2024 Karluk Consumer Confidence Report
PWSID# AK2250087

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?

The Karluk Water System uses surface water collected in a screened water intake (IT001) located in Nunalik Creek.

Source water assessment and its availability

Source water assessment and its availability
A source water assessment for the Karluk water well was completed in 2006 and the results of the assessment are:

Executive summary:
The Wellhead/Surface Intake Susceptibility is Very High.
The Aquifer Susceptibility is not applicable.
The overall vulnerability to potential contaminants is:
Bacteria and Viruses is Medium;
Nitrates/Nitrites is Medium;
Volatile Organic Chemicals is Medium;
Inorganics/Heavy Metals is Medium;
Synthetic Organic Chemicals is Medium;
Other Organic Chemicals is Medium.

The Drinking Water Source Protection (DWSP) group is no longer completing Source Water Assessment reports for public water system (PWS) sources. However, DWSP continues to delineate drinking water source protection areas for all PWS sources and furthers awareness of these protection areas through outreach efforts. DWSP encourages active protection efforts by promoting the development and implementation of DWSP plans by PWS and communities, as well as by providing passive protection efforts through reviewing and commenting on proposed permitted activities near PWS sources and ensuring agency loans and grants prioritize water quality improvement projects near PWS sources.

For assistance, please contact the DWSP coordinator at 907-269-7549, or toll free in Alaska at 1-866-956-7656.You can go to the DWSP website for more information at: https://dec.alaska.gov/eh/dw/dwp.

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 storm water 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?

Persons interested in the Karluk water system can contact the city administrator at 907-241-2218 for information regarding public participation in water quality decisions.

Description of Water Treatment Process

Your water is treated by filtration and disinfection. Filtration removes particles suspended in the source water. Particles typically include clays and silts, natural organic matter, iron and

manganese, and microorganisms. Your water is also treated by disinfection. Disinfection involves the addition of chlorine or other disinfectants to kill bacteria and other microorganisms (viruses, cysts, etc.) that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

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.
- 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.
- Visit www.epa.gov/watersense for more information.

Significant Deficiencies

A sanitary survey of the Karluk water system was completed in 2022. A sanitary survey is a periodic checkup of an individual water system to identify problems which may affect the safety of the water. Community water systems must complete a sanitary survey every three years by a qualified drinking water professional. Any deficiencies found in the survey must be fixed, documented, and reported to ADEC. The Karluk water system has been working to correct the list of eleven significant deficiencies; five recommendations found during the 2022 sanitary survey have taken corrective action and were granted extensions to give RMW time to travel to the system. A list of these deficiencies can be found on the ADEC Drinking Water Watch website on the Karluk monitoring summary.

The deficiencies are ongoing. In a Corrective Action Plan established 3/19/21, there was a projected deficiency correction due date established as 8/1/22. This date had been extended to June and July of 2024.

ANTHC has been working on the design for the replacement of the Karluk water treatment plant. We are also in the conceptual design phase of a project to replace the raw water storage tank with a treated water storage tank to provide contact time for treatment. Construction for both projects has been rescheduled for the Spring of 2025.

One of the sanitary survey corrective actions regarded the location of the sample tap for collecting the Chlorine reading and the location of the turbidity meter. The sample tap is located in the community hall and not at entry point to the distribution system in the water treatment plant. Additionally, the turbidity meter was located at the school, but has now been relocated to the community hall. Construction of the new treatment plant in 2025 will resolve these two issues.

Another deficiency was that the entire system loses pressure below 20 psi during the filtration backwash cycle. The system currently has an engineering submittal to replace the entire treatment plant and install new water storage tanks. Additionally, the system will construct backwash surge tank to aid in the filtration backwash cycle and prevent the system from losing pressure. The system is required to complete the system modifications and to continue to work with DEC engineers and Alaska Native Tribal Health Consortium in completing this system modifications. Health effects are unknown.

Additional Information for Lead

The system inventory does not include lead service lines. Karluk completed their LSLI inventory using previous materials evaluations, water system records, and field inspections, and found no lead, galvanized requiring replacement, or unknown service lines. The Lead Service Line inventory has been completed and accepted by DEC. Consumers can access the service line inventory on the public-facing Lead Safe Alaska Portal map, located here: https://ak-lsli-adec.hub.arcgis.com/

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. Karluk Water System is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Karluk Water System (Public Water system Id: AK2250087) by calling 907-241-2218 or emailing karlukiracouncil@aol.com. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available 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	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)								
Chlorine (as Cl2) (ppm)	4	4	0.98	0.63	0.98	2024	No	Water additive used to control microbes
TTHMs [Total Trihalomethanes] (ppb)	NA	80	9.9	NA	NA	2024	No	By-product of drinking water disinfection
Inorganic Contaminants								
Nitrate [measured as Nitrogen] (ppm)	10	10	0.835	NA	NA	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Microbiological Contaminants								
Turbidity (NTU)	NA	1	0.14	NA	NA	2024	No	The lowest monthly % of samples meeting the turbidity limit was 100%. Soil runoff

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	0.082	0.0052	0.1	0	2024	No	Corrosion of household plumbing systems

Contaminants	MCLG	AL	Your Water	Range		# Samples Exceeding AL	Sample Date	Exceeds AL	Typical Source
				Low	High				
Lead - action level at consumer taps (ppb)	0.0	15	0.31	N/A	0.47	0	2024	No	Corrosion of household plumbing systems; Erosion of natural deposits

Violations and Exceedances

- We received two violations in July for not having chlorine residual associated with the monthly total coliform sample. We returned to compliance when we submitted a total coliform sample with adequate chlorine residual on 8/7/2024.

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)
NTU	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.
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.

Important Drinking Water Definitions	
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
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.

For more information please contact:

Contact Name: ANDREW, ALICIA
Address: P.O. BOX 22 KARLUK, AK 99608
Phone: 907-241-2218