

# City of Loveland Treated Drinking Water Analysis



May 2018

Parameter	Effluent Value	Interpretation	Comments
Alkalinity	36	Acceptable	Acceptable, meets the recommended facility specific levels of 20 to 60 mg/L given from the CDPHE. Alkalinity and hardness are closely related. High water hardness can cause scaling in bathtubs, water heaters, pipes, and other plumbing fixtures. There is no direct health concern associated with increased alkalinity.
Aluminum	0.048	Acceptable	Acceptable, meets the SMCL of 0.05 to 0.2 mg/L. Levels above the secondary standard for drinking water can cause colored water, increase in turbidity, or scaling and sedimentation.
Ammonia, as N	0.000	Acceptable	Currently, there is no drinking water guideline for ammonia because there is no direct health concern associated with increased levels of ammonia. Higher levels of ammonia can react with chlorine and interfere with the chlorination of water. Increased levels of ammonia can cause water odor at concentrations greater than 1.5 mg/L and tend to cause taste issues for concentrations over 35 mg/L. Ammonia is an important parameter to monitor the for health of aquatic life in at home aquariums.
Calcium	7.1	Acceptable	Currently, there is no drinking water quality guideline for calcium because there is no direct health concern associated with increased levels of calcium. Calcium is a primary constituent for water hardness.
Color (Color Units)	0.54	Acceptable	Acceptable, meets the SMCL of 15 color units. Higher levels of color tend to cause the water to have a visible tint.
Chloride	4.3	Acceptable	Acceptable, meets the SMCL of 250 mg/L. Higher levels of chloride tend to cause the water to have a salty taste and can cause corrosion in the water distribution systems.
Chlorine, Free	1.19	Acceptable	Acceptable, meets the recommended facility specific levels of 0.2 to 4.0 mg/L given from the CDPHE. Chlorine is added to the water to disinfect and prevent bacteria from growing.
Chromium, Total	<0.002	Acceptable	Acceptable, meets the MCL of 0.1 mg/L. Higher levels of chromium tend to be caused by natural deposits.
Copper	<0.0025	Acceptable	Acceptable, meets the MCL of 1.3 mg/L. Higher levels of copper tend to be caused by corrosion of household plumbing systems and erosion of natural deposits. Higher levels of copper can cause a metallic taste or a blue-green staining.
Fluoride	0.73	Acceptable	Acceptable, meets the SMCL of 2.0 mg/L and the MCL of 4.0 mg/L per EPA. The CDPHE Oral Health Unit recommends an optimum level of 0.7 mg/L. Fluoride is added to reduce dental decay and improve public health.
Hardness, Total	28	Acceptable	Acceptable, Calcium and Magnesium are the primary components of water hardness. High water hardness can cause scaling in bathtubs, water heaters, pipes, and other plumbing fixtures. There is no direct health concern associated with increased hardness.
Iron, Total	0.001	Acceptable	Acceptable, meets the SMCL of 0.3 mg/L. Higher levels of iron tend to cause rusty colored water, sedimentation, a metallic taste, and/or a reddish or orange staining.
Lead	<0.002	Acceptable	Acceptable, meets the action level of 0.015 mg/L. Higher levels of lead tend to be caused by corrosion of household plumbing and erosion on natural deposits.
Magnesium	1.64	Acceptable	Currently, there is no drinking water quality guideline for magnesium because there is no direct health concern associated with increased levels of magnesium. Magnesium is a primary constituent for water hardness.
Manganese	0.011	Acceptable	Acceptable, meets the SMCL of 0.05 mg/L. Higher levels of manganese can tend to cause black to brown colored water, black staining, and can have a bitter metallic taste.

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Nitrate, as N	0.006	Acceptable	Acceptable, meets the MCL of 10.0 mg/L. Higher levels of nitrate tend to be caused by runoff from fertilizer use, leaking from septic tanks, and erosion of natural deposits.
pH (S.U.)	7.73	Acceptable	Acceptable, meets the recommended facility specific levels of 7.3 to 8.6 given from the CDPHE. Also, meets the SMCL of 6.5 to 8.5. A lower pH can be corrosive to the water system and have a bitter metallic taste. A higher pH can give the water a slippery feel, a soda like taste, and contributes to scaling.
Potassium	0.5	Acceptable	Currently, there is no drinking water guideline for potassium because there is no direct health concern associated with increased levels of potassium. Potassium is an important parameter for home brewing enthusiasts.
Silica, as SiO <sub>2</sub>	3.0	Acceptable	Currently, there is no drinking water quality guideline for silica. Typically, natural sources of water contain 1 to 100 mg/L of silica. A person drinking one 8 oz. glass of water would be consuming less than half of a serving of dried fruit worth of silica. There is no direct health effect associated with increased levels of silica.
Sodium	14.0	Acceptable	Currently there is no drinking water quality guideline for sodium. Drinking water is an insignificant source of sodium in a diet. For individuals on a very low sodium diet (500 mg/day), EPA recommends that drinking-water sodium not exceed 20 mg/L. In order to avoid adverse effects on taste, EPA recommends that sodium concentrations in drinking water not exceed 30 to 60 mg/L, a threshold for taste-sensitive segments of the population. Many individuals will not be able to detect the presence of sodium in this concentration range.
Specific Conductance (µS/cm)	106.8	Acceptable	Currently, there is no drinking water quality guideline for specific conductance because there is no direct health concern associated with increased levels of specific conductance.
Sulfate	9.0	Acceptable	Acceptable, meets the SMCL of 250 mg/L. Higher levels of sulfate tend to give the water a salty taste.
Total Dissolved Solids	96.1	Acceptable	Acceptable, meets the SMCL of 500 mg/L. High dissolved solids can leave deposits on glass and fixtures, can cause staining or give water an undesirable salty taste.
Turbidity (NTU)	0.053	Acceptable	Acceptable, meets the recommended facility specific levels of 0.3 to 1 NTU. Also, meets the MCL of 1 NTU. Turbidity is a measure of the cloudiness in water. Higher levels of turbidity may be caused by hydrant flushing, pipeline replacement, or valve openings and closings in specific areas of the water system.
Zinc	0.03	Acceptable	Acceptable, meets the SMCL of 5.0 mg/L. Higher levels of zinc tend to give the water a metallic taste.

All units are in mg/L unless otherwise noted

Sources for Comments:

CSU Water Quality Interpretation Tool: <https://erams.com/wqtool/>

EPA-Drinking Water Criteria: <https://www.epa.gov/dwstandardsregulations>

Colorado Department of Public Health & Environment: <https://www.colorado.gov/pacific/cdphe/drinking-water>

MCL: Maximum Contaminant Level (mandated by the USEPA)

MCLG: Maximum Contaminant Level Goal

SMCL: Secondary Maximum Contaminant Level (mandated by the USEPA)

MDRL: Maximum Disinfectant Residual Level