runoff.

## **ARSENIC**

Arsenic in high concentrations is carcinogenic and can cause liver and kidney damage.

## **SODIUM**

Persons affected with certain diseases require water with a low sodium concentration (20 mg/L or less).

## **FLUORIDE**

Fluoride is helpful in dental health as above. However, excessive consumption of naturally occurring fluoride can damage bone tissue (dental fluorosis).

Less than 0.2-0.29 mg/L:	Show a very small amount of fluoride and are not enough to prevent tooth decay.
0.3-0.7 mg/L:	Show that some fluoride is present but it may not be enough to protect children's teeth.
0.7 mg/L or higher:	Show a level of fluoride that is high enough to help protect children against tooth decay.

## **URANIUM**

Uranium in high concentrations can harm kidneys and may cause cancer.