

CITY OF VAIL

2022 WATER QUALITY REPORT

2021 Testing Results

This report contains important information regarding the water quality in our water system. The source of the water is groundwater, and the groundwater is drawn from the alluvial aquifer(s). All of the water is purchased from the West Central Iowa Rural Water Association, Boyer Subsystem. Our water quality testing shows the following results:

VAIL TEST RESULTS

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	61.00 (61 – 61)	09/30/2021	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	27.00 (27 – 27)	09/30/2021	No	By-products of drinking water disinfection
Copper (ppm)	AL=1.3 (1.3)	90 th	1.1 (0.32 - 1.3)	2019	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	AL=15 (0)	90 th	ND	2019	No	Corrosion of household plumbing systems; erosion of natural deposits
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.0 (ND - 1.53)	12/31/2021	No	Water additive used to control microbes

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

BOYER SUBSYSTEM TEST RESULTS

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)			
Total Trihalomethanes (ppb) [TTHM]	80 (N/A)	LRAA	59.00 (59 – 59)	09/30/2021	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5]	60 (N/A)	LRAA	50.00 (50 – 50)	09/30/2021	No	By-products of drinking water disinfection
Lead (ppb)	AL=15 (0)	90 th	4.00 (ND – 14)	2020	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90 th	1.3 (ND – 1.3)	2020	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	1.1 (1 – 1.3)	12/31/2021	No	Water additive used to control microbes
01 - WELLS 2 & 3 @ TREATMENT PLANT LAB TAP						
Arsenic (ppb)	10 (0)	SGL	1.00	08/03/2021	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes
Barium (ppm)	2 (2)	SGL	0.149	08/03/2021	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4 (4)	RAA	0.61 (0.444 – 0.611)	09/30/21	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Sodium (ppm)	N/A (N/A)	SGL	12.43	12/07/2021	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	0.12	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

DEFINITIONS

- Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- 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.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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.
- 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.
- SGL – Single Sample Result
- RTCR - Revised Total Coliform Rule
- NTU - Nephelometric Turbidity Units

GENERAL INFORMATION

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 water posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. VAIL WATER SUPPLY is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

CCR Vail Water Supply PWSID: 2452044

OTHER VIOLATIONS

In November 2021 we failed to monitor the Coliform Bacteria. Adverse health effects, if any, are not know. Monitoring procedures have been corrected to avoid future violations.

SOURCE WATER ASSESSMENT INFORMATION

Vail obtains some or all of its water from another public water supply. It is a consecutive water supply, where an originating parent supply provides drinking water to one or more downstreams supplies.

The WCIRWA's Boyer System obtains its water from the North Raccoon River sand and gravel of the alluvial aquifer. The alluvial aquifer was determined to be highly susceptible to contamination because the characteristics of the aquifer and overlying materials provide little protection from contamination at the land surface. WCIRWA's Boyer System wells will be highly susceptible to surface contamination from nonpoint sources, contaminant spills, excess fertilizer application, as well as spills from railroads. A detailed evaluation of the source water was completed by the Iowa Department of Natural Resources and is available from the Association at 712-653-2534 or 888-844-2614. The water supply is filtered, disinfected, and fluoridated. Incorporated towns that can be served from the Boyer Subsystem include Lidderdale, Westside, and Vail. Also, the Town of Arcadia can be served either from the Boyer Subsystem or the Denison Subsystem.

CONTACT INFORMATION

For questions regarding this information, please contact Jon Lapel at 712-677-2210. Office hours are 10:30 to 2:30 p.m. Decisions regarding the water system are made at the city council meetings held on the second Monday each month at 7:00 p.m. at the offices of City Hall, located at 215 Main Street. Please call 712-677-2210 to be placed on the agenda.