

TOWN OF SUPERIOR

2017 *Water Quality Report*

SUPERIOR METROPOLITAN DISTRICT NO 1 2017 *Consumer Confidence Report* For Calendar Year 2016

CONSUMER CONFIDENCE REPORT

We are pleased to present to you this year's water quality report (for calendar year 2016). Our constant goal is to provide you with a safe and dependable supply of drinking water. Please contact [Jim Widner](mailto:Jim.Widner@superiorco.gov) at [303-499-3675](tel:303-499-3675) with any questions about the Drinking Water Consumer Confidence Report (CCR) or for public participation opportunities that may affect the water quality.



GENERAL INFORMATION

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791) or by visiting <http://water.epa.gov/drink/contaminants>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly, and infants can be particularly at risk of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and microbiological contaminants call the EPA Safe Drinking Water Hotline at (1-800-426-4791).

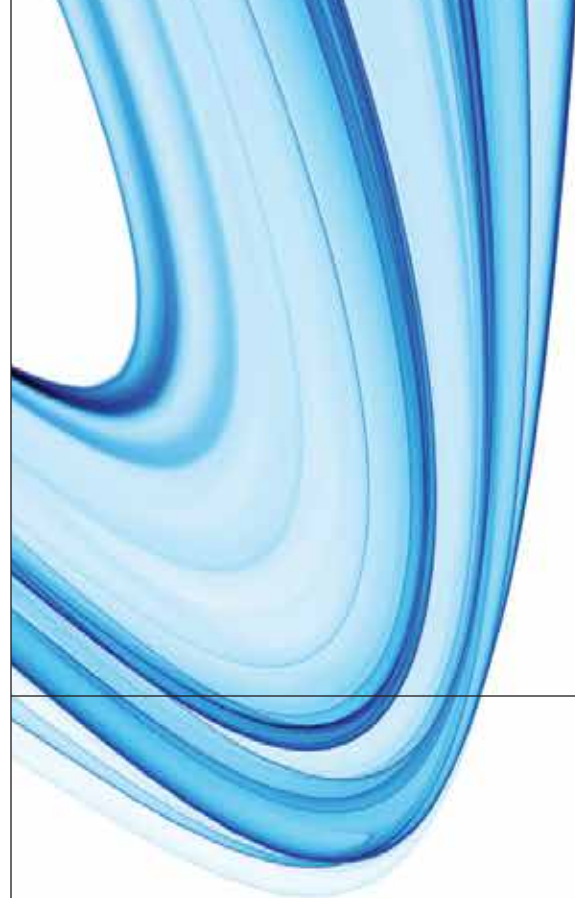
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants:** viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides:** may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.
- **Radioactive contaminants:** can be naturally occurring or be the result of oil and gas production and mining activities.
- **Organic chemical contaminants:** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

In order to ensure that tap water is safe to drink, the Colorado Department of Public Health and Environment prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

LEAD IN DRINKING WATER

If present, elevated levels of lead can cause serious health problems (especially for pregnant women and young children). It is possible that lead levels at your home may be higher than other homes in the community as a result of materials used in your home's plumbing. If you are concerned about lead in your water, you may wish to have your water tested. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.



Our Water Sources

SOURCE: CARTER LAKE

SOURCE/WATER TYPE:
Intake/Surface Water

SOURCE: MARSHALL LAKE
via Terminal Reservoir

SOURCE/WATER TYPE:
Intake/Surface Water

Potential sources of contamination in our source water area come from: EPA Superfund Sites, EPA Abandoned Contaminated Sites, EPA Chemical Inventory/Storage Sites, Permitted Wastewater Discharge Sites, Aboveground, Underground, and Leaking Storage Tanks, Solid Waste Sites, Existing/Abandoned Mine Sites, Other Facilities, Commercial/ Industrial/Transportation, Low Intensity Residential, Urban Recreational Grasses, Row Crops, Fallow, Pasture/Hay, Deciduous Forest, Evergreen Forest, Septic Systems, Oil/Gas Wells, Road Miles

DETECTED CONTAMINANTS

SUPERIOR MD NO 1 routinely monitors for contaminants in your drinking water according to Federal and State laws. The following table(s) show all detections found in the period of January 1 to December 31, 2016 unless otherwise noted. The State of Colorado requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination.

Therefore, some of our data, though representative, may be more than one year old. Violations and Formal Enforcement Actions, if any, are reported in the next section of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section then no contaminants were detected in the last round of monitoring.

Disinfectants Sampled in the Distribution System						
TT Requirement: At least 95% of samples per period (month or quarter) must be at least 0.2 ppm OR If sample size is less than 40 no more than 1 sample is below 0.2 ppm Typical Sources: Water additive used to control microbes						

Contaminant Name	Time Period	Results	Number of Samples Below Level	Sample Size	TT Violation	MRDL
Chlorine	December, 2016	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	10	No	4.0 ppm

Lead and Copper Sampled in the Distribution System						
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Contaminant Name	Time Period	90th Percentile	Sample Size	Unit of Measure	90th Percentile AL	90th Percentile AL Exceedance
Copper	09/16/2015 to 09/25/2015	0.28	20	ppm	1.3	No

Typical Sources: Corrosion of household plumbing systems; Erosion of natural deposits

Lead	09/16/2015 to 09/25/2015	9	20	ppb	15	No
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Typical Sources: Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts Sampled in the Distribution System								
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Name	Year	Average	Range Low - High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation
Total Haloacetic Acids (HAA5)	2016	22.74	9.7 to 35.44	16	ppb	60	N/A	No

Typical Sources: Byproduct of drinking water disinfection

Total Trihalomethanes (TTHM)	2016	33.41	17.4 to 47.9	16	ppb	80	N/A	No
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Typical Sources: Byproduct of drinking water disinfection

Total Organic Carbon (Disinfection Byproducts Precursor) Removal Ratio of Raw and Finished Water							
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Name	Year	Average	Range Low - High	Sample Size	Unit of Measure	*TT Minimum Ratio	TT Violation
Total Organic Carbon Ratio	2016	1.46	1.03 to 3.06	12	Ratio	1.00	No

Typical Sources: Naturally present in the environment

* If minimum ratio not met and no violation identified then the system achieved compliance using alternative criteria.

Disinfectants Sampled at the Entry Point to the Distribution System

Contaminant Name	Year	Number of Samples Above or Below Level	Sample Size	TT/MRDL Requirement	TT/MRDL Violation
Chlorine/Chloramine	2016	0	2157	TT = No more than 4 hours with a sample below 0.2 MG/L	No

Typical Sources: Water additive used to control microbes

Summary of Turbidity Sampled at the Entry Point to the Distribution System

Contaminant Name	Sample Date	Level Found	TT Requirement	TT Violation
Turbidity	Date/Month: February	<u>Highest single</u> measurement: 0.31 NTU	Maximum 1 NTU for any single measurement	No
Typical Sources:	Soil Runoff			
Turbidity	Month: December	<u>Lowest monthly</u> percentage of samples meeting TT requirement for our technology: 100 %	In any month, at least 95% of samples must be less than 0.3 NTU	No
Typical Sources:	Soil Runoff			

Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Name	Year	Average	Range Low - High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation
Barium	2016	0.02	0.02 to 0.02	1	ppm	2	2	No
Typical Sources:	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits							
Fluoride	2016	0.4	0.12 to 0.85	7	ppm	4	4	No
Typical Sources:	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories							

Secondary Contaminants**

**Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin, or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.

Name	Year	Average	Range Low - High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2016	4.4	4.4 to 4.4	1	ppm	N/A

Unregulated Contaminants***

EPA has implemented the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants that are suspected to be present in drinking water and do not have health-based standards set under the Safe Drinking Water Act. EPA uses the results of UCMR monitoring to learn about the occurrence of unregulated contaminants in drinking water and to decide whether or not these contaminants will be regulated in the future. We performed monitoring and reported the analytical results of the monitoring to EPA in accordance with its Third Unregulated Contaminant Monitoring Rule (UCMR3). Once EPA reviews the submitted results, the results are made available in the EPA's National Contaminant Occurrence Database (NCOD) (<http://www.epa.gov/dwucmr/national-contaminant-occurrence-database-ncod>) Consumers can review UCMR results by accessing the NCOD. Contaminants that were detected during our UCMR3 sampling and the corresponding analytical results are provided below.

Name	Year	Average	Range (Low - High)	Sample Size	Unit of Measure
Molybdenum	2013	0.48	0.46 - 0.50	4	ppb
Strontium	2013	48	46 - 50	4	ppb
Vanadium	2013	0.15	0.11 - 0.12	4	ppb
Hexavalent Chromium	2013	0.037	0.034 - 0.04	2	ppb

***More information about the contaminants that were included in UCMR3 monitoring can be found at: <http://www.drinktap.org/water-info/whats-in-my-water/unregulated-contaminant-monitoring-rule.aspx>. Learn more about the EPA UCMR at: <http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule> or contact the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/contact.cfm>.

SOURCE WATER ASSESSMENT AND PROTECTION (SWAP)

The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply. For general information or to obtain a copy of the report please visit <http://wqcdcompliance.com/ccr>. The report is located under "Source Water Assessment Reports", and then "Assessment Report by County". Select BOULDER County and find 107725; SUPERIOR MD NO 1 or by contacting JIM WIDNER at 303-499-3675. The Source Water Assessment Report provides a screening-level evaluation of potential contamination that **could** occur. It **does not** mean that the contamination **has or will** occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats.

This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan. Potential sources of contamination in our source water area are listed on the next page.

Please contact us to learn more about what you can do to help protect your drinking water sources, any questions about the Drinking Water Consumer Confidence Report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

TERMS AND ABBREVIATIONS

Maximum Contaminant Level (MCL) – The highest level of a contaminant allowed in drinking water.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

Health-Based – A violation of either a MCL or TT.

Non-Health-Based – A violation that is not a MCL or TT.

Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment and other regulatory requirements.

Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Violation (No Abbreviation) – Failure to meet a Colorado Primary Drinking Water Regulation.

Formal Enforcement Action (No Abbreviation) – Escalated action taken by the State (due to the risk to public health, or number or severity of violations) to bring a non-compliant water system back into compliance.

Variance and Exemptions (V/E) – Department permission not to meet a MCL or treatment technique under certain conditions.

Gross Alpha (No Abbreviation) – Gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222, and uranium.

Picocuries per liter (pCi/L) – Measure of the radioactivity in water.

Nephelometric Turbidity Unit (NTU) – Measure of the clarity or cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the typical person.

Compliance Value (No Abbreviation) – Single or calculated value used to determine if regulatory contaminant level (e.g. MCL) is met. Examples of calculated values are the 90th Percentile, Running Annual Average (RAA) and Locational Running Annual Average (LRAA).

Average (x-bar) – Typical value.

Range (R) – Lowest value to the highest value.

Sample Size (n) – Number or count of values (i.e. number of water samples collected).

Parts per million = Milligrams per liter (ppm = mg/L) – One part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion = Micrograms per liter (ppb = ug/L) – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Not Applicable (N/A) – Does not apply or not available.

Level 1 Assessment – A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment – A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.



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Violations, Significant Deficiencies, Backflow/Cross-Connection, and Formal Enforcement Actions

Violations					
Name	Category	Time Period	Health Effects	Compliance Value	TT Level or MCL
Plans and specifications rule	State Monitoring - Non-Health-Based	07/27/2016 - 09/14/2016	N/A	N/A	N/A

Additional Violation Information

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Explanation of the violation(s), the steps taken to resolve them, and the anticipated resolved date:

In early 2017 Superior Metro District had completed a Sanitary Survey from the Colorado Department of Public Health and Environment. At the time of the survey Superior had not received approval for the new upgrades to the pH control and Fluoride feed system. Superior Metro District No. 1 had submitted for and has received approval shortly after the survey with no comments.

124 E. COAL CREEK DRIVE, SUPERIOR, CO 80027 303.499.3675

