

# **Mammoth Hot Springs WY5680092 Drinking Water Quality Report CCR 2024**



Yellowstone National Park's Mammoth Hot Springs water treatment plant is pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies

## **Do I need to take special precautions?**

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

### **Where does my water come from?**

Our source water is a combination of Indian and Panther Creeks in Yellowstone National Park, WY. In addition, the Gardiner River is included during low flow conditions, typically in winter.

### **Source water assessment and its availability**

A source water assessment was conducted in 2004. Findings from this study indicate that the greatest threat to the Mammoth water source is due to wildfires. A copy of this study is available at the Mammoth water treatment plant.

### **Why are there contaminants in my drinking water?**

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 poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (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:

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 stormwater 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 stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### **How can I ask questions?**

Feel free to reach out to Jason Murphy [jason\\_murphy@nps.gov](mailto:jason_murphy@nps.gov) or the Mammoth Water Team at [yell\\_mammoth\\_water@nps.gov](mailto:yell_mammoth_water@nps.gov)

## **Description of Water Treatment Process**

Your water is treated in a "treatment train" (a series of processes applied in a sequence) that includes coagulation, flocculation, sedimentation, filtration, and disinfection. Coagulation removes dirt and other particles suspended in the source water by adding chemicals (coagulants) to form tiny sticky particles called "floc," which attract the dirt particles. Flocculation (the formation of larger flocs from smaller flocs) is achieved using gentle, constant mixing. The heavy particles settle naturally out of the water in a sedimentation basin. The clear water then moves to the filtration process where the water passes through sand, gravel, charcoal or other filters that remove even smaller particles. A small amount of chlorine or other disinfection method is used to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water before water is stored and distributed to homes and businesses in the community.

## **Water Conservation Tips**

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit [www.epa.gov/watersense](http://www.epa.gov/watersense) for more information.

## **Additional Information for Lead**

Yellowstone National Park (YNP) is committed to providing high-quality drinking water to our employees and residents. As part of our ongoing water quality and public health efforts, we would like to share the following important information about lead in drinking water.

## **Health Risks of Lead Exposure**

Lead can cause serious health effects in people of all ages, especially:

- Pregnant individuals
- Infants (both formula-fed and breastfed)
- Young children

### **Understanding the Source of Lead in Water**

Lead in drinking water primarily comes from materials and parts used in:

- Service lines
- Household plumbing

Yellowstone is responsible for maintaining public water systems and is in the process of conducting a lead service line inventory and replacement program. Currently there are still service lines with unknown status, and connectors of unknown material throughout the park. If you would like to know the status of a service line, please email [Jason.Murphy@nps.gov](mailto:Jason.Murphy@nps.gov) or call 406-640-0035.

### **Why Lead Exposure May Fluctuate**

Even if your tap water tested no detection at one point in time, lead levels can vary. As such, lead exposure remains possible due to fluctuations in water chemistry and plumbing conditions.

In 2024 Yellowstone National Park sent 90 lead and copper building and housing samples for analysis. No results exceeded the EPA limits for lead and copper. The park will continue to annually monitor lead and copper levels in park housing and buildings. The Yellowstone Facilities team is working together with NPS public health to evaluate the installation of point of use water filtration systems in park housing and buildings.

### **How You Can Protect Yourself and Your Family**

There are several steps you can take to reduce the risk of lead exposure:

- **EPA recommends use of a Certified Water Filter:** Choose one certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead. Be sure to follow the manufacturer's instructions for proper use.
- **Use Cold Water Only:** Always use cold water for:
  - Drinking
  - Cooking
  - Preparing baby formula (boiling water does not remove lead)
- **Flush Your Pipes\*:** Run your taps for several minutes before using water for drinking or cooking. You can flush your system by:
  - Running the tap
  - Taking a shower
  - Doing laundry
  - Running a dishwasher

\*Homes with lead service lines or galvanized pipes requiring replacement may need longer flushing times.

## Testing and More Information

If you are concerned about lead in your water and would like to request water testing, or learn more about your service line:

Contact: Jason Murphy, [Jason\\_Murphy@nps.gov](mailto:Jason_Murphy@nps.gov) 406-640-0035

More information about lead in drinking water, testing methods, and ways to reduce exposure is available here: <https://www.epa.gov/safewater/lead>.

WY5680092 Mammoth Hot Springs, 2024 Lead Service Line Inventory.

Lead Service Line Inventory available at the following link.

<https://www.nps.gov/yell/learn/nature/water.htm>.

## Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	29	NA	NA	2024	No	By-product of drinking water chlorination

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source	
				Low	High				
TTHMs [Total Trihalomethanes] (ppb)	NA	80	25	NA	NA	2024	No	By-product of drinking water disinfection	
Total Organic Carbon (% Removal)	NA	TT	NA	NA	NA	2024	No	Naturally present in the environment	
Inorganic Contaminants									
Barium (ppm)	2	2	0.07	NA	NA	2024	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Fluoride (ppm)	4	4	0.2	NA	NA	2024	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	
Nitrate [measured as Nitrogen] (ppm)	10	10	0.3	NA	NA	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
Sodium (optional) (ppm)	NA		4	NA	NA	2024	No	Erosion of natural deposits; Leaching	
Radioactive Contaminants									
Alpha emitters (pCi/L)	00	15	5.4	NA	NA	2024	No	Erosion of natural deposits	
Radium (combined 226/228) (pCi/L)	00	5	1.5	NA	NA	2024	No	Erosion of natural deposits	
Contaminants	MCLG	AL	Your Water	Range		# Samples Exceeding AL	Sample Date	Exceeds AL	Typical Source
				Low	High				
Inorganic Contaminants									
Copper - action level at consumer taps (ppm)	1.3	1.3	0.243	0.03	0.243	0	2024	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead - action level at consumer taps (ppb)	00	15	5	NA	00	0	2024	No	Corrosion of household plumbing

## Violations and Exceedances

### Unit Descriptions

Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required but recommended.

### Important Drinking Water Definitions

Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: 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.
MCL	MCL: Maximum Contaminant Level: 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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection 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 contaminants.
MRDL	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.

Important Drinking Water Definitions	
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level
90th Percentile	Compliance with the lead and copper action levels is based on the 90th percentile lead and copper levels. This means that the concentration of lead and copper must be less than or equal to the action level in at least 90% of the samples collected.

<b>For more information please contact:</b>
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