Annual Drinking Water Quality Report

PWSID MT0000584 *Sunset Mobile Home Park*
PWSID MT0004825 *Red Sky Mobile Home Park*
PWSID MT0000352 *Vaughn Cascade County Water and Sewer*
1161 6th Avenue, Vaughn, MT 59487

Potable water is one of the most vital services provided to community residents. All of us depend on water for drinking, cooking, washing, carrying away wastes, and other domestic needs. For the most part, we don't think about how drinking water gets to our homes or where that water comes from. We just want to be sure that our water is safe and keeps flowing to our taps.

The goal of Red Sky MHP, Sunset MHP, and Vaughn Cascade County Water and Sewer is to provide you with a safe and dependable supply of drinking water. Because of our commitment to ensuring the quality of your drinking water, we want to keep you informed about the activities and testing we do to assure that your water is safe. We are pleased to present to you this year's Water Quality Report.

WATER SOURCE

The **Red Sky MHP, Sunset MHP, and Vaughn Cascade County Water and Sewer District (Vaughn Cascade County WSD**) Public Water System (PWS) supplies drinking water to the Vaughn vicinity via two wells. The Town of Vaughn is located approximately 12 miles west of Great Falls, in Cascade County. The source of drinking water for the two Vaughn Cascade County WSD PWS wells is groundwater located in a gravel and sand unit that is overlain by glacial lake-bed sediments. Red Sky MHP and Sunset MHP purchase ground water from Vaughn Cascade County WSD and are considered a Consecutive Connection. We are pleased to report that our drinking water is safe and meets federal and state requirements. If you have any questions about this report or concerning your water utility, please contact James South at (406) 964-8880**.** We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings.

SOURCE WATER ASSESSMENT

A Source Water Assessment was performed for Vaughn Cascade County W&S in 2005 and updated in 2006. Our Public Water Supply has several identified significant potential contaminant sources within the spill response region and the source water has moderate to high susceptibility to all sources of regulated contaminants. The State website to view the full Source Water Assessment is:
https://deq.mt.gov/water/Programs/dw-sourcewater

Table 7. Susceptibility assessment for significant potential contaminant sources in the Vaughn Cascade County WSD PWS Inventory Region.

Contaminant Source	Contaminant	Hazard	Hazard Rating	Barriers	Susceptibility	Management Recommendations
Area Septic Systems	Nitrates and pathogens	If not properly operated and maintained, untreated effluent may impact area drinking water	High	Upward groundwater flow gradient	High	Encourage residents of the nearby subdivision to continue to properly operate and maintain their septic systems
Sewage Treatment Ponds	Nitrates and pathogens	If not properly maintained, seepage or overflows of liquid wastes may impact area groundwater	High	Groundwater flow direction; upward groundwater flow gradient	Moderate	Continue to properly maintain the lagoons
Cultivated Cropland (9%)	Nitrates and pathogens	Over application or improper handling of agricultural chemicals may impact area groundwater; excessive irrigation may cause transport of chemicals into area groundwater	Low	Upward groundwater flow gradient	Moderate	Encourage area producers to implement Best Management Practices

MONITORING

Vaughn Cascade Co. W&S, along with Sunset Mobile Home Park and Red Sky Mobile Home Park, routinely monitor for constituents in your drinking water according to Federal and State laws. The State of Montana requires monitoring for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some data in the tables, though representative, may be more than one year old. Our sampling frequency complies with EPA and State regulations. The table includes contaminants detected by our monitoring for the period of **January 1st to December 31st, 2023.**

Chlorine – Chlorine is a water additive used to control microbes. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. We are required to monitor and record chlorine residuals daily to assure the water being served is continually treated to make sure it is safe. All sampling for **2023** met the requirements.

Bacteriological Monitoring – Our system monitors monthly for total coliform and E. coli bacteria in our water. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, we always perform special follow-up tests to determine if harmful bacteria are present in the water supply.

- **Vaughn Cascade County Water & Sewer**: No coliform bacteria were detected in our **2023** testing.
- **Red Sky MHP**: No coliform bacteria were detected in our **2023** testing.
- **Sunset MHP**: Coliform bacteria were detected in our **2023** testing in one routine sample taken in **May**. Two of the follow-up samples, including one sample taken directly from the well, showed contamination. Also, one routine sample taken in **August** showed contamination, but no follow-up samples showed contamination.
- We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
- During the past year we were required to conduct one **Level 1 assessment** in May which was completed June 7, 2023. The outcome of the assessment was that one potential problem was identified. In addition, we were required to take one corrective action, and we completed that action. After the level 1 assessment, a routine sample taken in **June** showed no bacteria contamination.

Nitrate – Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you may wish to ask advice from your health care provider. In **2023** testing, Nitrate was not detected in our water system.

Inorganic Compounds (IOCs) – The following inorganic compounds were tested in **2023**. The heavy metals Cadmium, Chromium, Mercury, Antimony, Beryllium, and Thallium were not detected in our water system. Barium, Fluoride, and Selenium were detected but in concentrations less than the Maximum Contamination Level set by the EPA.

Arsenic – The US EPA has revised the regulations governing the amount of arsenic allowable in public drinking water supplies. Beginning January 23, 2006, the MCL for arsenic is 10 ppb and the MCLG is 0 ppb. In **2023** testing, Arsenic was detected in our water system but in concentrations less than the Maximum Contamination Level set by the EPA. While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

In the results table and the following information, you may find terms and abbreviations with which you might not be familiar. To help you better understand these terms, we've provided the following definitions:

ppm (Parts per million): one part per million corresponds to one minute in two years or a single penny in $10,000.
ppb (Parts per billion): one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
MFL (Million Fibers per Liter): The measure of the presence of asbestos fibers that are longer than 10 micrometers.
pCi/L (Picocuries per liter): A measure of the radioactivity in water.
N/A: Not applicable.
MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health.
MCL (Maximum Contaminant Level): The highest allowable amount of a contaminant that is allowed in drinking water.
SMCL (Secondary Maximum Contaminant Level): Non-mandatory water quality standards established as health advisory limits.
MRDLG (Maximum Residual Disinfectant Level Goal): 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 contamination.
MRDL (Maximum Residual Disinfectant Level): 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.
AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
90th Percentile Value: The concentration of lead or copper in tap water exceeded by 10 percent of the sites sampled during a monitoring period.
Waivers: Reduction or exclusion of monitoring requirements for certain compounds. Waivers are granted by the State of Montana, based on a water system's previous monitoring history.

TEST RESULTS FOR RED SKY MHP MT0004825

Contaminant	Violation Y/N	Sample Date	Level Detected	Units	MCLG	MCL	Likely Source of Contamination
Chlorine	N	2023	Highest level 0.60 Range 0.22-0.74	ppm	4	4	Water additive used to control microbes.
Copper	N	09/25/2023	90th Percentile 0.028	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	N	09/25/2023	90th Percentile 1	ppm	0	AL = 15	Corrosion of household plumbing systems, erosion of natural deposits

TEST RESULTS FOR SUNSET MHP MT0000584							
Contaminant	**Violation Y/N**	**Sample Date**	**Level Detected**	**Units**	**MCLG**	**MCL**	**Likely Source of Contamination**
Chlorine	N	2023	Highest level 0.60 Range 0.4-0.87	ppm	4	4	Water additive used to control microbes.
Total Coliform Bacteria	Y	May & August positive samples	Coliforms Present in 4 samples – Level 1 assessment required	N/A	0	2 positive monthly samples	Naturally present in the environment
Copper	N	09/25/2023	90th Percentile 0.028	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TEST RESULTS FOR VAUGHN CASCADE COUNTY WATER AND SEWER MT0000352							
Contaminant	**Violation Y/N**	**Sample Date**	**Level Detected**	**Units**	**MCLG**	**MCL**	**Likely Source of Contamination**
Chlorine	N	2023	Highest level 0.60 Range 0.28-0.72	ppm	4	4	Water additive used to control microbes.
Barium	N	10/11/2023	0.011	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	N	10/11/2023	0.457	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Selenium	N	10/11/2023	1	ppb	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Arsenic	N	10/11/2023	1	ppb	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Copper	N	09/15/2021	90th Percentile 0.218	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Unregulated Contaminants Results for Vaughn Cascade County Water and Sewer MT0000352							
Secondary Contaminant	**Violation Y/N**	**Sample Date**	**Result**	**Units**	**SMCL**	**MCL**	**Likely Source of Contamination or reason for monitoring**
Manganese WL002 WL003	 N N	 11/09/2022 11/09/2022	 0.247 0.218	ppm	N/A	SMCL = 0.05	Natural sources as well as discharges from industrial uses

Lead and Copper – **Lead:** 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 *Red Sky MHP, Sunset MHP, and Vaughn Cascade County Water and Sewer* are 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. **Copper:** Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink that water contains copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

- **Vaughn Cascade County Water & Sewer:** In **2021** sampling, Lead was not detected, and Copper was detected below the Action Level**.**
- **Red Sky MHP:** In **2023** sampling, Lead and Copper were both detected, but were below the Action Level**.**
- **Sunset MHP:** In **2023** sampling, Lead was not detected, and Copper was detected below the Action Level.

Volatile Organic Compounds (VOCs) – VOCs are petroleum byproducts, including fuels such as gasoline and diesel; lighter fluid; fuel additives; solvents such as benzene and toluene; cleaning compounds such as dry-cleaning solution, degreasers, refrigerants, and adhesives. The EPA regulates the concentration of certain VOCs in drinking water, while the EPA and the State monitor for the presence of other VOCs in drinking water. Over 60 additional organic compounds were tested in **2023**, and none were detected in our water system.

Synthetic Organic Compounds (SOCs) – SOCs encompass a wide range of organic compounds, including pesticides and herbicides used for crops and lawns; wood preservatives; PCBs from electrical transformers; and byproducts from PVC and other plastics, including phthalates and adipates. SOCs may be released during manufacturing processes, runoff from fields where herbicides or pesticides have been used, and disposal of industrial wastes. Nearly 40 different compounds were tested in **2023**, and none was detected in our water system.

Total Trihalomethanes (TTHMs) are a group of four chlorine and bromine-containing compounds that are formed when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. EPA regulates these compounds because they may be harmful to health at certain levels.

- **Vaughn Cascade County Water & Sewer:** In **2023** sampling, TTHMs were **not** detected in our water.
- **Red Sky MHP:** In **2023** sampling, TTHMs were not detected.
- **Sunset MHP:** In **2023** sampling, TTHMs were not detected.

Haloacetic Acids (HAA5) are a group of chemicals that are formed when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. EPA regulates these compounds because they may be harmful to health at certain levels.

- **Vaughn Cascade County Water & Sewer:** In **2023** sampling, HAA5s were not detected.
- **Red Sky MHP:** In **2023** sampling, HAA5s were not detected.
- **Sunset MHP:** In **2023** sampling, HAA5s were not detected.

Radionuclides – Alpha emitters are certain minerals which are radioactive, and which may emit a form of radiation known as alpha radiation. Radium-226 and Radium-228 are naturally occurring radioactive contaminants that occur primarily in ground water. Our water system tested for Alpha Emitters and combined Radium-226+228 in **2017,** and none were detected.

Manganese is not currently a regulated contaminant and is a naturally occurring element that can be found ubiquitously in the air, soil, and water. Manganese is an essential nutrient for humans and animals at low doses, but chronic exposure to high doses may be harmful. The health effects from over-exposure of manganese are dependent on the route of exposure, the chemical form, the age at exposure, and an individual's nutritional status. Regardless, the nervous system has been determined to be the primary target organ with neurological effects generally observed. See EPA's "Drinking Water Health Advisory for Manganese" document EPA-822-R-04-003 for more information.

INTERPRETATION for Vaughn Cascade County Water and Sewer

In **2023**, we received a reporting violation for failing to provide you, our drinking water customers, an annual report (this report) that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water. We had sent out the report but did not certify distribution to the DEQ by the deadline. We sent certification and achieved compliance with this violation on 07/06/2023. We continually monitor for various constituents in the water supply to meet all regulatory requirements. Some constituents have been detected in our water, as described above. Although some constituents have been detected, the EPA has determined that your water **IS SAFE** at these levels. If you would like more information about these contaminants, you may contact EPA's Safe Drinking Water Hotline (800-426-4791).

INTERPRETATION for Red Sky Mobile Home Park

In **2023**, we received a reporting violation for failing to provide you, our drinking water customers, an annual report (this report) that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water. We had sent out the report but did not certify distribution to the DEQ by the deadline. We sent certification and achieved compliance with this violation on 07/06/2023.. We continually monitor for various constituents in the water supply to meet all regulatory requirements. Some constituents have been detected in our water, as described above. Although some constituents have been detected, the EPA has determined that your water **IS SAFE** at these levels. If you would like more information about these contaminants, you may contact EPA's Safe Drinking Water Hotline (800-426-4791).

INTERPRETATION for Sunset Mobile Home Park

In **2023**, we received a reporting violation for failing to provide you, our drinking water customers, an annual report (this report) that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water We had sent out the report but did not certify distribution to the DEQ by the deadline. We sent certification and achieved compliance with this violation on 07/06/2023.

In **2023** monitoring, coliform bacteria were detected in one routine sample taken in **May**. Two follow-up samples and one taken directly from the well, also showed coliform contamination. We were required to conduct one Level 1 assessment and achieved compliance with this violation.

We continually monitor for various constituents in the water supply to meet all regulatory requirements. Some constituents have been detected in our water, as described above. Although some constituents have been detected, the EPA has determined that your water **IS SAFE** at these levels. If you would like more information about these contaminants, you may contact EPA's Safe Drinking Water Hotline (800-426-4791).

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*We at **Red Sky MHP, Sunset MHP, and Vaughn Cascade County W&S** work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.*

About Drinking Water….

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, which 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, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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 at 1-800-426-4791.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Did you know…?

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791

Prepared by the Department of Public Health and Human Services Environmental Laboratory (406) 444-3444