CITY OF ADAK, ALASKA

ADAK MUNICIPAL UTILITIES
ADAK PUBLIC WATER SYSTEM (ID: 260595)

Consumer Confidence Report 2014

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. We only detected 5 of those contaminants, and found only 1 at a level higher than the EPA allows. As we informed you at the time, our water temporarily exceeded drinking water standards. (For more information see the section labeled Violations at the end of the 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).

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 April – December 2014 for chlorine and turbidity levels due to late submission of operator reports. We also received a reporting violation not timely submitting the 2013 CCR & Certification Page to ADEC.

Due to our inability to test from a specific site, at a specific time in 2014, we missed the ability to appropriately test for TTHM/HAA5. This is due to a new regulation that requires specific approval from testing sites based on historical sampling. Adak's testing methodology before implementation of this regulation has hampered the current ability to provide a meaningful site. However, this issue was resolved and rectified for the 2015 testing period. The reason testing for TTHM/HAA5 is import is that potential health effects from exposure to TTHMs above the MCL include liver, kidney or central nervous system problems and increased risk of cancer. Potential health effects from exposure to HAA5s above the MCL include increased risk of cancer. It is important to note that we have not exceeded MCLs for either contaminant.

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.

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	Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
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	20.4	NA		2013	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	14.7	NA		2013	No	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

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	0.0552	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

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 the distribution system can be isolated to the occupied areas and 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

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

TT Violation	Explanation	Length	Steps Taken to Correct the Violation	Health Effects Language

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 have designed and are presently going through the processes to construct improvements to the water supply and distribution system, including replacing components of the intake from the community water source. A new intake screen to assist in filtering is part of the immediate construction process. A new water treatment plant, which will provide full compliance with all rules, is awaiting design pending distribution system improvements and usage information. 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.

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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