

## Interpretation of Results

### National Primary Drinking Water Regulations

The below information is taken directly from the Environmental Protection Agency's (EPA's) National Primary Drinking Water Regulations (NPDWR) Complete Table. This interpretation sheet reflects only those chemical compounds on the EPA's NPDWR Complete Table that are analyzed for in Northeast Laboratory Service's **Basic**, **Expanded** (*Residential/Conventional Mortgage Approval Test*), and **Comprehensive Safety** test packages.

The EPA's NPDWR Complete Table can be found freely available in its original, unabridged PDF format online at: [https://www.epa.gov/sites/production/files/2016-06/documents/npwdr\\_complete\\_table.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf).

Contaminant	Maximum Contaminant Level (MCL)	Potential health effects from exposure above the MCL	Common Sources of Contaminant in Drinking Water
<b>Arsenic</b>	10 µg/L (ppb)	Skin damage or problems with circulatory systems, and may have increased risk of getting cancer	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production waste
<b>Antimony</b>	6.0 µg/L (ppb)	Increase in blood cholesterol; decrease in blood sugar.	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
<b>Copper</b>	1.3 mg/L (ppm)	Short-term exposure: gastrointestinal distress. Long-term exposure: Liver or kidney damage. People with Wilson's Disease should consult their personal doctor if the amount of copper in the water exceeds the action level	Corrosion of household plumbing systems; erosion of natural deposits
<b><i>E. coli</i> Bacteria</b>	Presence	<i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes may cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	Human and animal fecal waste
<b>Fluoride</b>	4.0 mg/L (ppm)	Bone disease (pain and tenderness of the bones); children may get mottled teeth	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
<b>Lead</b>	15 µg/L (ppb)	Infants and children: Delays in physical or mental development; children could show slight deficits in attention span and learning abilities; adults: Kidney problems; high blood pressure	Corrosion of household plumbing systems; erosion of natural deposits
<b>Nitrate as N</b>	10 mg/L (ppm)	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Nitrite as N</b>	1.0 mg/L (ppm)	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Total Coliforms</b>	5.0 percent <sup>1</sup>	Coliforms are bacteria that indicate that other, potentially harmful bacteria may be present. See <i>E. coli</i>	Naturally present in the environment
<b>Uranium</b>	30 µg/L (ppb)	Increased risk of cancer, kidney toxicity	Erosion of natural deposits

1. The EPA NPWDR limit of 5.0 percent positive for Total Coliforms applies to municipal/public water systems. The State of Maine Center for Disease Control and Prevention, Drinking Water Program, and Environmental and Occupation Health Program all strongly recommended treating the **presence** of Total Coliforms as "unsatisfactory."

## Interpretation of Results

### *National Secondary Drinking Water Regulations*

The below information is taken directly from the Environmental Protection Agency's (EPA's) National Secondary Drinking Water Regulations (NSDWR) Complete Table. This interpretation sheet reflects only those chemical compounds on the EPA's NSDWR Complete Table that are analyzed for in Northeast Laboratory Service's **Basic**, **Expanded** (*Residential/Conventional Mortgage Approval Test*), and **Comprehensive Safety** test packages. Per the US EPA NSDWR are non-enforceable guidelines for contaminants that may cause cosmetic or aesthetic effects. These effects include skin, tooth, or fixture discoloration and may also impart a poor taste, color, or odor to the water.

The EPA's NSDWR contaminant table with applicable levels can be found on page 7 of 7 of the EPA's NPDWR Complete Table which is freely available in its original, unabridged PDF format online at: [https://www.epa.gov/sites/production/files/2016-06/documents/npwdr\\_complete\\_table.pdf](https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf).

Contaminant	Secondary Maximum Contaminant Level (SMCL)	Contaminant	Secondary Maximum Contaminant Level (SMCL)
<b>Chloride</b>	250 mg/L (ppm)	<b>Iron</b>	0.3 mg/L (ppm)
<b>Copper</b>	1.0 mg/L (ppm)	<b>Manganese</b>	0.05 mg/L (ppm)
<b>Fluoride</b>	2.0 mg/L (ppm)	<b>pH</b>	<6.5 or >8.5
<b>Sulfate</b>	250 mg/L	<b>Zinc</b>	5.0 mg/L

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### *EPA Unregulated Additional Parameters*

The EPA does not acknowledge Sodium as a monitored contaminant under either the NPDWR or the NSDWR. The EPA has no health limits applicable to the Sodium content of drinking water. The State of Maine Center for Disease Control and Prevention requires the flagging of Sodium in excess of 20.0 mg/L (parts per million) for persons on low to no sodium diets per doctor's orders. For more information on Sodium please contact one of the State of Maine's Bureau of Health Toxicologists, toll free, at 1-866-292-3474.

Additional parameters may appear on the NEL Certificate of Analysis that do not display an EPA MCL/SMCL or any type of flagging (red X, yellow triangle, or green checkmark). These parameters have no EPA NPDWR or NSDWR limits, nor do they have a local limit imposed by the State of Maine Center for Disease Control and Prevention. These parameters include Total Hardness, Calcium, and Magnesium. Calcium and Magnesium are used in the calculation to determine Total Hardness. Total Hardness is a measure of mineral content in the drinking water supply. The hardness of the water may affect the functionality of soaps, detergents, and water heating equipment. Water hardness correlates as follows:

Degree of Hardness	Total Hardness (in mg/L or ppm)	Total Hardness (in grains per gallon)
<b>Soft</b>	<17.1	<1.0
<b>Slightly Hard</b>	17.1-60	1.0-3.5
<b>Moderately Hard</b>	60-120	3.5-7.0
<b>Hard</b>	120-180	7.0-10.5
<b>Very Hard</b>	>180	>10.5

Total Hardness is reported in milligrams per liter (mg/L) on the NEL Certificate of Analysis, most water treatment specialists are familiar with this unit of measure but also require Total Hardness in grains per gallon. 17.1 mg/L = 1.0 grain per gallon. To convert from the reported result to grains per gallon, divide the reported result by 17.1.