2016 Consumer Confidence Report
Talkeetna Public Water System
PWSID#225032

Is my water safe?
We are 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. Last year, we conducted tests for over 80 contaminants. Seven of those contaminants were detected in your water. Six of the seven were at acceptable levels while one was detected for a short period of time at level higher than the EPA allows. Our water may have slightly exceeded drinking water quality standards for arsenic for less than 10 days last October. The level of arsenic in the water during that time did not present a short term health hazard and the test result may have been caused by improper testing procedures. For more details on this event, please see the section labeled Violations at the end of this report.

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). If the water system requires our customers or the public to take special precautions or identify potential risks, you will be immediately notified by several different means including, but not limited to, notices posted in public places, mailed notices, local radio announcements (KTNA), Matanuska-Susitna Borough website @ www.matsugov.us and door to door if necessary.

Where does my water come from?
The water in Talkeetna is supplied by two ground water wells, in the same well house located at 22111 North "C" Street in Talkeetna, Alaska. The wells are 160 feet deep into a confined aquifer. The untreated well water exceeds the regulatory Maximum Contaminant Level (MCL) for arsenic and manganese so all well water goes through the Arsenic Treatment Plant. (Please see page 2, section titled "Description of Water Treatment Process")The source area is marked with signs and contact information in case of a spill or alarm at the water treatment plant. The treatment plant is located in the same fenced area as the well house. In order to protect your water source, we have posted signs noting that the area is a source water protection area and that no parking, trespassing or tampering with facilities is allowed. Failure to comply with these notices is a federal crime. Please help to protect your water and report any suspicious behavior to Matanuska-Susitna Borough at 861-7752 or 861-8347 or the State Troopers at 352-5401.

Description of Treatment Process
We treat water for elevated arsenic, exceeding the Maximum Contaminant Level (MCL). The treatment process that removes arsenic uses chlorine and ferric chloride injection into the water prior to green sand filtration. The chloride oxidizes the manganese as well as oxidizing the arsenic III to arsenic V. Ferric

chloride is injected subsequent to chlorine injection. Arsenic has an affinity for the iron in the ferric chloride and the chemical coagulates into particles, which are then removed by the green sand filters.

Source water assessment and its availability

The source water assessment provides an evaluation of the vulnerability to potential contamination of the public water system serving Talkeetna. The Class A (community) water system consists of two wells located within the same well house in on North C Street in Talkeetna, Alaska. The wells received a natural susceptibility rating of very high. This rating is a combination of susceptibility rating of very high for the actual wellhead and a very high rating for the aquifer in from which the well is drawing water. Identified potential and current sources for the Talkeetna Public Water System include: a gasoline station, sewer lines, fuel storage tanks, roads, a rail corridor, a pit toilet, outhouses, a campground, Department of Environmental Conservation (DEC) recognized contaminated sites, and Leaking Underground Storage Tank (LUST) sites. These are considered as sources of bacteria and viruses, nitrates and/or nitrites, volatile organic chemicals, heavy metals, cyanide and other inorganic chemicals, and other organic chemicals. Combining the natural susceptibility of the well with the contaminant risk, the public water system for Talkeetna received an overall venerability rating of very high for volatile organic chemicals and heavy metals, cyanide, and other inorganic chemicals, a high rating for bacteria and viruses, nitrates and/or nitrites and synthetic organic chemicals, and a medium rating for other organic chemicals.

A Source Water Assessment is available at the Matanuska-Susitna Borough, Operations and Maintenance Building located at 1420 South Industrial Way, Palmer, Alaska 99645 or the Talkeetna Operations Warm Storage /Office Building at 24206 South Comsat Road, Talkeetna. You may also call (907) 861-7753 to have a copy sent to you.

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 get involved?

There are several ways in which residents can become more involved in the process of treating and providing healthy drinking water. All residents should watch for activities that may pollute ground water and report these issues to the Borough at (907) 861-7753 or after hours at (907) 861-7755. Another

method of becoming involved is by attending public meetings of the Talkeetna Community Council or the Talkeetna Sewer and Water Board of Supervisors. The Board of Supervisors is a group of resident volunteers appointed by the Borough Mayor to make recommendations concerning how this publicly owned utility operates. The board meets the first Wednesday of each month at 1:00 pm at the Talkeetna Library. Interested residents can monitor the public meetings calendar at http://www.matsugov.us/ and view the board member directory at https://www.matsugov.us/boards/talkeetna-sewer-water-no-36.

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 for more information.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Other Information
The system has a monitoring waiver for asbestos for the monitoring period of 2014-2016 and a Synthetic and Other Organic Compounds (SOC) monitoring waiver for the 2014-2016 monitoring period.

Additional Information for 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. Talkeetna Water System 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.

Additional Information for Arsenic
While your drinking water now 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.

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 near the end of this report.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
Haloacetic Acids (HAA5) (ppb)	NA	60	4.2	3.9	4.2	2016	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	13	7	13	2016	No	By-product of drinking water disinfection

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
Inorganic Contaminants								
Arsenic (ppb)	0	10	14	7.3	14	2016	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Nitrate [measured as Nitrogen] (ppm)	10	10	0	NA	NA	2016	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	.152	.032	.12	2016	No	Erosion of natural deposits

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.17	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants							
Lead - action level at consumer taps (ppm)	0	15	.002	2016	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Violations and Exceedances

Arsenic

On October 16, 2016, our system test result for arsenic was 14 µg/L. We believe this sample was incorrectly collected by an inexperienced contractor at a location before the water was treated for arsenic since the result is inconsistent with other tests. The previous 4 samples tested by a certified laboratory showed results less than 9 µg/L, and the next sample taken on October 27, 2016 had no arsenic detected. The result for a January 18, 2017 sample was 4.7 µg/L and the result for the April 2017 was no arsenic detected. In addition, test strip measurement on October 17, one day after the suspect test was collected, showed arsenic in the range of 3 µg/L. Test strips are not a certified testing method but provide sufficient accuracy to demonstrate the arsenic level in treated water was well below the level measured in the October 16 sample. The 2016 annual average of certified tests for Arsenic was 10 µg/L, which is in compliance with EPA standards. We will continue to perform weekly checks of treatment plant equipment and supplies to avoid any mechanical problems that may cause elevated Arsenic levels. We will continue to utilize in-house arsenic test strips to track arsenic levels which allows rapid identification of possible treatment system mechanical problems.

The following violations were related to administrative procedures. Although they did not have any impact on the quality of your water, they must be included in this report.

Failed to file a Synthetic and Other Organic Compounds (SOC) monitoring waiver

In 2015 the system missed the filing deadline to apply for the Synthetic and Other Organic Compounds (SOC) monitoring waiver. We therefore were required to test for over 30 contaminants in 2016. A water sample was collected February 22, 2016 and the results showed none of the contaminants detected. Our 2014-2016 SOC monitoring waiver was approved on March 22, 2016. We will be submitting a SOC Monitoring Waiver Renewal Application for 2017-2019 in September of 2017.

Violations and Exceedances

Failed to provide 2015 CCR final copy to DEC on time

The 2015 CCR was due to be distributed to all customers and made public to the residents of Talkeetna by July 1, 2016. While the report was posted in public areas around Talkeetna, available on the website and mailed to all current customers and Talkeetna Public Water System service area property owners on June 30, 2016 the final report was not provided to DEC until July 5, 2016.

Failed to provide Chlorine Residual results to DEC

Two monthly chlorine residual tests are required. They are required to be pulled at the same time and place as the total coliform samples. While there were chlorine residual tests taken multiple times for each month, they were not properly recorded and submitted to DEC for 8 months of 2016; January – July and October. This issue is resolved and recording requirements are now in compliance.

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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

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