



CITY OF ADAK, ALASKA

ADAK MUNICIPAL UTILITIES

PWS: AK2260595

Consumer Confidence Report 2016

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.

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 primary water source is from a dam located at Lake Bonnie Rose, and is piped into town via ductile iron pipe. Our secondary water source is from a dam located at Lake De Marie and is also connected to the system by ductile iron pipe.

Source water assessment and its availability

The Adak water system is a Class A (community) water system that obtains water from Lake Bonnie Rose and Lake De Marie, approximately 1.5 miles south of the community. Access to the intake area is not restricted. The overall protection area is approximately 1.5 square miles in size and received a susceptibility rating of "very high". A rating of high to very high is typical for all systems with surface water intakes.

Potential and existing sources of the following contaminants were evaluated for the Source Water Assessment: bacteria and viruses, nitrates and/or nitrites, heavy metals, cyanide, and other inorganic chemicals, synthetic organic chemicals, volatile organic chemicals, and other organic chemicals. A gravel road passing near the lake was identified as a potential source of contaminants for the drinking water source. This evaluation included all available water sampling data submitted to ADEC by the system operator. The samples may have been collected from either raw water or post-treated water. Combining the susceptibility of the surface water source with the contaminant risks, this water system has received a vulnerability rating of "medium" for nitrates/nitrites, volatile organic chemicals, synthetic organic chemicals, and other organic chemicals; and "very high" for bacteria and viruses and heavy metals. This assessment can be used as a foundation for local voluntary protection efforts as well as a basis for the continuous efforts on the part of Adak to protect public health.

A source water assessment has been conducted by ADEC and a copy of this is available at our office or through the ADEC drinking water program.

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?

If you would like further information or to get involved please feel free to contact the city office.

Monitoring and reporting of compliance data violations

We received a reporting violation for the months of February & October 2016 as we did not conduct the minimum of 20 samples for those months. These violations usually occur due to the inability to access our facilities during some significant weather events. During 2017 the city purchased equipment to assist in mitigation during the winter months of 2017-2018.

We received a violation as we failed to sample for Total Trihalomethanes (TTHM) & Haloacetic Acids (HAA5) in 2016. We are required to sample a specific location in the month of June. Due to a clerical error on our part we missed the testing window. We will return to compliance once we take these samples in 2017.

We received a violation for timely submission of the 2015 Consumer Confidence Report. Although we submitted a report before the deadline, there were errors that required material correction and submission of another version. As this occurred after the deadline, we received a violation.

We received a violation for the submission of chlorine samples with our coliform samples during the month of August 2016. This occurred during the water supply improvements project and a mistake in communication led for the sample not to be included in the monthly shipment.

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. Adak Municipal Utilities - Public 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>. Our public education regarding lead is also available on our website at <http://adak-ak.us/content/pbntc/160509.pdf>.

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.

<u>Contaminants</u>	<u>MCLG or MRDLG</u>	<u>MCL, TT, or MRDL</u>	<u>Your Water</u>	<u>Range</u>		<u>Sample Date</u>	<u>Violation</u>	<u>Typical Source</u>
				<u>Low</u>	<u>High</u>			
Disinfectants & Disinfectant By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
TTHMs [Total Trihalomethanes] (ppb)	NA	80	36	36	36.4	2015	Yes*	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	32	32	42	2015	Yes*	By-product of drinking water chlorination
Inorganic Contaminants								
Barium (ppm)	2	2	1.6	NA		2012	No	Erosion of natural deposits
Chromium (ppb)	100	100	0.405	NA		2012	No	Erosion of natural deposits
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	0.83	NA		2014	No	Erosion of natural deposits
<u>Contaminants</u>	<u>MCLG</u>	<u>AL</u>	<u>Your Water</u>	<u>Sample Date</u>	<u># Samples Exceeding AL</u>	<u>Exceeds AL</u>	<u>Typical Source</u>	
Inorganic Contaminants								
Lead - action level at consumer taps (ppb)	0	15	55.2	2014	2	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Copper - action level at consumer taps (ppm)	1.3	1.3	1.67	2014	0	Yes	Corrosion of household plumbing systems; Erosion of natural deposits	

*Sampling did not occur in 2016 as required, resulting in a violation.

Violations and Exceedances

Copper - action level at consumer taps

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 water containing 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. The Adak Municipal Water System has components that are over 70 years old. A number of unknown connections and piping materials are now causing issues of exceeding contaminant levels in testing areas. We are also aware that housing units also have lead soldering with household plumbing areas, causing samples at the taps to exceed contaminant levels. The Adak Municipal Water System is working on corrosion control in partnership with the Alaska Department of Environmental Conservation. System-wide control will be an issue for the utility until a new water plant can be constructed. It is strongly encouraged that extra flushing of your household lines is completed before water use. Permanent measures also include re-soldering household piping as well as inclusion into the testing program.

Lead - action level at consumer taps

Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults Who drink this water over many years could develop kidney problems or high blood pressure. The violation occurred during calendar year 2014. The Adak Municipal Water System has components that are over 70 years old. A number of unknown connections and piping materials are now causing issues of exceeding contaminant levels in testing areas. We are also aware that housing units also have lead soldering with household plumbing areas, causing samples at the taps to exceed contaminant levels. The Adak Municipal Water System is working on correction methods in partnership with the Alaska Department of Environmental Conservation. System-wide control will be an issue for the utility a new water plant can be constructed. It is strongly encouraged that extra flushing of your household lines is completed before water use. Permanent measures also include re-soldering household piping as well as inclusion into the testing program. In 2017-2018 we will be undertaking a program to assist homes with swapping kitchen faucets that do not contain lead components to ascertain what difference, if any, will result in future testing.

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	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	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	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
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	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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	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

<u>TT Violation</u>	<u>Explanation</u>	<u>Length</u>	<u>Steps Taken to Correct the Violation</u>	<u>Health Effects Language</u>
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Surface water treatment rule filtration and disinfection violations

Explanation: The Adak Municipal Water System is not able to filter as no filtration system is installed in the designed system. The intake screen at the water source is also broken.

Length: The violation of the surface water filtration rules are ongoing.

Corrective Steps: The Adak Municipal Water System, in partnership with the State of Alaska Village SafeWater Program and USDA Rural Development construct improvements to the water supply and distribution system, including replacing components of the intake from the community water source in summer 2016. A new intake screen to assist in filtering was installed as well as significant downsizing of the active system. A new water treatment plant, which will provide full compliance with all rules, is awaiting design and construction funding. In the meantime the water system is currently on a Boil Water Notice (postings are in multiple places around town) due to this issue.

Health Effects: 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.

Lead and copper rule violations

Explanation: On November 21, 2013 lead and copper samples were taken from the distribution system. The copper results were above the action level limit of 1.3 mg/L with a value of 1.41 mg/l. The lead results were below the action level limit of 0.015 mg/l with a value of 0.00609 mg/l. As a result of exceeding the copper action level, Adak was placed on corrosion control in 2013. The purpose of corrosion control is to identify the reasons why copper and/or lead was found at elevated levels in the drinking water and to implement treatment to decrease the amount of lead and/or copper in the drinking water below the action level(s). While placed on the corrosion control process Adak had the option to take 2 consecutive 6 month sample sets to try and curtail the corrosion control process. Adak attempted the 1st 6 month sample set on December 13, 2014 and exceeded both the lead and copper action levels with values of 0.052 mg/l for lead and 1.67 mg/l for copper. Adak is required to complete the corrosion control process.

Length: Ongoing since December 2013, variable with sample locations.

Corrective Steps: Currently, Adak is working with ADEC, specifically Village Safewater to address issues of ensuring appropriate corrosion control systems are incorporated into the design and construction of the new water treatment plant. We provided public notice to the affected customers at the time we received the results however the City of Adak is complying with EPA federal guidelines require quarterly public notice in utility bills and distributing annual public education notices. The City, with the assistance of ADEC and the USDA performed significant construction to the water system during summer 2016. Part of this work involved disconnecting major sections of the system that have not been used in over a decade and/or are in areas that are not habitable. The City anticipates conducting a Lead/Copper testing to better understand the quality of water in the active system sometime in 2018.

Health Effects: Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits

in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. 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 water containing 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.

For more information please contact:

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