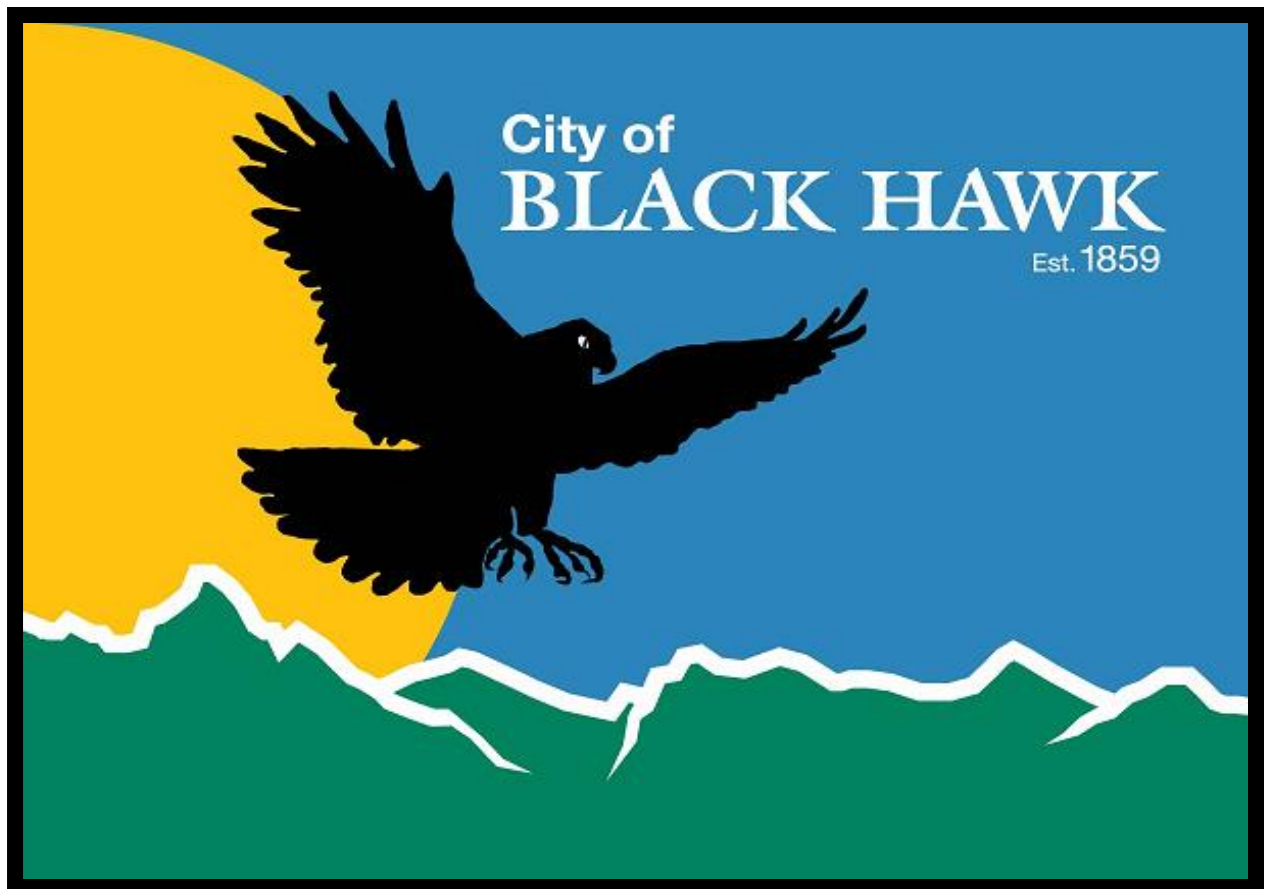


# **2023 City of Black Hawk Drinking Water Consumer Confidence Report (CCR) For Calendar Year 2022**

***Public Water System ID: CO-124147***

The purpose of this report is to inform our customers about the high quality of their drinking water and their water system. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want our customers to be informed about where your water comes from, what it contains and how it compares to stringent Federal water quality standards. The City of Black Hawks drinking water meets and exceeds the strict standards as regulated by the State of Colorado and the U.S. Environmental Protection Agency.



## **CONTACT INFORMATION**

City of Black Hawk Web Site.....[www.cityofblackhawk.org](http://www.cityofblackhawk.org)  
Jason Fredricks Water Superintendent.....303-582-2246  
(Email - [jfredricks@cityofblackhawk.org](mailto:jfredricks@cityofblackhawk.org))  
Black Hawk Public Works.....303-582-1324  
City of Black Hawk Main Number.....303-582-2221  
Colorado Dept. of Public Health and Environment...303-692-2000  
EPA's Safe Drinking Water Hotline.....1-800-426-4791  
EPA's Web Site....[www.epa.gov/ground-water-and-drinking-water](http://www.epa.gov/ground-water-and-drinking-water)

# General Information About Drinking Water

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).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 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**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides**, that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- Radioactive contaminants**, that 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 which limit 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.

## Detected Contaminants

The City of Black Hawk 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, 2022 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 following sections of this report.

Note: Only detected contaminants sampled within the last 5 years appear in this report. If no tables appear in this section, that means that the City of Black Hawk did not detect any contaminants in the last round of monitoring.

## 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>.

### Lead and Copper Sampled in the Distribution System

Analyte Name	Monitoring Period	90th Percentile	Number of Samples	Unit of Measure	90th Percentile Action Level	Sample Sites Above AL	90th Percentile AL Exceedance	Typical Sources
Copper	06/03/2021 to 08/11/2021	0.09	30	ppm	1.3	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	06/03/2021 to 08/11/2021	12	30	ppb	15	3	No	Corrosion of household plumbing systems; Erosion of natural deposits

### Inorganic Contaminants Sampled at the Entry Point to the Distribution System

Analyte Name	Year	Average	Range Low – High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Arsenic	2022	0.5	0 to 1	2	ppb	10	0	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2022	0.05	0.04 to 0.05	2	ppm	2	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2022	1	0 to 2	2	ppb	100	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2022	0.19	0 to 0.37	2	ppm	4	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	2022	0.45	0.4 to 0.5	2	ppm	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2022	1.5	1 to 2	2	ppb	50	50	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

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 <u>OR</u> 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 2022	<u>Lowest period</u> percentage of samples meeting TT requirement: 100%	0	15	No	4.0 ppm

Disinfection By Products (TTHMs, HAA5, and Chlorite) Sampled in the Distribution System									
Analyte Name	Year	Average of Individual Samples	Range of Individual Samples (Lowest - Highest)	Number of Samples	Unit of Measure	MCL	MCLG	MCL Violation?	Typical Sources
TOTAL HALOACETIC ACIDS (HAA5)	2022	14.48	3.3 to 36.1	16	ppb	60	N/A	No	Byproduct of drinking water disinfection.
TTHM	2022	29.79	7.6 to 80.4	16	ppb	80	N/A	No	Byproduct of drinking water disinfection.
Chlorite	2022	0.17	0 to 0.39	36	ppb	1.0	0.8	No	Byproduct of drinking water disinfection with Chlorine Dioxide.

Summary of Turbidity Sampled at the Entry Point to the Distribution System					
Analyte Name	Sample Date	Level Found	TT Requirement	TT Violation?	Typical Sources
Turbidity	Date: September 2022	Highest single measurement: 0.204 NTU	Maximum 1 NTU for any single measurement	No	Soil runoff
Turbidity	Month: December 2022	Lowest monthly percentage of samples meeting TT requirement for our technology: 100%	In any month, at least 95% of samples must be less than 0.1 NTU	No	Soil runoff

Secondary Contaminants**						
**Secondary standards are <u>non-enforceable</u> 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.						
Contaminant Name	Year	Average	Range Low -High	Sample Size	Unit of Measure	Secondary Standard
Sodium	2022	21.35	15-27.7	2	ppm	N/A

Total Organic Carbon (Disinfection Byproducts Precursor) Percentage Removal Ratio of Raw & Finished Water								
Contaminant Name	Year	Average	Range Low- High	Sample Size	Unit of Measure	TT Minimum Ratio	TT Violation	Typical Sources
Total Organic Carbon Ratio	2022	1	1 to 1	4	Ratio	1.00	No	Naturally present in the environment

### 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 Unregulated Contaminant Monitoring Rule (UCMR). 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 UCMR sampling and the corresponding analytical results are provided below.

Unregulated Contaminants***					
Contaminant Name	Year	Average	Range Low - High	Sample Size	Unit of Measure
HAA5	2020	14.63	11.607-17.656	12	ppb
HAA6Br	2020	19.83	14.687-24.98	12	ppb
HAA9	2020	27.03	20.211-33.86	12	ppb
***More information about the contaminants that were included in UCMR monitoring can be found at: <a href="https://drinktapp.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR">https://drinktapp.org/Water-Info/Whats-in-My-Water/Unregulated-Contaminant-Monitoring-Rule-UCMR</a> . Learn more about the EPA UCMR at: <a href="http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule">http://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule</a> , <a href="https://www.epa.gov/sites/production/files/2017-03/documents/ucmr4-fact-sheet-general.pdf">https://www.epa.gov/sites/production/files/2017-03/documents/ucmr4-fact-sheet-general.pdf</a> or contact the Safe Drinking Water Hotline at (800)426-4791 or <a href="http://water.epa.gov/drink/contact.cfm">http://water.epa.gov/drink/contact.cfm</a>					

Cryptosporidium and Raw Source Water E. Coli			
Contaminant Name	Year	Number of Positives	Sample Size
Cryptosporidium	2018	0	19
E. Coli	2018	9	19
Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.			

Radionuclides Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average	Range Low - High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Gross Alpha	2021	1.45	0.2 to 2.7	2	pCi/L	15	0	No	Erosion of natural deposits
Combined Uranium	2021	2	2 to 2	1	ppb	30	0	No	Erosion of natural deposits
Combined Radium	2021	1.6	1 to 2.2	2	pCi/L	5	0	No	Erosion of natural deposits

Volatile Organic Contaminants Sampled at the Entry Point to the Distribution System									
Contaminant Name	Year	Average	Range Low -High	Sample Size	Unit of Measure	MCL	MCLG	MCL Violation	Typical Sources
Xylenes	2022	0.22	0 to 0.7	6	ppb	10,000	10,000	No	Discharge from petroleum factories; discharge from chemical factories

#### Cross Connection Control and Backflow Prevention

Backflow is the reversed flow of untreated or contaminated water into the City's distribution system through a cross connection. A cross connection is a physical connection of a safe or potable water supply with another water supply of unknown or contaminated quality in which potable water could be contaminated or polluted. State regulations prohibit contaminated sources from entering the public potable water supply through cross connections.

To prevent backflow in plumbing systems, City Code and State Regulations require backflow prevention assemblies to be installed in specific locations in the distribution system. The backflow assembly devices are required to be inspected and tested to meet specific operating and design parameters annually by a certified technician.

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

#### Health-Based Violations

**Maximum contaminant level (MCL) violations:** Test results for this contaminant show that the level was too high for the time period shown. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We are evaluating, or we already completed an evaluation, to find the best way to reduce or remove the contaminant. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

**Treatment technique (TT) violations:** We failed to complete an action that could affect water quality. Please read the information shown below about potential health effects for vulnerable populations. This is likely the same violation that we told you about in a past notice. We were required to meet a minimum operation/treatment standard, we were required to make upgrades to our system, or we were required to evaluate our system for potential sanitary defects and we failed to do so in the time period shown below. If the solution will take an extended period of time, we will keep you updated with quarterly notices.

Name	Description	Time Period	Compliance Value	TT Level or MCL
Cross Connection Rule	Failure to meet Cross Connection Control and/or backflow prevention requirements – M611	07/06/2022-08/18/2022	N/A	N/A

**Health Effects:** We had an inadequate backflow prevention and cross-connection control program. Uncontrolled cross connections can lead to inadvertent contamination of the drinking water. This is due to one of more of the following: we have permitted an uncontrolled cross connection, and/or we have installed or permitted an uncontrolled cross connection, and/or we failed to comply with the requirements for surveying our system for cross connections, and/or we failed to complete the testing requirements for backflow prevention devices or methods, and/or we failed to notify the State Health Dept. of a backflow contamination event.

**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.

#### Describe the steps taken to resolve the violation(s), and the anticipated resolution date:

This is the same notification for a violation on August 3<sup>rd</sup>, 2022 for the backflow prevention assembly testing requirements that were not met at 331 Gregory St. and 241 Gregory St. Posting this again in the 2022 annual report is a requirement from the Colorado Department of Health and Environment. The backflow assemblies mentioned were returned to compliance in June 2022. Public notification was completed August 3<sup>rd</sup>, 2022.





Terms and Abbreviations		
<u>Term</u>	<u>Abbreviation</u>	<u>Definition</u>
Maximum Contaminant Level Goal	MCLG	The 'Goal' is 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 Contaminant Level	MCL	The 'Maximum Allowed' is 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.
Treatment Technique	TT	A treatment technique is 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.
Average of Individual Samples	No Abbreviation	The typical value. Mathematically it is the sum of values divided by the number of samples.
Range of Individual Samples	No Abbreviation	The lowest value to the highest value.
Number of Samples	No Abbreviation	The number or count of values.
Gross Alpha, Including RA, Excluding RN & U	No Abbreviation	This is the gross alpha particle activity compliance value. It includes radium-226, but excludes radon 222 and uranium.
Microscopic Particulate Analysis	MPA	An analysis of surface water organisms and indicators in water. This analysis can be used to determine performance of a surface water treatment plant or to determine the existence of surface water influence on a ground water well.
Variance and Exemptions	V/E	Department permission not to meet an MCL or a treatment technique under certain conditions.
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.
Parts per trillion = Nanograms per liter	ppt = nanograms/L	One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
Parts per quadrillion = Picograms per liter	ppq = picograms/L	One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
Picocuries per liter	pCi/L	Picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit	NTU	Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Not Applicable	N/A	Not Applicable
Violation	No Abbreviation	A failure to meet a Colorado Primary Drinking Water Regulation.
Formal Enforcement Action	No Abbreviation	An escalated action taken by the State (due to the number and/or severity of violations) to bring a non-compliant water system back into compliance by a certain time, with an enforceable consequence if the schedule is not met.

We all live in a watershed, watersheds hold and direct collected water downhill towards rivers, lakes, aquifers, wetlands and the ocean and help provide our water sources. This downward gravity flow of water also carries with it the effects of human activities throughout the watershed. Protection of our watersheds begins with our Source Water Assessment Plan (SWAP). The Colorado Department of Public Health and Environment has provided us with a Source Water Assessment Report for our water supply.

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. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

The most prevalent and most threatening sources of contamination in our water source area comes from: EPA Superfund sites, EPA Abandoned Contaminated Sites, EPA Chemical Inventory/Storage Sites, EPA Hazardous Waste Generator Sites, Permitted Wastewater Discharge Sites, Above Ground/Underground Leaking Storage Tanks, Solid Waste Sites, Existing/Abandoned Mines, Other Facilities, Oil/Gas Wells, Septic Systems, Evergreen Forests and Roadways. There are 3 surface water sources determined to have a rating of Moderately High or High for potential contamination.

Our system has no water source with a rating of Moderately High or High for Physical Setting Vulnerability. Our water sources are Ground Water Under the Direct Influence of Surface Water (GWUDI) and Surface Water.

You may obtain a copy of the report by visiting:

<http://www.cdphe.state.co.us/wq/sw/swapreports/swapreports.html>, clicking on Gilpin County and selecting 124147; City of Black Hawk.

For general information about Source Water Assessment please visit:

<http://www.cdphe.state.co.us/wq/sw/swaphom.html>

Water Sources			
Source	Source Type	Water Type	Location
COUNTY ROAD SPRING WELL NO 1	Well	GWUDI	Four Mile Gulch, N of WTP
COUNTY ROAD SPRING WELL NO 2	Well	GWUDI	Four Mile Gulch, N of WTP
DORY HILL RD FMG WELL NO 1	Well	GWUDI	Four Mile Gulch, N of WTP
DORY HILL RD FMG WELL NO 2	Well	GWUDI	Four Mile Gulch, N of WTP
DORY HILL RD FMG WELL NO 4	Well	GWUDI	Four Mile Gulch, N of WTP
G INTAKE INF GALLERY	Intake	Surface Water	Four Mile Gulch, N of WTP
K1 INTAKE INF GALLERY	Intake	Surface Water	Four Mile Gulch
N CLEAR CREEK FIREHOUSE INTAKE	Intake	Surface Water	North Clear Creek
NORTH CLEAR CREEK INF GALLERY	Intake	Surface Water	North Clear Creek
NORTH CLEAR CREEK WELL 3	Well	GWUDI	North Clear Creek
SPRING WELL G1	Well	GWUDI	Four Mile Gulch, N of WTP
SPRING WELL G2	Well	GWUDI	Four Mile Gulch, N of WTP
SPRING WELL H	Well	GWUDI	Four Mile Gulch, N of WTP
SPRING WELL K	Well	GWUDI	Four Mile Gulch, N of WTP
HIDDEN VALLEY	Intake	Surface Water	Clear Creek
HIDDEN VALLEY INTAKE	Intake	Surface Water	Clear Creek