



ANNUAL WATER QUALITY REPORT

YOUR DRINKING WATER

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 2014's water quality. We are committed to providing you with information because informed customers are our best allies.

WHERE DOES MY DRINKING WATER COME FROM?

The University of Alaska Fairbanks water system is supplied by ground water. Four wells provide all the water used in the treatment process. These wells are sealed and secured to eliminate the possibility of contamination from outside sources.

SOURCE WATER ASSESSMENT AND ITS AVAILABILITY

The ADEC has compiled a Source Water Assessment of our source of public drinking water. This assessment has defined an area around our wells that is critical to the preservation of the quality of our drinking water. Within this area they have identified potential and existing sources of contamination. Based on the information gathered, ADEC has determined the overall vulnerability of our wells to contamination. The results are available at the following locations: Rasmuson Library, UAF Power Plant, and the Fairbanks North Star Borough Library .

Inside this Report

- Drinking Water Contaminants.. 2
- Reading the Data Table 2
- WQ Data Table 3
- Secondary Contaminants 4
- Tour the Facility 4
- Nitrates 4
- Arsenic..... 4
- Lead 5
- TTHMs 5
- Radioactive Contaminants..... 5
- Special Precautions 5
- Abbreviations 6
- Definitions 6
- Contacts 6

SPANISH Este informe contiene informacion muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuniquese con alguien que pueda traducir la informacion.

RUSSIAN Данный рапорт содержит важную информацию о вашей питьевой воде. Переведите его или проконсультируйтесь с тем, кто его понимает.

JAPANESE この情報は重要です。翻訳を依頼してください。

KOREAN 이 안내는 매우 중요합니다. 본인을 위해 번역인을 사용하십시오.

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).

UAF's source drinking water is from groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

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.

For more information on sources of groundwater contamination, please visit :

<http://www.epa.gov/region1/students/pdfs/gwc1.pdf>

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

READING THE DATA TABLE

In this table you will find terms and abbreviations that might not be familiar to you. To help we have provided the following information:

Page 6— Abbreviations

Page 6— Definitions

Additional Information on:

Page 4— Arsenic

Page 5— Lead

Page 4— Nitrates

Page 5— Radioactive Contaminants

Page 4— Secondary Contaminants

Page 5— TTHMs

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 on pages 3 and 4 list 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. 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. All samples for this report were taken in 2014.



WATER QUALITY DATA TABLE

Contaminant	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants and Disinfectant By-Products								
There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants								
TTHMs (ppm)	N/A	0.080	0.079	0.054	0.111	2014	No	By-product of drinking water chlorination
HAA5 (ppm)	N/A	0.060	0.034	0.006	0.063	2014	No	By-product of drinking water chlorination
Chlorine as Cl ₂ (ppm)	4	4	0.33	0.05	0.63	2014	No	Water additive used to control microbes
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	1.8	N/A	1.8	2014	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Arsenic (ppb)	0	10	1.7	N/A	1.7	2014	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	2	2	0.16	N/A	0.16	2014	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppm)	0.1	0.1	0.001	N/A	0.001	2014	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	4	4	0.1	N/A	0.1	2014	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Microbial Contaminants								
Turbidity (NTU)	N/A	0.3	0.23	N/A	N/A	2014	No	Soil runoff
Coliform (Positive Samples)	0	0	6 ¹	N/A	N/A	2014	No	Human and animal fecal waste
Radioactive Contaminants								
Alpha Emitters (pCi/L)	0	15	0.65	N/A	N/A	2014	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	0.59	N/A	N/A	2014	No	Erosion of natural deposits
Contaminants	MCLG	Action Level	Your Water	Sample Date	# Samples Exceeding Action Level	Exceed AL	Effects above SMCL	
Inorganic Contaminants - No MCL								
Lead - action level at consumer taps (ppb)	0	15	9.5	2014	2	No	Corrosion of household plumbing systems; erosion of natural deposits	
Copper- action level at consumer taps (ppm)	1.3	1.3	1	2014	0	No	Corrosion of household plumbing systems; erosion of natural deposits	

1. UAF resampled the positive sites and sites up and downstream of the positive samples within 24 hours of receiving the results. All resamples were negative. We are currently looking into our sampling procedures to determine if the sample may have been contaminated during handling.

Secondary Contaminants



EPA has established National Secondary Drinking Water Regulations (NSDWRs) that set non-mandatory water quality standards for 15 contaminants (secondary contaminants). EPA does not enforce these "secondary maximum contaminant levels" or "SMCLs." They are established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL. See table below for UAF's sampling for secondary contaminants. For more information on these contaminants visit:

<http://water.epa.gov/drink/contaminants/secondarystandards.cfm>

Secondary Contami-	MCLG	SMCL	Your Water	Range		Sample Date	Exceeds SMCL	Effects above SMCL
				Low	High			
Iron (ppm)	0	0.3	0.051	0.023	0.127	2014	No	Rusty color; sediment; metallic taste; reddish or orange staining
Manganese (ppm)	0	0.05	0.165	0.043	0.257	2014	Yes	Black to brown color; black staining; bitter metallic taste
Hardness (ppm)	N/A	N/A	330	306	344	2014	No	Formation of scale on pipes and fixtures
pH	N/A	6.5-8.5	7.54	7.28	7.77	2014	No	Low pH: bitter metallic taste; corrosion; high pH: slippery feel; soda taste; deposits

If you would like to learn more about the water on campus, the UAF Utilities Water Treatment Plant provides tours to the campus community throughout the year. If you would like a tour of the plant, please contact Utilities at 907-474-7351. Group size is limited to no more than 10. Hard hats and safety glasses are required for tour participants and will be provided by UAF. Other safety requirements for tours are flat-heeled, closed toed shoes.

Nitrates

Nitrates and nitrites are nitrogen-oxygen chemical units which combine with various organic and inorganic compounds. Once taken in the body, nitrates are converted

to nitrites. Infants below six month who drink water containing nitrate in excess of the MCL could become seriously ill, and if untreated die. Symptoms include shortness of breath and blue baby syn-

drome. UAF did not exceed the MCL for nitrates in 2014.

For more information, please go to the following link:

<http://water.epa.gov/drink/contaminants/basicinformation/nitrate.cfm>

Arsenic

Some people who drink water containing arsenic in excess of the MCL over Many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. UAF did not exceed the MCL for arsenic in 2014.

Information on 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. UAF Utilities, PWS ID #AK2310683, 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>.



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 Drinking Water Hotline (800-426-4791).

TTHMs

To protect drinking water from disease-causing organisms or pathogens, UAF adds chlorine as a disinfectant to the campus drinking water. Trihalomethanes (TTHMs) form in drinking water when chlorine, which is used to disinfect drinking water, reacts with natural organic material in the water. It's common for drinking water that is disinfected with chlorine, like ours, to contain some trihalomethanes.

The Environmental Protection Agency sets limits on how much TTHM can be in drinking water based on a yearlong average. For 2014, UAF did not exceed that average. Had we exceeded you would have been notified as you have been in 2015.

Health effects from the low level of TTHMs in the UAF water sys-

tem would only come from very long-term consumption of the water. People who drink water containing trihalomethanes in excess of the MCL (the recommended maximum limit) over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

See [http](http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm) for additional information: <http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm>

For UAF- specific information on TTHM, FAQs and more, please visit: <http://www.uaf.edu/fs/> and click on UAF Water Quality Notice 6/19/15.

Radioactive Contaminants

Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

UAF sampled during 2014 and did not exceed the MCL for alpha emitters or radium.

Abbreviations		Definitions
AL	Action Level	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
EPA	Environmental Protection Agency	N/A
FDA	Food and Drug Administration	N/A
HAA5	Haloacetic Acids	N/A
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.
MRDL	Maximum Residual Disinfectant Level	The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminants
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 contaminants.
NA	Not Applicable	N/A
ND	Not Detected	N/A
NR	Not Required	Monitoring not required, but recommended.
NTU	Nephelometric Turbidity Units.	Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
	positive samples	positive samples/yr: The number of positive samples taken that year
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)	N/A
ppb	ppb: parts per billion, or micrograms per liter ($\mu\text{g}/\text{L}$)	N/A
ppm	ppm: parts per million, or milligrams per liter (mg/L)	N/A
SDWA	Safe Drinking Water Act	N/A
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHMs	Total Trihalomethanes	N/A

The University of Alaska Fairbanks is a Land, Sea, and Space Grant university and an international center for research, education, and the arts, emphasizing the circumpolar North and its diverse peoples. UAF integrates teaching, research, and public service as it educates students for active citizenship and prepares them for lifelong learning and careers.

For questions regarding this report, please contact Scott Bell, Vice Chancellor of Facilities Services at 907-474-7000 or dispatch@fs.uaf.edu.

Naturally Inspiring

